

This is a repository copy of *Teacher and youth priorities for education for environmental sustainability:a co-created manifesto*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/185143/>

Version: Published Version

---

**Article:**

Dunlop, Lynda orcid.org/0000-0002-0936-8149, Rushton, Elizabeth, Atkinson, Lucy et al. (9 more authors) (2022) Teacher and youth priorities for education for environmental sustainability:a co-created manifesto. British Educational Research Journal. ISSN: 0141-1926

<https://doi.org/10.1002/berj.3803>

---

**Reuse**



This article is distributed under the terms of the Creative Commons Attribution (CC BY) licence. This licence allows you to distribute, remix, tweak, and build upon the work, even commercially, as long as you credit the authors for the original work. More information and the full terms of the licence here:

<https://creativecommons.org/licenses/>

**Takedown**

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing [eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk) including the URL of the record and the reason for the withdrawal request.

# Teacher and youth priorities for education for environmental sustainability: A co-created manifesto

Lynda Dunlop<sup>1</sup>  | Elizabeth A. C. Rushton<sup>2</sup>  | Lucy Atkinson<sup>1</sup> |  
 Jacquie Ayre<sup>3</sup> | Andrea Bullivant<sup>4</sup> | Jane Essex<sup>5</sup> | Laura Price<sup>2</sup> |  
 Amanda Smith<sup>6</sup> | Maisy Summer<sup>7</sup> | Joshua E. Stubbs<sup>1</sup> |  
 Maria Turkenburg-van Diepen<sup>1</sup> | Lucy Wood<sup>2</sup>

<sup>1</sup>School of Education, University of York, York, UK

<sup>2</sup>School of Education, Communication and Society, King's College London, London, UK

<sup>3</sup>School of Education, Liverpool John Moores University, Liverpool, UK

<sup>4</sup>Liverpool World Centre, Liverpool, UK

<sup>5</sup>School of Education, University of Strathclyde, Glasgow, UK

<sup>6</sup>Centre for Alternative Technology, Llwynwgern Quarry, Machynlleth, UK

<sup>7</sup>Artist and Illustrator, Manchester, UK

## Correspondence

Elizabeth A. C. Rushton, School of Education, Communication and Society, King's College London, Waterloo Bridge Wing, Franklin Wilkins Building, London SE1 9HN, UK.

Email: elizabeth.rushton@kcl.ac.uk

## Funding information

This work was conducted as part of the British Educational Research Association Research Commission 2021–2022 on Education for Environmental Sustainability.

## Abstract

What would it mean to put environmental sustainability at the heart of education? This article describes a process of inclusive, participatory manifesto-making to identify young people's (aged 16–18 years) and teachers' priorities for education for environmental sustainability across the UK. Drawing on analysis of qualitative data from over 200 teachers and young people who participated in futures and visualisation workshops, we identify key educational priorities at the levels of classroom, school, community and policy, based on consensus between teacher and youth perspectives. Whilst consensus-seeking comes with a risk of favouring 'soft' actions which reinforce unsustainable practices and systems, the process of identifying more desirable futures and immediate barriers that must be negotiated to reach them has the potential to create spaces for more critical pedagogies and practices. There is a need for policy makers and school leaders to recognise the interests of teachers and young people to enable greater participation in decision making

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2022 The Authors. *British Educational Research Journal* published by John Wiley & Sons Ltd on behalf of British Educational Research Association.

at different scales, and to ensure that those with the greatest capacity bear their burden of responsibility for education for environmental sustainability.

**KEYWORDS**

environment, sustainability, teachers, youth

**Key insights****What is the main issue that the paper addresses?**

The main issue this paper addresses is what teachers and young people see as priorities for education for environmental sustainability in the UK at different levels – from changes that teachers can introduce in classrooms to those at the school, community and policy levels.

**What are the main insights that the paper provides?**

The paper provides insights into a participatory and inclusive research process to find out how teachers and young people see environmental sustainability, the changes they think are needed to achieve it and the barriers that are experienced as a result of depoliticising processes.

**INTRODUCTION: YOUTH, TEACHERS AND THE CLIMATE CRISIS**

In the 1930s, Harold Benjamin published a satire (Peddiwell, 2003) about a palaeolithic society that faces extinction because it is resistant to changing its core curriculum of skills (fish-grabbing, horse-clubbing and tiger-scaring), which have been rendered useless in the face of an impending ice age. Contemporary national and international youth movements such as Teach the Future and Fridays for Future have drawn attention to the inadequacies of current education in the face of the current, real, climate crisis (Teach the Future, n.d.; UK Student Climate Network, 2020; UNICEF, 2021). #FridaysforFuture has seen over 1.6 million young people taking part in climate strikes across the world (Fisher, 2019) asking ‘why should we spend the time and effort on an education, when our governments are not listening to the finest scientists?’ (Fridays for Future, 2022). Amongst teachers, there is broad agreement that students should be taught about climate change, its implications for environments and societies around the world, and how these implications can be addressed (YouGov, 2019). Fazey et al. (2020) have argued that formalised knowledge systems (including education systems) are currently failing humanity in the context of climate change. As the United Nations Economic Commission for Europe (UN, 2012, p. 6) has observed:

Education often contributes to unsustainable living. This can happen through a lack of opportunity for learners to question their own lifestyles and the systems and structures that promote those lifestyles. It also happens through reproducing unsustainable models and practices.

These conclusions prompt consideration of how education which supports or enables environmental sustainability can be achieved from where we are now. Existing research has considered the perspectives of teachers (Ferguson et al., 2021; Howard-Jones et al., 2021; Rushton, 2021; Zaradez et al., 2020) and students (Dunlop, Atkinson, Stubbs, et al., 2021; Dunlop, Atkinson, Turkenburg, et al., 2021; Williams & McEwen, 2021) separately, rather than as part of a collaborative dialogue. This article describes how we brought together teachers and young people from across the UK to create a manifesto for education for environmental sustainability, and presents the priority actions that were identified in the process of manifesto making. Through online participatory workshops, teachers and youth were able to articulate the changes they would like to see and realise a shared vision of what the future of education for environmental sustainability could look like. A key facet of the project was the opportunity for researchers and participants to work with Maisy Summer, an artist and illustrator. This approach afforded opportunities for participants to visualise, share and discuss their values, ideas and vision for the future of environmental sustainability in education.

## Manifesto making

We know all too well, after all, that no manifesto that has ever been written – be it in the domain of art or in the domain of politics – has ever managed to change the world...as an ironic form – or as an ironic performance – a manifesto can be nothing more than an attempt to speak and, through this, create an opening, a moment of interruption. (Biesta & Säfström, 2011 p. 542).

The UK Parliament (2021) describes a manifesto as containing ‘the set of policies that the party stands for and would wish to implement if elected to govern’. Manifestos are found not only in party political contexts but also in many areas of human activity, including art (Danchev, 2011), science (The Royal Society, 2019) and education (Biesta & Säfström, 2011). Little information is available on the processes of production of these manifestos, nor on the extent to which they identify or include stakeholders.

Manifestos call readers to unite to intervene and demonstrate against dominant systems in order to make change (Brett, 2019). They tend to challenge and provoke, but to be taken seriously must contain policies which are practical and popular in order to gain support (Intergenerational Foundation, 2015). We do not consider these aims as mutually exclusive – both are necessary to bring about change from where we are now to more desirable futures. In the context of environmental sustainability, it is important for educators to look for and create conditions to transform the concerns of students into the desire and ability to act (Jensen, 2004; Santos, 2017). The manifesto produced through this study was created by the people (youth and teachers) involved in education and presented as a statement of how governments and others in positions of power ought to act. With a focus on finding consensus between teachers and young people, the process attempts to identify realistic opportunities to bring about shared desired futures from where we are now.

