



FRAMING ARTICLE/EDITORIAL

School strike for climate: A reckoning for education

Blanche Verlie^{1,*}  and Alicia Flynn²

¹Sydney Environment Institute, The University of Sydney, Sydney, NSW, Australia and ²Melbourne Graduate School of Education, University of Melbourne, Melbourne, Vic, Australia

*Corresponding author. E-mail: blanche.verlie@gmail.com

(Received 19 January 2022; accepted 22 January 2022; first published online 16 February 2022)

Abstract

In this article framing the special issue on the global school strikes for climate, we ask: what if education is not the solution, but part of the system young people want to change? In conversation with school strikers and reflecting on the contributions to this issue, we argue that the strikes pose a reckoning for education. Five key themes emerge from this special issue: (1) students are striking because of the affective weight of climate injustice; (2) students learn through their participation in striking, in contrast to the often insufficient climate change education taught in schools; (3) young people are becoming climate change educators through their roles as strikers; (4) strikers are patronised through paternalistic structures (including schooling) that ostensibly exist to protect them; and therefore (5) we need to reimagine education. We then advance four propositions for education in response to young people's modest demands for a liveable future: (1) young people are in and of the collapsing climate; (2) youth voices need to be taken seriously, without excusing adult and collective responsibilities; (3) multigenerational, more-than-human, intercultural collaborations must be practiced in education for climate justice; and (4) we must learn to navigate ontological uncertainty and attend to ethical complexity.

Keywords: activism; climate change; Fridays for future; protest; School Strike 4 Climate; young people

Introduction

‘No graduation on a dead planet’
Global youth strike for climate movement, 2018

In August 2018, a 15-year-old Swedish school girl, Greta Thunberg, went on strike from school. Thunberg sat alone outside the Swedish Parliament every day for 3 weeks in the lead up to the Swedish election, with her sign that read *skolstrejk för klimatet* (school strike for climate), demanding the Swedish Parliament act to radically reduce greenhouse gas emissions. Inspired by American children walking out of school in response to the Stoneman Douglas high school shooting, Thunberg's lone strike built on a long history of children striking from school to assert political power (Bowman & Germaine, this issue; Dupuis-Déri, 2021) and quickly captured the world's attention. Students around the world began, and continue, to strike from school once a week under the moniker Fridays for Future, demanding climate justice.

Since mid-2018, this global movement—known in Australia as School Strike 4 Climate (SS4C)—has organised large, global, coordinated strikes that have mobilised roughly 10 million people in over 260 countries. In these times of another socio-ecological crisis, COVID-19, they have moved online. Across diverse places and platforms, school strikers are crying out for the world to ‘change the system, not the climate’ (e.g. Youth Climate Strike US, 2020; see also

Wahlström et al., 2019), honing in on the heart of the problem: what is needed is not technopopian market-based mechanisms of haphazard climate *action*, but socio-cultural, economic and political transformation for climate *justice* (Whyte, 2017). As many Indigenous-led instantiations of the school strikes identify, the root cause of climate change is the pervasive individualism, inequality and anthropocentrism of colonial capitalism (Deranger, 2021; Margolin, 2019; Ritchie, 2021); the resultant policy and leadership crises are just one surface-level symptom.

This special issue responds to the global momentum of the school climate strikes and contributes to scholarship on the confluence of education, youth activism and the climate strikes specifically (Brennan, Mayes, & Zipin, 2021; Dunlop, Atkinson, Stubbs, & Diepenet, 2021; Dupuis-Déri, 2021). The articles in this issue variously respond to the implication of these strikes for education, in particular environmental education. In this essay, we (Blanche and Alicia) firstly explore the themes raised by the papers in this issue, and then offer four propositions for education informed by what we have learned from youth climate strikers and these papers.

Greta Thunberg is now a household name and her efforts and effect on youth climate justice activism cannot be overstated. However, striking from school for the climate is not new. Young people from around the world have been engaged in justice-oriented climate activism for decades (O'Brien, Selboe, & Hayward, 2018) including through striking from school (see e.g. <https://www.climatestrike.net/call2015/>), as Thunberg herself acknowledges. In Australia, we have the Australian Youth Climate Coalition which celebrated its 15th birthday in 2021, and The Australian Student Environment Network formed in 1997. Young BIPOC (Black, Indigenous and People of Colour) leaders such as Xiuhtezcatl Roske-Martinez, Jamie Margolin, Hilda Nakabuye and organisations such as Seed Indigenous Youth Climate Network (Australia) and the Pacific Climate Warriors (Pacific Islands), have been campaigning for climate justice for decades, or, with a more expansive definition of climate activism, for as long as colonialism has ruptured human-land-climate relations (Whyte, 2017). Yet BIPOC efforts receive significantly less recognition and support than white, wealthy children's climate activism. Interrogating the racial, cultural and economic inequalities BIPOC youth climate activists continue to face is central to taking youth calls for climate justice seriously, as Ugandan climate activist Vanessa Nakate (2021)—infamously cropped out of an image with European school strikers—and Ravi (2021) compellingly argue.

While not new, the form and scale of the Thunberg-amplified school strikes indicate a critical shift in youth climate activism as well as political action more broadly and, as this special issue explores, one that directly enrolls education and schools into the arena of climate politics. One oft-used school striker placard reads, 'we are skipping our lessons to give you one' and Thunberg et al. (2019) argue striking is 'the biggest lesson of all'. In this essay, we argue that it behoves educators and education scholars to pay attention to what we might learn about (climate) education from school strikers.

