

## DEVELOPMENT EDUCATION AND CLIMATE CHANGE

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This special issue on development education and climate change marks the thirtieth issue of *Policy and Practice: A Development Education Review*, and is co-edited by Gaby, who has recently joined the Editorial Board of the journal, bringing her expertise in education, climate change and children's rights - particularly in Latin American contexts - and Su-ming, whose primary interest is in the history and futures of human rights and 'development', and who has been associated with this journal since its beginnings. When we agreed to guest-edit this special issue, we had no idea that the entire world would enter a global pandemic lockdown, but this strange timing only serves to underline, rather than to eclipse, the fact that climate change is the topic that both challenges (Dryzek, Norgaard and Schlosberg 2013) and changes everything (Klein, 2014) in development, in education, in global learning and in global citizenship.

Something had already fundamentally changed in 2019, when 1.6 million people, mainly students, formed the 'Fridays' for Future' global protest movement (Wahlström et al., 2019), to bring attention to the consistently back-benched and minimised climate issue. Arguably, Fridays' for Future was an indicator that both the stakes and the means of education had profoundly changed. Schools and universities might have to re-think and repurpose themselves to become simply a conducive learning environment that enables students to educate themselves. The kids are all right – it's the rest of us – adults, institutions and politics that will have to adapt.

The conceptual timeframe for climate change has shifted, so that future risk has become a salient present reality. Students have acknowledged this by refusing to attend formal education-as-usual, while mobilising and participating in mass social activism, using social media and peer networks to successfully leverage mainstream media coverage all over the world. Up until this moment, we had been assuming that students are the ones who are to be

taught about the world, not the ones who teach the rest of the world. Up until that point, student ‘empowerment’ has been largely conceptualised as a programme for nudging students as consumers, directing each individual into action pathways and constituting sustainable ‘societies’ as aggregations of individual consumers. The other alternative, to shape students as ‘active citizens’, has been more represented in the ‘real’ world and through non-formal advocacy and activism, rather than in the separate spaces of formal education.

The interview with Anna Kernahan, a young climate striker presented in this issue, is an exemplary case of the reasons fuelling children and young people’s participation in mobilisations, disrupting formal education as a way to challenge traditional spaces of participation across the world. The way in which she explains her responses to the climate crisis, her involvement in the Fridays’ for Future movement and her agenda - to influence climate policies and raise awareness among peers and adults - further demonstrates the current change in the conceptualisation of children and young people, not simply as subjects who must be individually ‘empowered’ but more as agents who are already creating change in the wider social reality. Anna’s interview touches on key elements of the different articles that comprise this issue: the emotional responses that result from climate change education, the role of teachers in supporting students’ interest in the environment, young peoples’ agency in climate change education and the possibilities of ‘climate change learning’ from environmental and social action. The interview then, not only serves as a conducting thread for the articles but as a timely reminder that the voice of children and young people is a pivot in two senses - turning the educational agenda towards the urgency of climate change and turning on young people as the central pole for discussing this subject and the problems that it surfaces.

Audrey Bryan looks into affective pedagogies for climate change education for sustainable development and the significant role emotions play in teaching and learning about this complex and challenging issue. By introducing to the field of climate change education the notion of ‘implicated subjects’, originally developed by Rothberg, Bryan successfully acknowledges the psychic and emotional impact the changing climate has on individuals,

especially younger generations, while examining the different ways in which we can engage with the climate crises. By embracing rather than glossing over the range of emotions associated with the climate crisis, Bryan not only addresses the multiple pedagogical challenges of climate change, but provides a new framework to engage in discussions of responsibility and action. The proposal is to look at individuals as ‘feeling-thinking beings’ and explore the different levels of both proximity and responsibility towards climate-related harm and injustices. This proposal is a practical alternative for education looking to acknowledge the issues of social justice in climate change education and change the way in which we relate to the environmental crisis in response.

Whereas Bryan analyses the emotional responses motivated by climate change education - due to the increasing awareness it generates - discussing the challenges this poses for teachers; Liston and Devitt’s article helps us to better understand the role teachers can play in supporting climate action. They share their findings of a qualitative study exploring student teachers’ attitudes towards climate change as a result of their involvement in a module on development education and the implications it has for their future work towards global justice after their transition. Despite a general interest by student teachers in climate change and willingness to engage in global justice issues, personal orientations are affected by structural and institutional constraints such as the school culture and ethos, lack of support and resources and the level of professional autonomy granted to them. The conclusions pose relevant questions for Initial Teacher Education programmes and the best way in which these can better support student teachers in the implementation of the experiential and transformative pedagogies they learn into their own classrooms, if they are going to promote climate action and sustainable development after their transition as teachers.