Given the urgency of the climate crisis, there is a need to interrupt the *status quo* in education and clearly articulate the role education can play in environmental sustainability. It is important to involve those who participate in the educational process – teachers, young people and teacher educators – keeping in mind the environmental conditions of the near future. Schlosberg (2007) argues that justice requires not only attention to distribution of ‘goods’, but also to the processes that result in maldistribution of goods and to how the goods are transformed into the flourishing of individuals and communities. This requires recognition (concerning who is ignored in decision-making) and participation (concerning whether or not processes are fair). The UN Convention on the Rights of the Child (UN, 1989) protects

young people's rights to express views on matters affecting them, but these tend to go unheard, and youth have few opportunities to be involved in environmental decision making affecting them (Thew et al., 2020), although young people are at the forefront of calls for action on climate change and environmental justice (Teach the Future, n.d.; Thunberg, 2019). On participation in decision-making, Hart (2008, p. 24) argues:

The highest possible degree of citizenship in my view is when we, children or adults, not only feel that we can initiate some change ourselves, but when we also recognise that it is sometimes appropriate to also invite others to join us because of their own rights and because it affects them as fellow citizens.

It was our intention in this study to bring teachers and young people together to discuss an issue of common concern in order to identify priorities for the future of education for environmental sustainability across the UK.

## **Education, the environment and sustainability in the UK**

In this study, we have used the term 'sustainability' decoupled from 'development' (which may prioritise economic development) to reflect the social and political dimensions of environmental education. We avoided imposing our own definition, working instead with definitions participants provided at the beginning of each workshop.

Education is a devolved matter in the UK, meaning that England, Northern Ireland, Scotland and Wales set their own education policy, including national curricula and assessments (see Table 1). Research on education policy in the UK (Martin et al., 2013) has found that emphasis on 'education for sustainable development' has diminished in England and Northern Ireland, but is reflected more strongly in Scotland, with a more mixed picture in Wales, which is currently promoting a co-constructive approach to curriculum design for introduction from 2022 (Welsh Government, 2021a). Primary and secondary education are organised differently, and we focus here on secondary education, working with teachers and young people at the end of compulsory education, on the brink of full political participation in society.

Devolved responsibility means that the environment and sustainability are reflected and enacted differently in policy across the four administrations of the UK. In Wales, Education for Sustainable Development and Global Citizenship (ESDGC) is currently recognised as a priority for the Welsh government, reflected in the school inspection framework and guidance available to aid schools with ESDGC (Welsh Assembly Government, 2008). In the new curriculum to be statutory from September 2022 (Welsh Government, 2021b), sustainability features in the 'what matters' code upon which schools must base their curriculum, for example, by ensuring 'informed, self-aware citizens engage with the challenges and opportunities that face humanity, and are able to take considered and ethical action' (p. 10). Similarly, sustainability is recognised within the curriculum aims and purposes in Northern Ireland and Scotland. In Scotland, sustainability features as a cross-curricular approach to building a socially just, sustainable and equitable society (Scottish Government, n.d.). In Northern Ireland, the Council for the Curriculum, Examinations, and Assessment (2020) includes the environment and sustainability in the objectives, key elements and areas of learning in the statutory curriculum, specifically in the objective 'to develop the young person as a contributor to the economy and the environment', the key element 'education for sustainable development' and through the area of learning 'environment and society'. Teachers have considerable freedom to determine how they teach these key elements to meet objectives, with examples of how this can be achieved across the curriculum outlined in the

TABLE 1 Education in the UK

	England	Northern Ireland	Scotland	Wales
Government department or directorate responsible	Department for Education	Department of Education	Learning Directorate	Department for Education and Skills
Sets curriculum	Department for Education	Council for the Curriculum, Examinations & Assessment (CCEA)	Education Scotland/ Foghlam Alba (Scottish Government Executive Agency)	Department for Education and Skills
Qualification awarding bodies	AQA Edexcel (Pearson) OCR (regulated by Ofqual, a non-ministerial government department)	CCEA	Scottish Qualifications Authority (SQA)	WJEC (regulated by Qualifications Wales, an independent statutory body funded by the Welsh Government)
Main qualification at school leaving age (usually 16)	GCSE	GCSE	National 5	GCSE
Inspectorate	Ofsted (Office for Standards in Education, Children's Services and Skills), a non-ministerial department	Education and Training Inspectorate (within the Department of Education)	Her Majesty's Inspectorate of Education (within Education Scotland)	Estyn (independent of Welsh Parliament but funded by the Welsh government)

'Education (Curriculum Minimum Content) Order (Northern Ireland) 2007' (Department of Education, 2007). The extent to which sustainability features in practice, however, is not well understood, and in the upper secondary years (14–19) it is likely that assessed content featured on examination specifications is prioritised. In England, the environment features in the national curriculum for design and technology, geography and the sciences (with no references to sustainability) and in a recent review of environmental education policy in England, Glackin and King (2020) found that there was limited attention to education *for* the environment (as opposed to education *about* or *in* the environment) in national educational policy and assessment specifications. Despite this minimal treatment of the environment and sustainability in curriculum and assessment, a recent survey by Howard-Jones et al. (2021) found that the majority of teachers surveyed in England supported an action-based climate change curriculum including issues of global social justice.

In policy terms, across the UK, there has been a transfer of responsibility to local institutions through both devolution and, in England, academisation, which Martin et al. (2013) argue results in the distribution of efforts across different government departments, resulting in siloing, narrowing of interest and overall less coherent policy. The policy context is compounded by obstruction in some jurisdictions by policies associated with standards, accountability and safeguarding, and risk aversion (Dunlop, Atkinson, Stubbs, et al., 2021; Eaton & Day, 2020). For example, a recent survey by the Royal Society of Chemistry (RSC, 2021) found that 40% of respondents were worried about teaching about sustainability and climate change because it might be seen by others as a controversial topic. Indeed, whilst more young people than ever are participating in environmental activism through climate strikes or Extinction Rebellion, only a minority of young people have been involved and not enough is known about the numbers and types of young people participating (Pickard et al., 2020). Research on youth representations of environmental protest in the context of fossil fuel extraction has found that young people see protest as less desirable than other forms of participation – even amongst those supportive of protests (Dunlop, Atkinson, Turkenburg, et al., 2021) – what they want is for 'formal' methods of political participation to work for them, and to be listened to by those in positions of authority. The work presented in this article describes the production of a manifesto for education for environmental sustainability. The methods for producing the manifesto (BERA, 2021) are outlined below.

## METHODOLOGY

This study took place within a qualitative, participatory paradigm and responds to calls for more democratic and participatory approaches for marginalised groups, including young people (Alminde & Warming, 2020). The work aimed to identify priority actions that can be taken across the UK at secondary level to contribute to education for environmental sustainability. The overarching research question addressed in this article is:

What are teachers' and young people's priorities for education for environmental sustainability in the UK?

The study aimed to identify consensual, workable priorities for achieving education for environmental sustainability relevant across the four jurisdictions of the UK, with the launch timed to coincide with the UK's recent presidency and hosting of the UN Climate Change Conference, COP26.

Our approach was rooted in collectivity, participation and inclusivity, with a focus on creating spaces for voices less frequently heard in discussions and debates concerning education, the environment and sustainability. In this sense, we sought to position students



and teachers as 'knowing and approving experts' (Edwards & Holland, 2013, p. 79). The challenges associated with doing research with people, and in particular with hard-to-reach communities, are that they tend to be in different geographical and online spaces, some do not want to respond, some do not meet inclusion criteria, and others do not want to participate because they are marginalised or act on the verge of legality (Kaufmann & Tzanetakis, 2020). Specifically, barriers that girls and young people of colour face in terms of their activism have been reported in the research literature (Earl et al., 2017), and little research on environmental activism has focused on young people with disabilities (Salvatore & Wolbring, 2021). To encourage participation, attention was paid to expertise on inclusion, diversity and global learning in the project team, in provocation materials for workshops, in the design of data-gathering workshops, in the recruitment of participants and by designing multimodal ways for young people and teachers to contribute their perspectives. However, as we did not ask young people or teachers to provide data about personal characteristics, we cannot be sure that these processes have resulted in a representative group of participants.