In 2018 and 2019, Blanche attended climate strikes in Narrm Melbourne (Wurundjeri Country, Kulin Nation) and Sydney (Gadigal Country, Eora Nation) with her students, and Alicia in Narrm with her own children. The strikes forced us to seriously consider whether education is fit for purpose in the context of the escalating global crises of climate change and mass biodiversity extinction. Many educators and education scholars are posing similar questions, exemplified by the Common Worlds Research Collective (2020) UNESCO paper of declarations 'Learning to become *with* the world: Education for future survival'. The millions of school children around the world getting organised, walking out of their classrooms and striking in the streets inspired us to wonder: what if education is not the solution, *but part of the problem*? Through our ongoing engagement with school strikers, we contend that the strikes pose a *reckoning for education* that must be thoughtfully engaged with by scholars, educators, activists and others involved with education.

Many educators (including us) have thought that the knowledge and skills we help young people develop are a meaningful way of addressing social and environmental issues. Indeed, education, especially environmental and climate change education, are among the most commonly

named ‘solutions’ to the climate crisis. However, as Orr has argued, our ecocidal global socio-economic systems (namely colonial-capitalism) are ‘largely the result of work by people with BAs, BSs, LLBs, MBAs and PhDs’ (Orr, 1991, n.p.) and ‘more of the same kind of education will only compound our problems’ (1991, n.p.). Of concern to us is the reality that under the conditions of climate anxiety (Hickman et al., 2021), students have felt that walking *away* from school—literally and symbolically—is the most agentic thing they could do for ecological justice. At this stage, it appears to have been the most effective and *affecting* action that has caught global attention. This raises the scholarly question, what if (mainstream) (environmental) education is not only inadequate, but obstructive, to young people’s climate action (Dunlop et al., 2021)?

While scholarship across social movements studies, political science and media and communications has begun to consider the school strikes, considerably less research has focused on the implications for education. At the start of 2020, just as the COVID-19 pandemic was unfolding, we placed the call for submissions for this special issue to provide a space to closely consider the educational dimensions of the school strikes. Central to our concerns was the persistent and pervasive dismissal of children’s climate knowledge and political agency perpetuated in some climate change education research, commonly apparent in deficit-based studies that seek to quantify students’ *lack* of knowledge, concern and/or action (Mayes & Hartup, 2021; Rousell & Cutter-Mackenzie-Knowles, 2020). We specified in the call for papers that we were primarily interested in research that emphasised young people’s sophisticated and nuanced abilities as informed and agile social activists. Our intention was to attract papers that think *with*, not for or on behalf of, the diverse young people of this movement.

This special issue contains eight research articles and communications pieces, two student research thesis synopses (by Emma Keech; and Jayden Wlasichuk), and two book reviews (reviewed by Panu Pihkala; and Monica Green). These pieces represent authors from Australia, New Zealand, Canada, and the United Kingdom. Two articles include school strikers as authors (Amanda Tattersall, Jean Hinchliffe & Varsha Yajman; Peta White, Joe Ferguson, Niamh O’Connor Smith & Harriet O’Shea Carre), three are sole- or lead-authored by PhD students (Nita Alexander, Theresa Petray & Ailie McDowall; Ria Bright & Chris Eames; Hannah Feldman), and the three remaining papers are by Greg Lowan-Trudeau and Teresa Anne Fowler, Karena Menzie-Ballantyne and Miriam Ham, and Benjamin Bowman and Chloé Germaine. These papers come from political studies, activism and social movement studies, youth studies, media and communications, culture and literary criticism and education. All these papers were written throughout the COVID-19 pandemic, although they are mostly discussing the climate strikes that occurred before the pandemic. While the articles, and we, resist the homogenising of youth experience and perspective, some common themes arise from the special issue, which we explore in the next section.

Striking from School is Empowering Youth-Led Learning

One of the most significant themes of this collection is the affective dimensions of climate injustice: students are striking because they are terrified of the future they are inheriting and horrified by the unequal implications for other bodies—human and non-human—around the world. In solidarity with, and having learned from, BIPOC climate activism, school strikers consciously advocate for climate *justice* (Wlasichuk; White et al.; Trudeau & Fowler; Bowman & Germaine) which focuses on how the impacts of climate change affect disadvantaged and marginalised people ‘first and worst’ (Seed Indigenous Youth Climate Network, 2022). This intra-generational injustice is intensified by the fact that climate change is a problem that compounds over time, hence, it is also a matter of intergenerational injustice. These complex injustices generate intense emotions such as anxiety and anger in young people, which can be paralysing but can also catalyse and sustain school strike action (Bright & Eames; Pihkala). Striking from school for

climate justice is found to be, for some young people, an effective way of responding to these emotional harms through both ameliorating the painful feelings and the root causes of the crisis, including the hyper individualisation of schooling. As discussed variously in this special issue, coming together with other young people that feel similarly and finding ways to address the situation collectively helps strikers counteract the sense of isolation that can accompany climate anxiety (Bright & Eames), and build a sense of solidarity and empowerment (Tattersall et al.).