Liston and Devitt’s article not only emphasises the tensions that exist between individual concerns for the changing climate and the structural challenges constraining the possibilities for action, but also highlights the role teachers and educators have in shaping climate change education. Youth activists, as Anna’s interview shows, are demanding greater climate change

education but not only as a tool to raise awareness or to deepen our understanding of the causes and consequences of the current environmental crisis. The proposed climate change education must be action-oriented as well as socially just, that is education that serves as a catalyst for political and civic engagement that is deeply concerned about the social injustices and inequalities that climate change poses, and helps individuals to develop their capacity to foster societal change. These two articles highlight the existing connections between development education and climate change education as both share pedagogical principles and practices and are underpinned by concerns of social justice and inequality.

Knut Hjelset began by researching two interesting questions about climate change education in the oil-dependent region of Stavanger, Norway; the extent to which climate change features as a topic in multi-disciplinary, project based learning and the position adopted by climate-sceptical teachers. This article offers an important contribution, as rather little literature considers the role of students as a political force to educate wider society as well as each other, including school leaders, political leaders and public opinion more widely. Hjelset's research comes to some unanticipated directions. There is substantial dependence on oil in Stavanger, Norway's 'oil capital', and a minority of teachers hold individually climate-sceptical opinions. However, all are influenced by a shift in student preferences, away from a reliance on fossil fuel-based knowledge and skills and towards renewables-based alternatives. Their change mindset is more positive than that of their teachers' generation and they think that positive change is possible. In Stavanger, times changed dramatically when the 2014-15 collapse of oil prices severely impacted employment. Even climate-sceptic teachers are not student-sceptic, and following student preferences, they want their school to change direction and offer pathways to educating for renewable and sustainable technologies. At the university level, demand for teacher education at the University of Stavanger quadrupled because layoffs in the oil sector drove people to seek to reskill and shift from the oil sector to the education sector.

The article by Selby, Kagawa and Oberman highlights what can be learnt from environmental education at the ‘edge’, in small island developing states. These are the areas of the world that have contributed least to climate change and yet are already significantly suffering the most from climate change effects. This article highlights how to learn from efforts to get to grips with already-biting effects of climate change and the necessity to develop disaster resilience for more-affected communities, shifting the focus away from the concerns of what to teach the less-affected and more-privileged, who live far away from the ‘edges’.

Selby, Kagawa and Oberman discuss examples of ‘climate change learning’ that originate from environmental and social action at the global climate ‘frontline’. In small island developing states, curriculum has already been forced to focus on climate change adaptation as a mainstream concern. Climate change education in the global North has not yet reached this stage of necessity and formal curriculum and formal education in general have not yet faced a systematic disruption until the COVID-19 pandemic hit. This extraordinary global moment has forced educational systems to face fundamental issues, such as the separation between formal and non-formal education and may provide an opening for rethinking the relationships between school and community learning and between children or youth and adult learning. Given the dramatically changed circumstances of the pandemic lockdown, this challenge has become more immediately salient, and change may be more possible, change that takes into consideration these postcards from the edge.

Selby, Kagawa and Oberman’s ‘edgy learning’ highlights the importance of interdisciplinarity and transdisciplinarity – the crossing and transcendence of subjects, practices and educations – towards necessary change. Much activist and extra-institutional learning begins with practical needs, in reaction to disasters and risks. The ‘Susgren’ project in St Vincent and the Grenadines, however, originated as a medium-term biodiversity conservation project. Most development educators would consider the eight-year conservation project timeline as being incredibly long-term compared to

most educational projects in our ever-accelerating educational world. Biological conservation offers not only a long, transformative timeframe, it also has a strongly defined purpose and orientation which is quite the opposite of the baggy generality of ‘education for the SDGs (Sustainable Development Goals)’. Focusing on the conservation of Marine Managed Areas, the educational objective of working on sustainable livelihoods is focused on the maintenance of a common resource.

This offers an educational scope that centres the wise use of natural resources, while attempting to harmonise the very different fundamental goals of conservation, stewardship, livelihoods, climate adaptation and building civil society. This is such a fundamentally different starting point from where most development education is coming from, that one wonders how this can be applied in schools and universities that are not located in such ‘edgy’ places. Central aspects that might apply anywhere, but are still very radical in the context of conventional education are nature, experience, emotional connection, collaborative and project based learning and not merely trusting the young, but entrusting them with leadership and influence. The development of empathy and emotional connection to nature is not only crucial to environmental stewardship and sustainable resource management, but opens out to a different way of living in the world and engaging with it.

The global pandemic has highlighted the global interconnections and the sense of global responsibility so often evoked in climate change education (Mallon, 2015). As McCloskey discussed in the Viewpoint article, the pandemic has deep implications for how we think about development and its role in the mitigation and adaptation to climate change, but also in the ways in which we act upon the climate crisis. These crises change everything, so now is the time to re-imagine what a sustainable society is, how institutions and spaces need to adapt to better alternatives and shift individual attitudes and behaviours accordingly. It is time to start listening to the children and young people, to move away from content-oriented education that is limited to explaining ‘the science behind climate change’. Now is the time to begin to favour an action-oriented approach, grounded in contextual needs that fosters

civic engagement, political participation and a sense of responsibility towards the world. Now it is the time to make sure that development education is an effective tool for learners to live in uncertain times with full capacity to transform the world.

## References

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