## Workshop design

Priorities for the manifesto were identified through a series of futures and visualisation workshops with stimuli presented in the form of provocations from teachers, youth, practitioners and researchers (Routes, 2021). Provocations attended to five main themes: (i) young leaders of collective action for the climate; (ii) intergenerational conversations about the climate; (iii) local and global bridges to an interconnected world; (iv) perspectives from practitioners and teachers; and (v) perspectives from research.

The workshops took place online between 18 May and 26 June 2021, during a period of restrictions across the UK owing to the Covid-19 pandemic. The online format facilitated interaction between teachers and young people in different locations in the UK, but this affordance presented a potential challenge in building rapport and creating an environment where participants felt free to speak and to disagree with one another (Rushton et al., 2021). Both sets of workshops used activities as well as questions to stimulate discussion, which Walters (2020) has argued is an approach where researchers can relinquish control, and be exposed to discomfort and unpredictability, which can create space for new ideas.

Two sets of workshops were designed. The first comprised futures workshops (seven iterations, each 2h long, involving young people aged 16–18, teachers, initial teacher educators and beginning teachers in peer groups) and the second comprised visualisation workshops (two, each 2h long, each iteration bringing together teachers and young people). We also invited responses to the workshop questions and stimuli in other ways and received responses from three sets of young people in schools for youth with declared additional or specific learning needs. The design of both sets of workshops is outlined below.

## Futures workshops

Futures workshops bring groups of people together to generate ideas in response to social problems (Alminde & Warming, 2020) and have been used amongst environmental social science researchers (Fazey et al., 2020) and policy professionals (Government Office for Science, 2007). Here we use them to imagine futures in education for environmental sustainability. Futures workshops typically involve phases of:



1. critique – to identify problems and frustrations with the status quo;
2. fantasy – to think creatively about the best way to solve problems; and
3. implementation – to think about how to transform ideas into change.

In the present study, we used a version of visioning where participants were asked to identify where we are now with education for environmental sustainability, where we need to get to and what barriers exist. This approach was selected in order to create a shared understanding of the current context in different jurisdictions of the UK and to prioritise steps needed to achieve a vision from an agreed description of the current reality. The futures workshops were designed for peer groups (teachers with teachers, and youth with youth) because discussion with peers can help participants feel more relaxed, particularly in unfamiliar contexts where researchers are unknown, moderating the power dynamic between researcher and participants (Alminde & Warming, 2020). To mitigate for shyness and dominant speakers, discussion in the plenary session was interspersed with small group sessions with a facilitator in a breakout room in order to build a rapport amongst participants and give more people the opportunity to speak. As an icebreaker activity, participants were asked to share core values. Key moments in the workshop for data collection included:

- participants' definitions of environmental sustainability (*Zoom chat*);
- what is needed for education for environmental sustainability (breakout room discussions, *google jamboards*);
- barriers to achieving education for environmental sustainability (*mentimeter*, *google jamboards*);

## Visualisation workshops

The purpose of the visualisation workshops was to create imagery that could be used to illustrate the manifesto. Visual art engages people in ways that academic writing cannot, allowing for new and deeper ways of seeing things, and Herbert (2021) proposes engagement with the socio-ecological imagination as a way to envisage just and sustainable futures in the context of the climate crisis. Arts-based approaches have been used to promote the engagement and empowerment of youth (Lyon & Carabelli, 2016) and using arts to communicate research findings is a growing area of practice (Bartlett, 2015). Visualisation workshops were designed by the illustrator (Author 8) and arts facilitator (Author 6), using preliminary analysis of data from the futures workshop as stimuli. Social science researchers were present as non-participant observers. Arts-based methods are particularly useful to access knowledge not easily expressed in words, to include and amplify marginalised voices, to present material to different audiences and to increase accessibility, particularly to non-academic audiences (Nunn, 2020; Tarr et al., 2018). Arts-based methods also help to create new meanings, mobilise emotions and action, and build stronger relationships between research participants, even for short spaces of time (Bartlett, 2015), which is particularly useful for building connections between individuals with common interests, here, in education, the environment and sustainability.

Artistic responses were sought through pen and paper drawing, photographs and online collage-making and drawing (using *padlet* to gather responses and *miro* as a workspace). Participants were presented with stimuli including reflective activities (e.g. draw your own carbon footprint; find some items that support sustainability in your everyday life) and questions (e.g. what should the climate change classroom look like?, what should an environmentally friendly school look like?, how could sustainability be recognised in the community?), and given time to share and discuss their responses. Our observations were that, although there was still a reliance on written text from some participants (participants were invited

to respond in ways they felt comfortable), ideas came to life in this way. For example, the award scheme mooted in several futures workshops developed into a visual metaphor (from acorn to forest), which reflected progression from individual to collective. Key moments in the workshop for data collection included:

- participants' drawings of what a classroom for environmental sustainability would look like (*miro* drawings and labels);
- participants' drawings of what an environmentally sustainable school would look like (*miro* drawings and labels).

Only data containing words (e.g. in the chat, on the padlet and *miro* boards) from the visualisation workshop are analysed and reported in this article. Images were used as inspiration for the illustration of the manifesto (BERA, 2021).

## Participants

To try to ensure the manifesto was inclusive of teachers and youth in different ways, the team included those with expertise and networks in young people with special educational needs and those involved in co-ordinating networks across the UK and specifically with black youth and young people from minority ethnic backgrounds, and teachers interested in equity and sustainability. The team also sent invitations to participate through their own network of teachers in state secondary schools and further education colleges. However, there is a risk that the teachers and young people are not representative of the population of the UK, not least because in England at least, white, female, British teachers are over-represented in the teaching workforce when compared with the general population (DfE, 2021a), and because not all young people have access to the time, technology, confidence or private space required to take part in workshops outside their formal education.

Participant registration to futures workshops by location of study or institution is provided in Table 2. The total proportion registering from England (81%) was higher than those from Northern Ireland (6%), Scotland (9%) and Wales (2%), with 2% not stated. These proportions broadly reflect the population of the UK. There is a tension between minimising the amount of personal information we asked participants for, consistent with GDPR (General Data Protection Regulation), and wanting to know whether our inclusive process was successful. We decided not to ask participants for information about their sex, nationality, ethnicity, socio-economic background or other personal characteristic because (i) we aimed to find areas of consensus rather than difference amongst teachers and young people across the UK and (ii) discussions about environmental sustainability can be sensitive and we aimed

**TABLE 2** Registrants to futures workshops by location of study/work

Workshop participant groups	England <i>n</i> (%)	Northern Ireland <i>n</i> (%)	Scotland <i>n</i> (%)	Wales <i>n</i> (%)	Not stated <i>n</i> (%)	Total
Teachers	54 (74)	5 (7)	7 (10)	1 (1)	6 (8)	73
Youth	70 (76)	9 (10)	10 (11)	3 (3)	0	92
Beginning teachers	48 (100)	0	0	0	0	48
Initial teacher educators	40 (82)	2 (4)	6 (12)	1 (2)	0	49
Teachers and youth	42 (84)	2 (4)	4 (8)	2 (4)	0	50

**TABLE 3** Participant attendance at each workshop

Workshop	Number of participants
Futures (18 May)	38 teachers
Futures (20 May)	18 teacher educators
Futures (1 June, two iterations)	48 beginning teachers
Futures (22 May)	27 young people
Futures (27 May)	16 young people
Futures (9 June)	9 young people
Futures (mediated by teachers, offline)	34 young people
Visualisation (22 June)	6 young people and teachers
Visualisation (26 June)	14 young people and teachers
Total	210

to create an open space for dialogue with minimal personal intrusion. Discussion about the content of the manifesto must be sensitive to potential absences.