A second theme in the collection is that strikers learn through their participation in striking, often in stark contrast to the insufficient climate change education taught in schools (Menzie-Ballantyne & Ham). Research published in this issue shows how young people are learning a dynamic suite of skills and critically applied knowledge when striking from school (e.g. Bright & Eames; Tattersall et al.; Trudeau & Fowler). Young people are navigating regulations around the occupation of public space, negotiating with police, organising web presences, and developing coherent demands built on their critical geopolitical literacy (Tattersall et al.; White et al.; Trudeau & Fowler). This demonstrates that many young people today are more than capable of seeking out and understanding climate science, making sense of its implications through sophisticated socio-economic analyses, courageously engaging politically with varied injustices, and at organising themselves to take critical and reflective collective climate action (see Tattersall et al.; Bowman & Germaine; Trudeau & Fowler; Menzie-Ballantyne & Ham).

A third commonality is that young people are becoming climate change educators. Not only have the young people involved in the strikes been learning, they have also been teaching themselves and others, from their peers, to parents, teachers, communities, politicians and scholars. Tattersall et al., Bright and Eames, and Bowman and Germaine demonstrate that students are no longer waiting for formal education to teach them what they need to know. Rather, as Bowman and Germaine state, the movement is a 'collaborative, youth-led endeavour in climate education'. Students are becoming adept at teaching themselves the knowledge they need to engage meaningfully outside of class time. For example, as noted previously, youth climate strikers organise around the premise of 'climate justice' which requires multidisciplinary knowledges, yet climate justice is not well addressed within environmental education literature (Stapleton, 2018) and is seldom represented in curricula (Brennan et al., 2021).

Taken together, these latter two findings demonstrate that striking from school does not equate to rejecting education. Rather, students are leaving schools where they are not learning what they need and instead teaching themselves outside of school where they are generating emergent transformative (Bowman & Germaine) and critical (Trudeau & Fowler; White et al.) literacies as well as leadership skills (Tattersall et al.). While conservative politicians such as Australian Prime Minister Scott Morrison have argued that we need 'more learning, and less activism, in schools' (Australian Associated Press, 2018), the admonishable situation is that there has been little meaningful, effective and affective climate change learning available in school (Rousell & Cutter-McKenzie-Knowles, 2020). Hence, it is not that we need less activism in schools, but we do need more relevant, meaningful, empowering climate change learning in schools. Until then, climate activism as learning compensates.

A fourth matter addressed in this special issue is the complex political terrain that school strikers navigate in order to fight for their futures. All climate activists are faced with the pervasive petro-industrial complex of colonial-capitalism (Trudeau & Fowler). However, youth climate activists face additional political structures that inhibit their democratic participation, which is further amplified when their roles as school students are added into the mix (Green). School strikers have experienced discursive marginalisation founded on the generational oppression that comes with being a young person. Excluded from voting and other mechanisms of being heard by politicians and policy makers (Keech), young people are also disrespected by right wing media personalities and authoritarian politicians (Bowman & Germaine; Alexander et al.).

Further, school strikers are patronised through paternalistic structures that ostensibly exist to protect them, both institutional policies and cultural narratives (Alexander et al., Feldman). This

‘protective silencing’ works in perverse alignment with broader climate denial and inaction that refuses to hear their demands, such as when Australian Federal Minister for the Environment Susan Ley appealed a court ruling that found she has a ‘duty of care’ to protect children from the impacts of climate change (SBS, 2021). Collectively, these social practices result in a systematic silencing of young people on climate change, but as ever, this silencing is not evenly experienced (Nakate, 2021). Feldman’s important commentary in this issue reminds us of the limitations of research methods which themselves potentially leave large swathes of students’ voices unheard on these critical issues. Indeed, the young people represented in this issue are almost exclusively from rich nations with little disaggregation of experiences and perspectives within that cohort—which may reflect on our call for papers and scholarly networks—meaning that despite the important findings of this collection, there are still significant racial, geographical, cultural and class-based silences.

The papers in this special issue explore how schooling is failing students in multiple ways in the face of the climate crisis. Not only is it not (adequately) teaching them what they need to know, it is constraining their cultural and political agency and affect, and as such is foreclosing on inter-generational justice. In response to these foundational challenges to the legitimacy of education, a fifth theme in the papers collated here is a call to ‘reimagine education’ (White et al.) in diverse ways. Some articles outline specific ways education can improve, for example through integrating education for global citizenship and education for sustainability (Menzie-Ballantyne & Ham); other scholars call for a more fundamental rethinking of what education could and should be (White et al.; Bowman & Germaine). As our authors demonstrate, despite the barriers posed by adult structures, young people’s prefigurative activism (Bowman & Germaine; Alexander et al.) imagines and enacts other worlds (White et al.) and demands that we take youth-led education for climate-justice seriously.

A Reckoning for Education

In conversation with the articles assembled here, the words and actions of school strikers around the world, and our own experiences as teachers, researchers, activists and a parent (Alicia), we contend that the school strikes specifically, and the climate crisis more broadly, pose a reckoning for education. Climate change has been described as a ‘code red for humanity’ by the UN Secretary General (Slezak & Timms, 2021). This is materialising in official ‘code red’ declarations affecting schools, such as the catastrophic fire conditions during Australia’s Black Summer bushfires (2019–2020) which resulted in hundreds of schools having to close and some school campuses burning. It is in this context that children are *leaving* rather than turning up to school in order to fight for their futures; and as some strikers during that summer proclaimed on signs, kids cannot go to school when their schools are closed due to climate change. Strikers’ signs regularly proclaim that there are no jobs, no graduation, no point and no possibility of education on a dead planet. Two SS4C leaders from Castlemaine, Harriet O’Shea Carre (a co-author in this issue) and Milou Albrecht elaborate:

We have decided to go on strike from school to show our leaders that, right now, tackling climate change feels more important than our education. What’s the point of learning facts at school if the people in power ignore the facts? We have to know that we will have a liveable planet before we can get excited about our future careers . . . Going on a strike seems educational in itself. We are learning how to use our voices and stand up for what we believe is right. That’s the point of school anyway. (O’Shea Carre & Albrecht, 2018)

Climate change is widely framed as an existential crisis, and we argue that this must be recognised also as an existential crisis *of and for education*. The very notion that young people are driven to strike from school because of widespread climate inaction is a deep challenge to foundational assumptions about the purposes and values of education, including the idea that education has young people's best interests at heart and is helping prepare them to flourish in the future. In economically 'developing' countries, girls are already being withdrawn from education as climate change forces their families to prioritise more pressing survival challenges (Thomas, 2021). In combination with strikers' withdrawal of consent by refusing to attend school, these phenomena force us to ask, following the Common Worlds Research Collective (2020): if education does not enable planetary survival, then is it fit for purpose?

Formal schooling is a central part of the colonial-capitalist system that strikers are demanding be changed. Critical pedagogy has long criticised the multiple ways that capitalist education's ideological and material structures enrol learners into business-as-usual subjectivities (e.g. Freire, 2012/1970), as evidenced by Australia's recent education policies aspiring for (particular) 'jobs ready graduates'. But what role has environmental education played, and what role could it play in systems change? Environmental educators might suggest that the school strikes indicate the need to 'mainstream' environmental education. In our view, it is not self-evident that we can see the strikes as a clear 'win' that vindicates our (environmental educators' and scholars') efforts to increase students' climate literacy and action competencies. Mobilising global social movements, speaking at United Nations events, becoming *Time's* Person of the Year, and walking out of school have not been goals historically advocated by environmental educators. It is possible that we have been diminishing the vast capacities of young people by focusing only on their scientific literacy and over-emphasising the value of individual actions to help them feel hopeful in the short term, without (adequately) providing them with the critical political opportunities, and working alongside them, to dismantle planet-destroying global systems. This 'hopeful denial' only enhances the climate anxiety of young people, as Thunberg compellingly argues:

We can no longer let the people in power decide what is politically possible. We can no longer let the people in power decide what hope is. Hope is not passive. Hope is not blah, blah, blah. Hope is telling the truth. Hope is taking action. And hope always comes from the people. (Thunberg in Carrington, 2021, Sept 28).

While criticisms of the depoliticisation of environmental education in schools is not new (Lousley, 1999), more recent research demonstrates that 'sustainability education' that promotes individual green choices is itself deeply political, as it serves the interests of extractive capitalism and is even advocated and implemented by fossil fuel companies (Eaton & Day, 2020).

Of course, much environmental education does enable students to interrogate and resist fossil capitalism. However, the strategies and discourses through which this can be achieved are politically and professionally fraught terrain. Anecdotally we know that many teachers have inspired and supported students to strike, and through climate change education literature we know that many teachers are progressively implementing creative, justice-oriented climate change education (e.g. Rooney, 2019; Stapleton, 2018). Further, many strikers, such as O'Shea Carre and Albrecht (2018), frame striking as a sacrifice they make, indicating that they value their education immensely. Of course, this rhetoric of sacrifice may be a strategic move to counteract the claims from conservative politicians and commentators that strikers are, among other things, 'rebellious truants' (Mayes & Hartup, 2021, p. 1) who would do anything to wag school. In this context where striking from school cannot be official school policy, some schools have sought to support children's climate activism by framing the strikes as excursions. But while this may allow students to be present at a political event, it does mean students are no longer *striking* from school, and as such, it both enables and constrains their expression of political resistance. In sum, the school strikes raise

complex challenges for teachers, school management and guardians regarding whether and how to support strikers.

In the section that follows, we offer four propositions for reckoning with the complex politics of climate activism in education, informed by what we have learned from youth climate strikers and the contributions in this issue.

Young people are in and of the collapsing climate

One of the most foundational elements of this reckoning is to appreciate that children and young people—as all people/bodies, human and not, young and old—are *in and of* and always *becoming-with* the changing climate (Common Worlds Research Collective, 2020; Bawaka Country et al., 2020; Flynn, 2022; Verlie, 2017, 2022). Climate change can no longer be considered an object of the curriculum to be studied from a dispassionate distance, through scientific or justice lenses. Rapidly accelerating climate change must be recognised as the (often devastating) conditions and relations in which young people live, which reiteratively co-compose them and their life-worlds (Rooney, 2019; Verlie & Blom, 2021). Climate change is a structural violence inflicted on the young (Hickman et al., 2021; UNICEF, 2021), but it is more comprehensively a disruption in the matrix of multispecies and multigenerational relations they are embedded within (Flynn, 2022; Haraway, 2016; Verlie, 2022; Whyte, 2017). The climate crisis shapes who young people are, who they can become, and what they can do and know, which is similarly true of teachers and all people (Verlie, 2022). We are all weathering the pervasive impacts of climate change, albeit in socially differentiated ways (Neimanis & Hamilton, 2018; Rooney, 2019). Thus, education can only ever be *education-with-and-in-and-as-the-changing-climate*. From this reality flow our subsequent three propositions.