Typically, between one-third and half of those who registered participated in the workshops. The total number of participants in each workshop is presented in Table 3. Perspectives from England, Northern Ireland, Scotland and Wales were represented in the workshops except for the initial teacher education workshops (although even in those workshops, participants brought perspectives from beyond England). All ‘mediated by teacher futures’ responses are from young people with declared additional learning needs who attend special schools.

**Ethics**

Ethical approval for the study was obtained from the relevant institutional ethics committee and voluntary informed written consent obtained from participants. For safety online, facilitators were present in the main room and in each breakout room during the youth workshops.

**Data collection and analysis**

Data was gathered from (i) recordings of workshops, (ii) responses sent in from young people and teachers and (iii) artefacts from workshops, including *google jamboard*, *mentimeter*, *miro* and *padlet* posts, and the *Zoom* chat. Six authors were involved in the analysis. A conventional approach to qualitative content analysis (Hsieh & Shannon, 2005) was used because it lends itself by the use of teams working with a large, multimodal dataset. In the first round of analysis, researchers were assigned a single dataset corresponding to one workshop and coded data according to different levels of influence (class, school, community and policy). In the second round of coding, researchers identified themes (meaningful patterns across the dataset) within each level of influence. Themes were then discussed to identify areas of commonality amongst and then between teachers and young people. Given the focus on a shared and co-created manifesto, we focused on broad patterns of consensus rather than difference from the various workshops. Where themes were only present amongst one group, they were not included, as is the case for techno-utopianism, which was found only in the youth contributions and not in teacher contributions. Themes which were found across the workshops were marked for inclusion in the final research report and manifesto. Data is reported according to whether it was derived from a teacher (T) or young person’s (Y) contribution. Data from both teachers and young people are included to support

each key point. The open approach to identifying themes had the advantage of not imposing theoretical perspectives on the data. We ensured the conclusions were an accurate reflection of the discussions held during the workshops by (i) discussion amongst researchers (ii) checking with workshop facilitators (iii) checking conclusions with workshop participants, allowing time for feedback and response.

## Findings

Findings are presented in three sections: first, what teachers and young people understand by environmental sustainability; second, their priorities for education for environmental sustainability; and finally barriers to education for environmental sustainability.

### What is environmental sustainability?

At the beginning of the futures workshop, participants were asked to write their working definition of environmental sustainability. Definitions clustered around five main themes: care, repair, time, priority and process. Shared understandings of these five themes and indicative quotes from teachers (T) and youth (Y) are presented in Table 4.

Definitions of sustainability often draw on the United Nations (1987, n.p.) Brundtland Commission definition of 'meeting the needs of the present without compromising the ability of future generations to meet their own needs'. This is consistent with the dimensions of 'care' and 'time' present in participants' definitions, but also important for the teachers and young people in this study was social and environmental repair, environmental sustainability as a priority in the present and the idea that sustainability was a process, not an end-point. It was, therefore, thought of as something that might never be fully achieved or realised, but constantly worked towards.

### Teacher and youth priorities for education for environmental sustainability

In the futures workshops, participants were asked where we are now, where we need to be and what is needed to get there. There was a tension between immediate needs to improve on the *status quo*, and the need for 'system change', for example:

these question need answering twice: once in terms of working towards a fundamental reworking of the education system for a world where sustainability is an existential issue and not a fringe interest; and again in terms of what we can achieve until such time as fundamental reform is delivered (T).

when change is asked for, the response is often belittling (e.g. we got a vegetable patch when we asked for large systemic change) (Y).

In this paper, and in the manifesto, we focus on identifying areas of consensus: practical and popular (across the workshops) actions that are perhaps more likely to be taken seriously by decision makers and which are an important initial step in identifying how the education system might be reworked more fundamentally to meet the needs of society during the climate crisis.

**TABLE 4** Participants' shared understanding of five aspects of environmental sustainability

Theme	Shared definition	Indicative quotes
Care	Ideas about preservation, conservation, protection, responsibility, safety, maintaining and sustaining the environment, preventing further harm, living in harmony with nature, and not wasting resources	For me, environmental sustainability means protecting and preserving the environment so that future generations or humans and animals have access to everything that they need (Y) Conserve nature and resources, protect ecosystems health and wellbeing for all (T)
Repair	Ideas about repair, reparation and addressing social and environmental injustices	Addressing the extractivism and racial capitalism that structures how we use resources in such a way as to do profound harm to ecologies and societies (T) They should teach about how we can change what we have done and make the world a better place (Y)
Time	A need to consider the long-term, and the needs of future generations	For me environmental sustainability means ensuring life can continue as it is or improve for future generations to come (T) Long-term justice and action without compromising future generations' ability to do the same (Y)
Priority	The environment should be prioritised in decision making	For me, environmental sustainability means making the environment one of the first and most important considerations before making any decisions (Y) Making decisions at local/people and national level to engage society in right use of resources (T)
Process	Environmental sustainability was characterised as a process, with features such as collaboration, creating capabilities, learning to live differently, giving young people a voice, education, empowerment, understanding connections and complexities, living positively and without guilt, solving problems and creating meaning	Catering to both the needs of the environment as well as social needs in a collaborative and renewable way (Y) Interacting with planet earth in a meaningful way that is accessible to all, in order to create a positive future (T)

Teachers and young people identified priorities for change to achieve education for environmental sustainability at different levels: classroom, school, community and policy.

An overview of the key priorities is shared in Table 5, along with supporting data from both teacher and student workshops.

### Barriers to education for environmental sustainability

Barriers to education for environmental sustainability were identified at different levels: external to the school, internal to the school and personal to teachers and students.

External to the school, barriers identified by young people and teachers included the culture of society in the UK, lack of ambition and policy from government, prioritisation of corporate interests and economic outcomes, and curriculum and assessment policy which is limited in content and subject area.

**TABLE 5** Teacher and youth priorities for the future of education for environmental sustainability, presented in the illustrated manifesto (BERA, 2021)

Levels at which education is enacted	Change needed for education for environmental sustainability	Indicative quotes from teachers (T) and young people (Y)
Classroom: actions requiring support from teachers (e.g. content, pedagogy, encouragement, professional development and role modelling)	<ul style="list-style-type: none"> <li>• Provide students with the space and time to learn about climate change and environmental sustainability that is not linked to assessment</li> <li>• Encourage students to research and take action on sustainability</li> <li>• Resource teachers of all subjects to engage in sustainability-focused professional development to develop confidence</li> <li>• Use more sustainable resources and practices in the classroom</li> </ul>	<p>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)</p> <p>We can lack confidence because we are navigating this ourselves and do not feel like experts where we might in our subject (T)</p>
School: actions requiring support from school leaders (e.g. in making and monitoring decisions about energy, food, transport and waste as well as education)	<ul style="list-style-type: none"> <li>• Identify ways to feature sustainability in school-level decision-making bodies and policies</li> <li>• Consider environmental sustainability in all purchasing decisions</li> <li>• Make the sustainable choice the convenient choice in school</li> <li>• Track and reward sustainability actions</li> <li>• Green the school environment: acknowledge and nurture the link between the quality of the school environment and mental and physical health</li> <li>• Appoint and empower a school sustainability lead</li> <li>• Place student voice and agency at the core of school sustainability action</li> </ul>	<p>Focus on improving the outdoor environment of schools – shift from tarmac and gravel to creative outside spaces – this is done really well in primary that secondary can learn from (T)</p> <p>Having teacher support – know that they will understand and encourage activism, not suppress it (Y)</p>
Community: actions requiring support from organisations other than schools or government (e.g. to enable networking, intergenerational education and accreditation for sustainability actions)	<ul style="list-style-type: none"> <li>• Create a no-cost, external, accredited award</li> <li>• Develop a community sustainability network and curriculum for groups and parents involved in education</li> <li>• Value schools as local hubs for sustainability</li> <li>• Start young and keep going!</li> </ul>	<p>The use of schools as hubs would allow people from across the community to take part in and lead education and activities, and build networks, facilitating 'collaborative working &amp; networks within and between schools (T)</p> <p>Courses that are free to attend and accessible create interest in wider groups (Y)</p>
Policy: actions requiring support from government to create an enabling environment for education for environmental sustainability (e.g. through curriculum, assessment, inspections and school funding)	<ul style="list-style-type: none"> <li>• Initiate a co-ordinated review, involving teachers and students, of secondary school curricula across the UK</li> <li>• Identify ways that sustainability can feature in existing accountability regimes and policies</li> <li>• Enlist the endorsement of respected public figures (politicians, social media influencers)</li> <li>• Create educational policies which focus on valuing collective, equitable action and positive problem solving</li> </ul>	<p>Adapting existing structures of accountability to achieve our aims is a good thing to do. Change exams – ask questions about sustainability ... or making it so governing bodies have to have a sustainability governor ... when Ofsted come in, that's one of the questions (T)</p> <p>I do not think we learn much about the environment or the global warming, etc. in schools. I feel like it'd be really useful if issues like these were in the curriculum and in the exams, therefore students would do more research on these topics and educate themselves (Y)</p>