Youth voices need to be taken seriously, without excusing adult and collective responsibilities

Given young people's lives are likely to be radically different to those of today's adults, we must listen to, support and work alongside young people, as they are the experts in what it is like to grow up in a climate changed world. While this may sound straightforward and sensible, the mechanisms through which this occurs and the ethics of such processes require careful consideration. As strikers repeatedly insist, listening to, thinking-with and promoting young people as climate knowers and actors must never involve abrogating responsibility or emotional labour to them. A common refrain is that striking children are sources of hope for older people, but this overburdens them as the singular heroes of this crisis. The rub of this response is thinking against and beyond the false youth/adult binary, as Thunberg, Kyra Gantois and 46 other youth activists (2019) compellingly argue:

This is about crossing lines—it's about rebelling wherever one can rebel. It's not about saying 'Yeah, what the kids do is great, if I was young I would have totally joined' . . . it is not just up to us. We feel a lot of adults haven't quite understood that we young people won't hold off the climate crisis ourselves. Sorry if this is inconvenient for you. But this is not a single-generation job. It's humanity's job. (Thunberg et al., 2019).

School strikers understand better than anybody that they cannot do this alone and are simply saying: please listen to us but do not leave it up to us.

As educators and educational researchers, we have important work to do in taking youth voices and political engagement seriously. Educators can be leaders in how to reconfigure more lateral, anti-authoritarian relationalities (Murriss & Haynes, 2020) with children and young people (and

their more-than-human kin). To do so, we must devise long term approaches to learning and working alongside young people in non-hierarchical, democratic and multigenerational solidarity (Fielding & Moss, 2011; Haraway, 2016). This requires a considered process of ‘troubling authority’ (Murriss & Haynes, 2020) in ‘creating a postdevelopmentalist logic’ for education such as posed by Blaise (2010). As strikers have insisted, climate justice requires diverse forms of co-labouring and solidarity across multiple boundaries/categories, so our educational practices cannot resort to either youth-led *or* adult-dominated actions and would be better approached by collaborating with ‘young adults in a multigenerational web’ (Haraway, 2016, p. 97), as we consider next.

Multigenerational, more-than-human, intercultural collaborations must be practiced in education for climate justice

These times call on educators to reckon with distributive, multigenerational, intercultural, multi-species and relational agencies, both those that contribute to, and those that undermine, ecological survival and justice (Haraway, 2016; Nakata, 2007; Tallbear & Willey, 2019; Whitehouse, 2011). This requires educators to reconsider the established (neo)liberal presumption that, if sufficiently educated, children could become ethical and empowered ‘managers’ or ‘stewards’ of the Earth and climate (Taylor, 2017). None of us, certainly not young people alone, can ‘stop’, ‘fix’ or control the climate crisis. We are not, and cannot be, unaffected planet managers; rather, the changing climate will ‘tame, shape and direct’ humans ‘in ways we cannot fully understand, anticipate or imagine’ (Verlie, 2022, p. 59). As such, addressing the climate crisis demands collective *response-ability-as* the global, multigenerational, more-than-human web of relations that constitute the climate (Bawaka Country et al., 2020; Whyte, 2017).

Education for climate justice is premised in working across boundaries, especially at contested ‘cultural interfaces’ (Nakata, 2007) to unlearn “grandiose,” ageing, Enlightenment binaries’ (Whitehouse, 2011, p. 63). Following and as part of such unlearning, important lessons in more lateral, distributive configurations of collective, more-than-human, relational agency are offered by Indigenous scholars and communities (e.g. Graham, 2009; Simpson, 2014; Tuck, McKenzie, & McCoy, 2014; Yunkaporta & Kirby, 2011). School strikers have embraced such challenges, experimenting with different ways to do political engagement ‘commensurate with the damaged worlds we are now inhabiting’ (Rose, 2014, n.p.). Youth activists have modelled how to act for climate justice while recognising their own vulnerable entanglement within it; how to position justice as central to the climate crisis; and how to do collaboration as a necessary part of the process. They demonstrate that what matters is not just *what* the matter is (the climate crisis), but *how* to engage appropriately with the matter (collaboratively, across difference, despite uncertainty), which brings us to our final proposition.

We must learn to navigate ontological uncertainty and attend to ethical complexity

Refusing the delusions of anthropocentric agency and human exceptionalism can be deeply disorienting (TallBear & Willey, 2019), just as the realities of the climate crisis can be wildly disconcerting. Learning *from* young people by thinking-*with* them, complexity is not just an idea to be studied and theorised, but to be enacted, practiced and performed in every situation, every encounter. This is evident in the school climate strikes’ collective efforts of building alliances and solidarity across generations, species and kinds; work that is not easy or straightforward, ethically or practically. Such praxis requires being more spontaneous and responsive, not reactive; to go with the flow of uncertainty while mobilising against the status-quo of climate inaction; to ‘stay with the trouble’ (Haraway, 2016) of climate complicity and vulnerability (Verlie, 2022).

The uncertainty of the effectiveness of particular modes of climate action has not impeded the school strikers. During the COVID-19 pandemic, young people have modelled how to navigate

uncertainty and recalibrate approaches in response to perpetually changing circumstances, moving many strikes online over the last 2 years. This indicates that the children of climate change are more adept at responding to the uncertain and complex challenges of our times than many of us adults. This is perhaps the most important of all the literacies we can learn from school strikers as our realities become increasingly uncertain and ethically fraught; as their placards implore, the climate is changing, and if we are to respond, so must we.

In Times of Planetary Crisis Learning Must be Activism

The school climate strikes enrol education as part of the political arena through which youth power is asserted, and as an institutional actor which youth power is being exerted against (Brennan et al., 2021). Schools are critical sites where climate politics are being articulated and contested (Dunlop et al., 2021; Dupuis-Déri, 2021; Mayes & Holdsworth, 2020), and where new futures are being imagined. Strikers proclaim that ‘activism is learning’ but their actions also assert that learning *must be* activism given what is at stake. While it is unclear what the longer-term ramifications of the strikes will be, it is time for education to reckon with its role in the climate crisis and its entanglement within colonial-capitalist extractivism. Ideally, the transformative response is to reorient educational structures, practices and relations towards those that sustain life on Earth and support the young (of all species) to survive in what is becoming an increasingly volatile Earth system.

This special issue has not provided a comprehensive or conclusive answer to whether and how environmental education has inspired and supported, or delayed and repressed, student climate activism. No doubt it has done both. With the purposes of retaining its own legitimacy and relevancy, and mobilising the educational ethics required of this time, we argue that the reckoning for (environmental) education is to face the reality that children’s lives have already been dramatically reshaped by the climate crisis and will be unimaginably more so throughout the coming decades and centuries. ‘The climate crisis is a child rights crisis’ (UNICEF, 2021) which young people overwhelmingly understand, but it is also an educational crisis. Listening carefully to the words and actions of school strikers around the world, we contend that education must reckon with its continued entanglement within colonial-capitalist logics which pose a structural barrier to young people securing a liveable world for themselves.

This moment of reckoning for education—caused both by the climate crisis and the school climate strikes—requires a willingness to radically, and rapidly, reinvent what we imagine education to be and mobilise it in place-responsive, justice-oriented, survival-enabling ways. Nobody knows precisely what knowledges and skills young people will need for their climate-changed futures. To listen and respond to school strikers’ demands would therefore require moving towards an education where ‘teachers’ and ‘students’ work collaboratively to prevent climate injustice from escalating, by learning to live well with the more-than-human world. This means learning-*with* and recuperating-*with* the world *in* a changing climate *for* planetary survival (Common Worlds Research Collective, 2020; Flynn, 2022; Verlie & Blom, 2021).

One necessary project is to unsettle the extractive legacies and ongoing authoritarian structures of education to redesign formal education commensurate with the political-planetary crises of these times. That young people’s lives, life-worlds and livelihoods are *at stake* must *matter* to education. As the young climate strike collectives guide, this is no time for single heroes but instead collaborative, culturally responsive, locally situated practices of justice. In schools this means turning away from anthropocentric teacher-controlled pedagogy and curriculum, towards anti-colonial, anti-authoritarian, place-responsive approaches to learning enacted by multigenerational collectives. The momentum that the school strikes have generated must energise education systems to focus attention away from individualised industrial-academic outcomes, towards differentiated approaches of thriving *with* the world.

As the ‘return to normal’ calls abound in this not-yet-post-pandemic world, youth climate leaders are urging the world not to return to business-as-usual, but to stay with the trouble (Haraway, 2016) of making different worlds possible based on climate justice, and as the youth leaders regularly remind us, ‘climate justice means First Nations justice.’ We call on educators and education scholars to use our differential positions of privilege and power to influence others inside and outside education; to take the political agency of young people seriously; and to allow ourselves to be influenced by, responsive to, and supportive of, young people, as we collectively work to cultivate climate-just worlds.