sustainability needs to be a 'must'...at the moment it is not an inspection must! Even in Scotland where sustainability is part of teacher ed. (T).

corporations and governments scapegoating the public - change needs to happen with them first (Y).

According to participants, the policy context mitigated against dealing with some aspects of sustainability, e.g. the link between greenhouse gas production, consumption and capitalism, which teachers and young people identified as important, but controversial given the policy context.

teachers can get in big trouble for challenging capitalist ideas (T).

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).

Internal to the school, barriers included resources (funding, time), staff confidence and capacity, exam pressures (linked to league tables), expectations, models of teaching and learning and school leadership:

no governor with responsibility...how to educate senior management on the crucial nature of this work (T).

Investment of time depends on individual teachers' priorities. Need to prepare teachers to feel passionate about environmental issues (Y).

Personal barriers to participating in education for environmental sustainability included apathy, lack of awareness and education, minimising the problem, time and freedom to think, feelings of powerlessness, alternative priorities and peer responses.

Peers - the sense of [education for environmental sustainability] not being 'cool' or 'above them' and 'not for them' (T).

Fear of being judged (Y).

Across all levels at which Education for Environmental Sustainability (EfES) is enacted, we saw, in addition to calls for education *about* the environment, opportunities for education *in* and *for* the environment across the curriculum, using interactive pedagogies which enable discussion, research and problem solving.

## DISCUSSION

There was broad consensus in the workshops that current education for environmental sustainability across the UK is not adequate, and should not be limited to science and geography lessons. There was a demand for discussion in low-stakes contexts which would enable young people to disagree and grapple with complex and controversial ideas. Teacher and youth priorities identified in the manifesto are consistent with research in international



contexts which has identified the need to prepare people to have ‘sufficient critical knowledge and skills to urge their governments to use suitable and just climate mitigation measures’ (Svarstad, 2021, p. 228). This study adds to these calls and identifies priority actions and barriers to be negotiated in the UK context. The study is novel in its bringing together of teacher and youth perspectives, and in its approach to inclusion, participation and co-creation. We discuss the nature of the priority actions (based on the Table 5 and the barriers), first in relation to the concept of depoliticisation, and then we reflect on the process of manifesto making.

In all teacher and youth workshops, there was attention to both individual and collective actions needed for education for environmental sustainability. In common with Herbert (2021), we noticed tensions between a desire for alternative, more socially just futures and uncertainty about what these are and how they can be achieved, for example, calls for system change amongst participants set against individual actions as proposed solutions. Environmental problems are anchored in our lifestyles and society, and therefore education must prepare young people to act at both a personal and societal level, and to identify not only quantitative changes (consuming less), but qualitative changes – different ways of doing and being (Jensen & Schnack, 1997). In educational contexts, the responses to climate change (in common with other environmental challenges) are often presented as individual choices, for example recycling, choosing less polluting forms of transport or converting to a vegan diet (Jensen, 2004; Malmberg & Urbas, 2020) – and these responses were found also in our workshop data, for example ‘link subjects to sustainable development goals’ (T) and ‘reduce paper’ (Y). These individual responses were frequently challenged, but the priority actions at the level of classroom (and to a lesser extent, school and community) tend to – in the current policy context – rely on individual actions from teachers in particular, but also from students (see Table 5). The focus on individual actions is problematic in three main respects.

Firstly, people have different opportunities and not everyone is able to choose to cycle to work or school or grow or buy sustainably grown and sourced food (often because they are subject to economic constraints). The emphasis on individual solutions presented as ‘choices’ was seen by participants (youth and teachers) as a cause of feelings of guilt and anxiety, and contributed to feelings of powerlessness. Teachers are unlikely to have time in an already demanding job to develop resources and approaches for teaching environmental sustainability, which is poorly recognised in educational policies, particularly those associated with teacher accountability. Indeed, this was reflected in barriers identified by teachers, for example ‘workload pressure for teachers’ (T) and ‘accountability structures – league tables, performance management etc. that pull us away from sustainability and towards being competitive with one another’(T). This was recognised also by young people who whilst demanding teaching about and for the planet, saw school leaders, exam boards and government as barriers to achieving this. For example ‘I think it has come from somewhere nice and high up ... it seems the exam boards [have] the choice, they’ll choose whatever’s nice to put in their textbooks, and so it needs ... it does need to come from I think the government’(Y).

Secondly, democratic citizenship is not an attribute of an individual but as individuals-in-context (Biesta & Lawy, 2006) and education for environmental sustainability cannot be achieved by individuals – it requires a societal response within and beyond schools. Participants recognised the need for collective action and wanted education to prepare them to do this – by developing the skills to put knowledge to action, to communicate and to build networks (e.g. through research projects and forms of activism including writing to MPs). This was evident in the way both teachers and young people talked about environmental sustainability as a process (Table 4) and the types of solutions and means by which they could be achieved that they identified. For example, young people talked about ‘teamwork – there is

only so much you can do by yourself, and as the environment helps to sustain all, all should help sustain the environment' (Y) and teachers identified 'empowerment – enabling students to make change as part of education, not on top of everything that is expected of them' (T). Teachers and young people talked about 'domino effects' and 'chain reactions' to build networks for change within schools and communities – and identified barriers that they faced in doing this, including personal barriers and those connected to school, policy and culture as identified above. As one teacher argued, current policies in education reinforce the focus on individuals over the collective, and mitigate against teaching the political dimensions of environmental sustainability:

The other thing that's interesting for me is, you know, when we are kind of encouraging people to do things, are we focusing on what people can do as individuals? Because there's this school of thought is not there that actually individual action is not really going to have much impact and what we need to do is think more about what's happening on national levels and, you know, are we teaching students to think politically and how much as an education system are we discouraged from doing that? And somebody mentioned in the chat, you know, 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 is not it? So those things are, you know, that's a definite barrier is not it, you know, there are certain freedoms that we do not have as teachers to challenge the orthodoxy that's there at the moment. (T).

The third main respect in which the focus on individual actions is problematic relates to attention to politics – and the removal of barriers to dealing with politics in education. Emphasising the individual over the collective transfers responsibility from government to individuals, and invisibilises the role of government, even when problems such as the climate crisis require societal (political) solutions (Malmberg & Urbas, 2020). This has been described as an example of depoliticisation, where politicians 'seek to persuade the demos that they can no longer be reasonably held responsible for a certain issue, policy field or specific decision' (Flinders & Buller, 2006, p. 295–296). Both teachers and young people alike identified 'government' and 'policy' as prominent barriers to education for environmental sustainability, as one teacher in England said, 'the leadership is absolutely crucial, and coming down to them from government, DfE, it's just not going to happen without that' (T).