References

- Australian Associated Press.** (2018). Scott Morrison tells students striking over climate change to be ‘less activist’. *The Guardian*. Retrieved from <https://www.theguardian.com/environment/2018/nov/26/scott-morrison-tells-students-striking-over-climate-change-to-be-less-activist>.
- Bawaka Country, Wright, S., Suchet-Pearson, S., Lloyd, K., Burarrwanga, L., Ganambarr, R., . . . Maymuru, D.** (2020). Gathering of the Clouds: Attending to Indigenous understandings of time and climate through songspirals. *Geoforum*, 108(1), 295–304. DOI [10.1016/j.geoforum.2019.05.017](https://doi.org/10.1016/j.geoforum.2019.05.017).
- Blaise, M.** (2010). Creating a postdevelopmental logic for mapping gender and sexuality in early childhood. In S. Edwards & L. Brooker (Eds.), *Engaging play* (pp. 80–95). Buckingham: Open University Press.
- Brennan, M., Mayes, E., & Zipin, L.** (2021). The contemporary challenge of activism as curriculum work. *Journal of Educational Administration & History*, 1(1), 1–15. DOI [10.1080/00220620.2020.1866508](https://doi.org/10.1080/00220620.2020.1866508).
- Carrington, D.** (2021, Sept 28). ‘Blah, blah, blah’: Greta Thunberg lambasts leaders over climate crisis. *The Guardian*. Retrieved from <https://www.theguardian.com/environment/2021/sep/28/blah-greta-thunberg-leaders-climate-crisis-co2-emissions>.
- Common Worlds Research Collective** (2020). Learning to become with the world: Education for future survival. Paper commissioned for the UNESCO Futures of Education report. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000374032?posInSet=1&queryId=N-EXPLORE-08167fcf-84e7-428b-af6e-633f41d3b606>.
- Deranger, E.T.** (2021). The climate emergency and the colonial response. Yellowhead Institute. Retrieved from <https://yellowheadinstitute.org/2021/07/02/climate-emergency-colonial-response/>.
- Dunlop, L., Atkinson, L., Stubbs, J.E., & Diepen, M.T.** (2021). The role of schools and teachers in nurturing and responding to climate crisis activism. *Children’s Geographies*, 19(3), 291–299. DOI [10.1080/14733285.2020.1828827](https://doi.org/10.1080/14733285.2020.1828827).
- Dupuis-Déri, F.** (2021). Youth Strike for Climate: Resistance of School Administrations, Conflicts Among Students, and Legitimacy of Autonomous Civil Disobedience—The Case of Québec. *Frontiers in Political Science*, 3(32), 1–11. DOI [10.3389/fpos.2021.634538](https://doi.org/10.3389/fpos.2021.634538).
- 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.
- Fielding, M., & Moss, P.** (2011). *Radical education and the common school: A democratic alternative*. London & New York: Routledge.
- Flynn, A.** (2022/forthcoming). *Recuperating-with the world: Composting education with sympoietic relationalities*. [Unpublished PhD thesis], University of Melbourne.
- Freire, P.** (2012/1970). *Pedagogy of the oppressed (30th anniversary edition, translated by Ramos, M. B.)*. Bloomsbury.
- Graham, M.** (2009). Understanding human agency in terms of place: A proposed Aboriginal research methodology. *PAN Philosophy, Activism, Nature*, 3, 71–78.
- Haraway, D.J.** (2016). *Staying with the trouble: Making kin in the Chthulucene*. Durham: Duke University Press.
- Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, E.R., Mayall, E.E., . . . van Susteren, L.** (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: A global survey. *The Lancet Planetary Health*, 5(12), E863–E873. DOI [10.1016/S2542-5196\(21\)00278-3](https://doi.org/10.1016/S2542-5196(21)00278-3).
- Lousley, C.** (1999). (De) Politicizing the environment club: Environmental discourses and the culture of schooling. *Environmental Education Research*, 5(3), 293–304.
- Mayes, E., & Holdsworth, R.** (2020). Learning from contemporary student activism: Towards a curriculum of fervent concern and critical hope. *Curriculum Perspectives*, 40(1), 99–103. DOI [10.1007/s41297-019-00094-0](https://doi.org/10.1007/s41297-019-00094-0).
- Mayes, E., & Hartup, M.E.** (2021). News coverage of the School Strike for Climate movement in Australia: The politics of representing young strikers’ emotions. *Journal of Youth Studies*, 2(2), 1–23. DOI [10.1080/13676261.2021.1929887](https://doi.org/10.1080/13676261.2021.1929887).
- Margolin, J.** (2019). I’m not only striking for the climate. *The New York Times*. Retrieved from <https://www.nytimes.com/2019/09/20/opinion/climate-strike.html>.
- Murris, K., & Haynes, J.** (2020). Troubling authority and material bodies: Creating ‘sympoietic’ pedagogies for working with children and practitioners. *Global Education Review*, 7(2), 24–42.

- Nakata, M.** (2007). *Disciplining the savages, savaging the disciplines*. Aboriginal Studies Press.
- Nakate, V.** (2021). *A bigger picture: My fight to bring a new African voice to the climate crisis*. Mariner Books.
- Neimanis, A., & Hamilton, J.M.** (2018). Weathering. *Feminist Review*, 118(1), 80–84.
- O'Brien, K., Selboe, E., & Hayward, B.M.** (2018). Exploring youth activism on climate change: Dutiful, disruptive, and dangerous dissent. *Ecology and Society*, 23(3), 42. DOI 10.5751/ES-10287-230342.
- O'Shea Carre, H. & Albrecht, M.** (2018, October 31). Why we're striking from school over climate change inaction, *The Sydney Morning Herald*. Retrieved from <https://www.smh.com.au/national/victoria/why-we-re-striking-from-school-over-climate-change-inaction-20181031-p50d30.html>.
- Orr, D.W.** (1991). What is education for?, *In Context*. Retrieved from <http://www.context.org/iclib/ic27/orr/>.
- Ravi, D.** (2021). The climate crisis is about the Global South's present. Not the Global North's future. *Al Jazeera*. Retrieved from <https://www.aljazeera.com/opinions/2021/11/12/climate-crisis-is-global-south-today-not-global-norths-tomorrow>.
- Ritchie, J.** (2021). Movement from the margins to global recognition: Climate change activism by young people and in particular indigenous youth. *International Studies in Sociology of Education*, 30(1-2), 53–72.
- Rooney, T.** (2019). Weathering time: Walking with young children in a changing climate. *Children's Geographies*, 17(2), 177–189.
- Rose, D.B.** (2014). Arts of living on a damaged planet. *Deborah Bird Rose: Love at the edge of extinction*. Retrieved from <http://deborahbirdrose.com/tag/donna-haraway/>.
- 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. DOI 10.1080/14733285.2019.1614532.
- SBS.** (2021, July 9). Environment minister to challenge court ruling that she owes children a duty of care over climate change. Retrieved from <https://www.sbs.com.au/news/environment-minister-to-challenge-court-ruling-that-she-owes-children-a-duty-of-care-over-climate-change/4f726fb9-4921-4c70-ae92-602b034daa55>.
- Seed Indigenous Youth Climate Network** (2022). Our story. Retrieved from https://www.seedmob.org.au/our_story.
- Simpson, L.B.** (2014). Land as pedagogy: Nishnaabeg intelligence and rebellious transformation. *Decolonization: Indigeneity, Education & Society*, 3(3), 1–25.
- Slezak, M., & Timms, P.** (2021, July 9). Climate change report from IPCC a 'code red for humanity', United Nations chief warns. *ABC News*. Retrieved from <https://www.abc.net.au/news/2021-08-09/coal-climate-change-global-warming-ippc-report-released/100355952>.
- Stapleton, S.R.** (2018). A case for climate justice education: American youth connecting to intragenerational climate injustice in Bangladesh. *Environmental Education Research*, 25(5), 732–750. DOI 10.1080/13504622.2018.1472220.
- Tallbear, K., & Willey, A.** (2019). Critical relationality: Queer, Indigenous, and multispecies belonging beyond settler sex & nature. *Imaginations*, 10(1), 5–15. DOI 10.17742/IMAGE.CR.10.1.1.
- Taylor, A.** (2017). Beyond stewardship: Common world pedagogies for the Anthropocene. *Environmental Education Research*, 23(10), 1448–1461.
- Thomas, T.** (2021, Nov 2). Climate change is forcing girls out of school — here's what young women want leaders to do about it. *Assembly: A Malala Fund Publication*. Retrieved from <https://assembly.malala.org/stories/climate-change-is-forcing-girls-out-of-school>.
- Thunberg, G., Taylor, A., Neubauer, L., Gantois, K., Wever, A.D., Charlier, A., & Villasenor, A.** (2019, March 15). Think we should be at school? Today's climate strike is the biggest lesson of all. *The Guardian*, Retrieved from <https://www.theguardian.com/commentisfree/2019/mar/15/school-climate-strike-greta-thunberg>.
- Thunberg, G., Gantois, K., Neubauer, L., Demirel, E., Nakate, V., Levy-Rappoport, N., . . . Mulinka, P.** (2019, May 24). Young people have led the climate strikes. Now we need adults to join us too. *The Guardian*, Retrieved from <https://www.theguardian.com/commentisfree/2019/may/23/greta-thunberg-young-people-climate-strikes-20-september>.
- Tuck, E., McKenzie, M., & McCoy, K.** (2014). Land education: Indigenous, post-colonial, and decolonizing perspectives on place and environmental education research. *Environmental Education Research*, 20(1), 1–23.
- UNICEF** (2021). *The climate crisis is a child rights crisis: Introducing the Children's Climate Risk Index*. New York: United Nations Children's Fund (UNICEF). Available at https://www.unicef.org/media/105531/file/UNICEF_climate%20crisis_child_rights_crisis-summary.pdf.
- Verlie, B.** (2017). Rethinking climate education: Climate as entanglement. *Educational Studies*, 53(6), 560–572.
- Verlie, B.** (2022). *Learning to live with climate change: From anxiety to transformation*. London: Routledge.
- Verlie, B., & Blom, S.M.** (2021). Education in a changing climate: Reconceptualising school and classroom climate through the fiery atmos-fears of Australia's Black summer. *Children's Geographies*, 29(3), 1–15. DOI 10.1080/14733285.2021.1948504.
- Wahlström, M., Kocyba, P., De Vydt, M., de Moor, J., Wouters, R., Wennerhag, M., . . . Buzogany, A.** (2019). *Protest for a future: Composition, mobilization and motives of the participants in Fridays For Future climate protests on 15 March, 2019 in 13 European Cities*. Keele, UK: Keele University e-Prints.
- Whitehouse, H.** (2011). Talking up country: Language, natureculture and interculture in Australian environmental education research. *Australian Journal of Environmental Education*, 27(2), 295–302.

Whyte, K. (2017). Indigenous climate change studies: Indigenizing futures, decolonizing the Anthropocene. *English Language Notes*, 1(2), 153–162.

Yunkaporta, T., & Kirby, M. (2011). Yarning up Aboriginal pedagogies: A dialogue about eight Aboriginal ways of learning. In N. Purdie, G. Milgate & H.R. Bell (Eds.), *Two way teaching and learning: Toward culturally reflective and relevant education* (pp. 205–213). ACER Press, http://research.acer.edu.au/indigenous_education/38/.

Youth Climate Strike US (2020). Theory of change. Retrieved from <https://www.youthclimatestrikeus.org/theory-of-change/>.

Dr. Blanche Verlie is a settler Australian climate change educator and researcher living on the unceded country of the Gadigal people of the Eora nation. She is currently completing a postdoctoral fellowship at the Sydney Environment Institute at the University of Sydney. Her work explores climate justice and emotions, and her book 'Learning to live with climate change: From anxiety to transformation' is available open access from Routledge.

Alicia Flynn is a white settler educator and researcher living on the unceded land of the Wurundjeri Woiwurrung people of the Kulin Nation. She is currently completing her PhD at the University of Melbourne Graduate School of Education on the sympoietic relationalities of more-than-human, anticolonial, climate and place-responsive learning, based on a field inquiry with a public high school in inner-city Narrm Melbourne.