We can see evidence of this in the draft Sustainability and Climate Change strategy for education and children's services systems (DfE, 2021b). Despite the strategic aim of 'preparing all young people [in the UK] for a world impacted by climate change through learning and practical experience' (p.8), the burden of responsibility is shifted to teachers to access curriculum resources and professional development and champion climate leadership. Teachers and young people must not be made to do the work of policy makers – and as our participants observed, this means that it is not enacted in classrooms where examinations tend to be prioritised. As one teacher said, 'the curriculum needs to have it built in because if there's not time and we're still grades based which we're going to be for a while then it's not going to happen I don't think', and similarly one young person observed 'I think it's hard because fundamentally the educational system right now is, and I'm not saying it's wrong, it's very exam-oriented, so like exams play a definite function.' Teachers and students alike made reference to assessment and accountability systems driving what was possible in classrooms. Putting environmental sustainability 'at the heart of education' means that action is needed on the policies which enable or inhibit schools and teachers from acting in more sustainable ways, and those over which the government holds teachers and schools to account, e.g. curriculum, assessment and inspection frameworks. Whilst a new model

science curriculum is proposed, there are no intentions stated at this point to include sustainability across the curriculum, to include teachers and young people in the design of the curriculum and references to awarding bodies are absent.

Teachers and young people saw working together to bring about change as important, with time and space across the curriculum to discuss different aspects of sustainability. Education cannot be, nor ought it to be, value-free and apolitical, and there is a need to educate and support students as 'subjects in change and not objects of change' (Alsop & Bencze, 2014), and give them 'a voice and a hand' in their education (Rousell & Cutter-Mackenzie-Knowles, 2020). The recognition of politics in environmental education, and an education that prepares young people to participate in politics, is an important feature of educational responses to the climate crisis and other environmental problems facing humanity. For example, students must develop understandings of democratic politics as a way of handling problems associated with environmental sustainability, but at present they are encouraged to think as individuals rather than as citizens (Malmberg & Urbas, 2020). What is required – and what we have tried to model in this research through the methods used – is 'learning democracy' (Biesta & Lawy, 2006), where democracy is understood as a process rather than an outcome or fixed state of affairs. Learning democracy recognises that those in positions of authority (who can act to influence different levels of government or public opinion) have responsibility for the social, economic and cultural situation and therefore educational responsibility for citizenship (Biesta & Lawy, 2006).

Our research had an expressly political intention: to bring together teacher and youth perspectives to identify policy and practice priorities, in order to contribute to public deliberation on education for environmental sustainability. There are parallels with Biesta and Lawy's (2006) argument for learning democracy, which relates to creating the conditions under which young people can learn to be citizens and also what it means to be a citizen. So too, for sustainability: there is a need to create the conditions for young people to learn what it means to be sustainable and how to live sustainably – how to practise it in different settings and at different levels. Schools can do this as places of learning, being and becoming. Beyond teaching and learning, the participants in the manifesto-making process were concerned that school (and broader systemic) policies and practices were inconsistent with education for environmental sustainability. There was a recognition that this was tightly related to budgets (with sustainable actions often seen as costly in time or money) and the wider policy context which can discourage sustainability. There was widespread dissatisfaction in terms of what this says about the value and importance of sustainability, particularly against a background recognition that not everyone can afford to be sustainable where it is presented as optional.

## Reflections on the manifesto-making process

This manifesto for education for environmental sustainability is presented as a provocation to those with responsibility for education in schools, communities and government. Whilst the manifesto was created with teachers and young people, the research team determined the objectives for the workshop. Although Alminde and Warming (2020) suggest that this may be undemocratic, the framing of the research was against the background of calls for change from young people and teachers through movements such as Teach the Future, and the workshops were designed such that there were different ways for people to respond to both our stimuli and each other's ideas, and to invite participants what to think *about*, not what to think.

Inclusion and participation (including across generations) were central to the decisions made about the methods to produce the manifesto, including partnering with those with

expertise in working with groups whose voices are less frequently heard, for example young people with additional learning needs. In the field of environmental justice, recognition and participation have been identified as elements of justice (Schlosberg, 2007). This means recognising the experiences of teachers and people and enabling them to participate in political processes which set and manage policy. Young people of secondary school age and their teachers are often excluded from educational policy-making processes. The manifesto-making process highlighted the desire for greater involvement in decision-making at different levels and points to the need for more critical and participatory approaches to education for environmental sustainability – in research, policy and practice.

Creating shared priorities for education, especially in situations of high degrees of uncertainty, might overlay the most common and achievable solutions and downplay disagreement over the extent and type of change needed. We recognise that the most powerful ideas are not always the most popular ideas, and as such the manifesto must be seen as a provocation or an interruption, with the caveat that this is to identify future paths and desirable processes rather than a one-size-fits-all approach. Working with a large number of contributions, however, it was possible to identify the key barriers to education for environmental sustainability in the UK, and for participants in different nations to learn what has been successful or unsuccessful in these different contexts. There is a need to be aware of the possible presence of ethnocentric projections which are likely to feature in a UK-centred research project involving a large number of participants for relatively short periods of time. To this end, we invited provocations that focused on politics and social justice, and encouraged participants to send responses following the workshop, in any format they felt comfortable with.

## CONCLUSIONS

The manifesto (BERA, 2021) presents priorities at different levels according to who has the power to make decisions and influence practice at each level. The environment and sustainability are treated differently in the four nations, but irrespective of where participants were joining from, there was consensus that the urgency of the climate crisis requires an educational response. The manifesto calls for educational policies which prioritise collective, equitable action and positive problem solving, a co-ordinated review of curriculum involving teachers and students and recognition of sustainability as a priority within accountability regimes. We have yet to see these calls reflected in policy announcements from the UK Secretary of State for Education post-COP26, where ministers made a commitment to ‘the integration of sustainability and climate change in formal education systems, including as core curriculum components, in guidelines, teacher training, examination standards and at multiple levels through institutions ... [and] working with diverse stakeholders, including young people, to ensure proposed policies and changes adequately respond to the needs and lived experiences of all communities.’ (UN Climate Change Conference UK, 2021).

Whilst the manifesto challenges the *status quo*, its focus on consensus between young people and teachers’ priorities means that it is unlikely to go far enough to achieve all the changes in educational work necessary to respond to the climate crisis. As Stein et al. (2020) have argued:

the predicament we face is not primarily rooted in ignorance and thus solvable with more knowledge, nor primarily rooted in immorality and thus solvable with more normative values; rather, it is rooted in denials that stem from harmful desires for and investments in the continuity of the securities and satisfactions promised by modernity-coloniality. (Stein et al., 2020, p. 1).

It is therefore important to pay attention to which perspectives were absent and to be cognisant of the possibility of (re)producing unsustainable or uncritical approaches to education, the environment and sustainability. Whilst we made efforts to ensure teachers and young people in mainstream and special schools were included, and to ensure young women and people of colour were represented in provocations through partner networks, and invitations to respond, we cannot be sure that the priorities reflect those of all teachers and young people. Those who took part will include those who had knowledge about education and environmental sustainability, had the confidence to participate in discussions with people unknown to them and had resources (including time and technology) available to enable them to participate.

Environmental sustainability is one priority for education, and this cannot be separated from other societal challenges including racism, unemployment and health and wellbeing. We do not see these as in competition, but as a constellation of priorities which demand our urgent and collective attention. We call for education to play a more visible and active role in preparing young people as individuals, and as a collective, to be able to respond to the major challenges of our time and to participate in the 'construction, maintenance and transformation' (Biesta & Lawy, 2006, p. 65) of social and political life. This is consistent with young people, teachers' and teacher educators' understanding of environmental sustainability as a process of both caring about and repairing environmental and social injustices.

In the context of environmental sustainability, we have trialled a process for articulating these priorities and identifying solutions, which includes those who are affected by policies and practices in education for environmental sustainability – teachers and young people. A future direction for this work will be to better articulate 'education for environmental sustainability' both conceptually and practically, to involve a greater diversity of voices with the manifesto acting as a stimulus for this work, and finally to pick up the trajectories of work identified in the manifesto, working with young people and educators to translate them into educational realities.

## ACKNOWLEDGEMENTS

We are grateful to the British Educational Research Association (BERA) for their support, and also to partners, provocateurs, and the young people and teachers who contributed to the manifesto.

## CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors. All authors listed have made a substantive contribution either to the writing and/or to the underpinning research.

## ETHICS APPROVAL STATEMENT

Approval for the research was granted by the University of York Department of Education Ethics Committee. Date approved 9 March 2021, reference 21/3.

## PATIENT CONSENT STATEMENT

All research participants consented to take part.

## DATA AVAILABILITY STATEMENT

Research data are not shared.

## ORCID

Lynda Dunlop  <https://orcid.org/0000-0002-0936-8149>

Elizabeth A. C. Rushton  <https://orcid.org/0000-0002-6981-8797>



## REFERENCES

- Alminde, S., & Warming, H. (2020). Future workshops as a means to democratic, inclusive and empowering research with children, young people and others. *Qualitative Research*, 20(4), 432–448. <https://doi.org/10.1177/1468794119863165>
- Alsop, S., & Bencze, L. (2014). Activism! Toward a more radical science and technology education. In *Activist science and technology education* (pp. 1–19). Springer.
- Bartlett, R. (2015). Visualising dementia activism: Using the arts to communicate research findings. *Qualitative Research*, 15(6), 755–768. <https://doi.org/10.1177/1468794114567493>
- BERA. (2021). *A manifesto for education for environmental sustainability*. Retrieved from <https://www.bera.ac.uk/news/manifesto-for-education-for-environmental-sustainability-efes-published-by-bera-research-commission>
- Biesta, G., & Lawy, R. (2006). From teaching citizenship to learning democracy: Overcoming individualism in research, policy and practice. *Cambridge Journal of Education*, 36(1), 63–79.
- Biesta, G., & Säfström, C. A. (2011). A manifesto for education. *Policy Futures in Education*, 9(5), 540–547. <https://doi.org/10.2304/pfie.2011.9.5.540>
- Brett, R. (2019). *What is a Manifesto ... ?* Social Sciences Blog of the British Library. Retrieved from <https://blogs.bl.uk/socialscience/2019/07/manifesto.html>
- Council for the Curriculum, Examinations & Assessment. (2020). *The big picture of the curriculum at key stage 4*. Retrieved from <https://ccea.org.uk/learning-resources/big-picture-curriculum-key-stage-4>
- Danchev, A. (2011). *100 artists' manifestos (penguin modern classics)*. Penguin.
- Department for Education (DfE). (2021a). *School teacher workforce*. Retrieved from <https://www.ethnicity-facts-figures.service.gov.uk/workforce-and-business/workforce-diversity/school-teacher-workforce/latest>
- Department for Education (DfE). (2021b). *Sustainability & Climate Change. A draft strategy for the education & children's services systems*. Retrieved from [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1031454/SCC\\_DRAFT\\_Strategy.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1031454/SCC_DRAFT_Strategy.pdf)
- Department of Education (DfE). (2007). *The education (curriculum minimum content) order (Northern Ireland)*. Department of Education, Northern Ireland. Retrieved from <https://www.education-ni.gov.uk/sites/default/files/publications/de/minimum-content-order-2007.pdf>
- Dunlop, L., Atkinson, L., Stubbs, J. E., & Turkenburg-van Diepen, M. W. G. (2021). The role of schools and teachers in nurturing and responding to climate crisis activism. *Children's Geographies*, 19(3), 291–299.
- Dunlop, L., Atkinson, L., Turkenburg, M. G. W., & Mc Keown, D. (2021). Youth representations of environmental protest. *British Educational Research Journal*, 47, 1540–1559. <https://doi.org/10.1002/berj.3737>
- Earl, J., Maher, T. V., & Elliott, T. (2017). Youth, activism, and social movements. *Sociology Compass*, 11(4), e12465. <https://doi.org/10.1111/soc4.12465>
- Eaton, E. M., & Day, N. A. (2020). Petro-pedagogy: Fossil fuel interests and the obstruction of climate justice in public education. *Environmental Education Research*, 26(4), 457–473. <https://doi.org/10.1080/13504622.2019.1650164>
- Edwards, R., & Holland, J. (2013). *What is qualitative interviewing?*. Bloomsbury. Retrieved from [https://eprints.ncrm.ac.uk/id/eprint/3276/1/complete\\_proofs.pdf](https://eprints.ncrm.ac.uk/id/eprint/3276/1/complete_proofs.pdf)
- Fazey, I., Schäpke, N., Caniglia, G., Hodgson, A., Kendrick, I., Lyon, C., Page, G., Patterson, J., Riedy, C., Strasser, T., Verveen, S., Adams, D., Goldstein, B., Klaes, M., Leicester, G., Linyard, A., McCurdy, A., Ryan, P., Sharpe, B., ... Young, H. R. (2020). Transforming knowledge systems for life on earth: Visions of future systems and how to get there. *Energy Research & Social Science*, 70, 101724. <https://doi.org/10.1016/j.erss.2020.101724>
- Ferguson, T., Roofe, C., & Cook, L. D. (2021). Teachers' perspectives on sustainable development: The implications for education for sustainable development. *Environmental Education Research*, 27, 1343–1359. <https://doi.org/10.1080/13504622.2021.1921113>
- Fisher, D. R. (2019). The broader importance of # FridaysForFuture. *Nature Climate Change*, 9(6), 430–431. Retrieved from <https://www.nature.com/articles/s41558-019-0484-y>
- Flinders, M., & Buller, J. (2006). Depoliticisation: Principles, tactics and tools. *British Politics*, 1, 293–318. <https://doi.org/10.1057/palgrave.bp.4200016>
- Fridays for Future. (2022). *Reasons to strike*. Online. Retrieved from <https://fridaysforfuture.org/take-action/reasons-to-strike/>
- Glackin, M., & King, H. (2020). Taking stock of environmental education policy in England – The what, the where and the why. *Environmental Education Research*, 26(3), 305–323. <https://doi.org/10.1080/13504622.2019.1707513>
- Government Office for Science. (2007). *The futures toolkit. Tools for futures thinking and foresight across UK Government*. Retrieved from [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/674209/futures-toolkit-edition-1.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674209/futures-toolkit-edition-1.pdf)

- Hart, R. A. (2008). Stepping Back from 'the ladder': Reflections on a model of participatory work with children. In A. Reid, B. B. Jensen, J. Nikel, & V. Simovska (Eds.), *Participation and learning*. Springer. [https://doi.org/10.1007/978-1-4020-6416-6\\_2](https://doi.org/10.1007/978-1-4020-6416-6_2)
- Herbert, J. (2021). The socio-ecological imagination: Young environmental activists constructing transformation in an era of crisis. *Area*, 53, 373–380.
- Howard-Jones, P., Sands, D., Dillon, J., & Fenton-Jones, F. (2021). The views of teachers in England on an action-oriented climate change curriculum. *Environmental Education Research*, 27, 1660–1680. <https://doi.org/10.1080/13504622.2021.1937576>
- 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>
- Intergenerational Foundation. (2015). 6. *What is a manifesto?* Retrieved from <http://www.if.org.uk/wp-content/uploads/2014/06/manifesto-2015-factsheet-6.pdf>
- Jensen, B. B. (2004). Environmental and health education viewed from an action-oriented perspective: A case from Denmark. *Journal of Curriculum Studies*, 36(4), 405–425. Retrieved from 10.1080/0022027032000167235
- Jensen, B. B., & Schnack, K. (1997). The action competence approach in environmental education. *Environmental Education Research*, 3(2), 163–178.
- Kaufmann, M., & Tzanetakis, M. (2020). Doing internet research with hard-to-reach communities: Methodological reflections on gaining meaningful access. *Qualitative Research*, 20(6), 927–944.
- Lyon, D., & Carabelli, G. (2016). Researching young people's orientations to the future: The methodological challenges of using arts practice. *Qualitative Research*, 16(4), 430–445. <https://doi.org/10.1177/1468794115587393>
- Malmberg, C., & Urbas, A. (2020). The virtue of citizenship: The deficit of democratic politics in science education. In W. Melville & D. Kerr (Eds.), *Virtues as integral to science education: Understanding the intellectual, moral, and civic value of science and scientific inquiry* (pp. 143–158). Routledge.
- 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, 1522–1544. <https://doi.org/10.3390/su5041522>
- Nunn, C. (2020). The participatory arts-based research project as an exceptional sphere of belonging. *Qualitative Research*, 22(2), 251–268. <https://doi.org/10.1177/1468794120980971>
- Peddiwell, J. A. (2003). *The saber-tooth curriculum*. McGraw Hill (Original work published 1939).
- Pickard, S., Bowman, B., & Arya, D. (2020). 'We are radical in our kindness': The political socialisation, motivations, demands and protest actions of young environmental activists in Britain. *Youth and Globalization*, 2(2), 251–280. Retrieved from [https://brill.com/view/journals/yogo/2/2/article-p251\\_251.xml](https://brill.com/view/journals/yogo/2/2/article-p251_251.xml)
- Rousell, D., & Cutter-Mackenzie-Knowles, A. (2020). A systematic review of climate change education: Giving children and young people a 'voice' and a 'hand' in redressing climate change. *Children's Geographies*, 18(2), 191–208.
- Routes. 2021. *What could the future of education for environmental sustainability look like?* Retrieved from <https://routesjournal.org/projects/bera/>
- RSC (2021). *Green shoots: A sustainable chemistry curriculum for a sustainable planet*. Retrieved from <https://www.rsc.org/globalassets/22-new-perspectives/sustainability/sustainability-curriculum/green-shoots-a-sustainable-chemistry-curriculum-for-a-sustainable-planet.pdf>
- Rushton, E. A. C. (2021). Building teacher identity in environmental and sustainability education: The perspectives of preservice secondary school geography teachers. *Sustainability*, 13(9), 5321.
- Rushton, E. A., Dunlop, L., Atkinson, L., Price, L., Stubbs, J. E., Turkenburg-van Diepen, M., & Wood, L. (2021). The challenges and affordances of online participatory workshops in the context of young people's everyday climate crisis activism: insights from facilitators. *Children's Geographies*, 1–10. <https://doi.org/10.1080/14733285.2021.2007218>
- Salvatore, C., & Wolbring, G. (2021). Children and youth environmental action: The case of children and youth with disabilities. *Sustainability*, 13(17), 9950. Retrieved from <https://www.mdpi.com/2071-1050/13/17/9950>
- Santos, M. (2017). *Toward an other globalization: From the single thought to universal conscience* (Vol. 12). Springer.
- Schlosberg, D. (2007). *Defining environmental justice: Theories, movements, and nature*. Oxford University Press.
- Scottish Government. (n.d.). *School curriculum and qualifications*. Retrieved from <https://www.gov.scot/policies/schools/school-curriculum/>
- Stein, S., Andreotti, V., Suša, R., Ahenakew, C., & Čajková, T. (2020). From 'education for sustainable development' to 'education for the end of the world as we know it'. *Educational Philosophy and Theory*, 54, 274–287. <https://doi.org/10.1080/00131857.2020.1835646>
- Svarstad, H. (2021). Critical climate education: Studying climate justice in time and space. *International Studies in Sociology of Education*, 30(1–2), 214–232. <https://doi.org/10.1080/09620214.2020.1855463>



- Tarr, J., Gonzalez-Polledo, E., & Cornish, F. (2018). On liveness: Using arts workshops as a research method. *Qualitative Research*, 18(1), 36–52. <https://doi.org/10.1177/1468794117694219>
- Teach the Future. (n.d.). *Current climate education is inadequate*. Retrieved from <https://www.teachthefuture.uk/>
- The Royal Society. (2019). *Science that works for society – Royal Society manifesto*. Retrieved from <https://royal-society.org/-/media/news/2019/13-11-19-royal-society-manifesto.pdf>
- Thew, H., Middlemiss, L., & Paavola, J. (2020). Youth is not a political position: Exploring justice claims-making in the UN Climate Change negotiations. *Global Environmental Change*, 61, 102036. <https://doi.org/10.1016/j.gloenvcha.2020.102036>
- Thunberg, G. (2019). *No one is too small to make a difference*. Penguin Books.
- UK Parliament. (2021). *Manifesto*. Retrieved from <https://www.parliament.uk/site-information/glossary/manifesto/>
- UK Student Climate Network. (2020). *Our demands*. Retrieved from <https://ukscn.org/our-demands/>
- UN Climate Change Conference UK. (2021). *Co-chairs conclusions of education and environment ministers summit at COP26*. Retrieved from <https://ukcop26.org/co-chairs-conclusions-of-education-and-environment-ministers-summit-at-cop26/>
- UNICEF. (2021). *Youth for climate action*. Retrieved from <https://www.unicef.org/environment-and-climate-change/youth-action>
- United Nations. (1987). *Sustainability*. Retrieved from <https://www.un.org/en/academic-impact/sustainability>
- United Nations. (1989). *Convention on the rights of the child*. United Nations, Treaty Series, 1577(3).
- United Nations. (2012). *Learning for the future: Competences in education for sustainable development*. Retrieved from [https://unece.org/fileadmin/DAM/env/esd/ESD\\_Publications/Competences\\_Publication.pdf](https://unece.org/fileadmin/DAM/env/esd/ESD_Publications/Competences_Publication.pdf)
- Walters, R. (2020). Relinquishing control in focus groups: The use of activities in feminist research with young people to improve moderator performance. *Qualitative Research*, 20(4), 361–377. <https://doi.org/10.1177/1468794119847633>
- Welsh Assembly Government. (2008). *Education for sustainable development and global citizenship. A common understanding for schools*. Retrieved from <https://hwb.gov.wales/api/storage/eaf467e6-30fe-45c9-93ef-cb30f31f1c90/common-understanding-for-school.pdf>
- Welsh Government. (2021a). Curriculum for Wales. *The Journey to 2022*. <https://hwb.gov.wales/api/storage/0be87463-ba5a-4c88-882e-c293898cb67b/curriculum-for-wales-the-journey-to-2022.pdf>
- Welsh Government. (2021b). *The curriculum for Wales – Statements of what matters code*. Retrieved from <https://gov.wales/sites/default/files/publications/2021-11/curriculum-for-wales-statements-of-what-matters-code.pdf>
- Williams, S., & McEwen, L. (2021). ‘Learning for resilience’ as the climate changes: Discussing flooding, adaptation and agency with children. *Environmental Education Research*, 27, 1638–1659. <https://doi.org/10.1080/13504622.2021.1927992>
- YouGov. (2019). *Concern for the environment at record highs*. Retrieved from <https://yougov.co.uk/topics/politics/articles-reports/2019/06/05/concern-environment-record-highs>
- Zaradez, N., Sela-Sheffy, R., & Tal, T. (2020). The identity work of environmental education teachers in Israel. *Environmental Education Research*, 26(6), 812–829.

**How to cite this article:** Dunlop, L., Rushton, E. A., Atkinson, L., Ayre, J., Bullivant, A., Essex, J., Price, L., Smith, A., Summer, M., Stubbs, J. E., Diepen, M-v., & Wood, L. (2022). Teacher and youth priorities for education for environmental sustainability: A co-created manifesto. *British Educational Research Journal*, 00, 1–22. <https://doi.org/10.1002/berj.3803>