

Editorial

2020 tells us a lot about how humans respond to a global crisis. This year has been dominated by the COVID-19 pandemic. We've had to quickly respond, change, and adapt to a new normal that has included more time working and learning from home, new habits around mask-wearing, and "scanning in" wherever we go. We've added new terms to our vocabularies: social distancing, contact tracing, and "flattening the curve". New Zealanders can still return home, but carefree overseas travel has been grounded for now, while we carefully manage and control our borders to keep the virus at bay. New Zealand's COVID-19 response was decisive, effective, and consistent, and so far we have been successful in collaborating, as a "team of five million", to limit the spread of the virus. However, the same cannot be said for other parts of the world. No matter how well we manage our own response, what happens beyond our shores inevitably impacts on us too, for better or for worse.

This special issue of *Set*, conceived before COVID-19 and gestated through the first year of its global spread, seeks to bring the spotlight onto the biggest existential threat to humans and other living species that share our planet: climate change. Concerns around climate change have been raised for decades, yet it feels as if the global community has simply kicked this can down the road year after year, putting off the changes that science tells us need to happen to maintain a thriving, liveable planet. Similar to COVID-19, climate change is a global problem, but local solutions are required, and education is key. This year, with COVID-19, schools all over New Zealand showed how caring, adaptable, resilient, and solution-focused the education sector can be in the face of a collective national and global crisis. How can educators bring similar qualities and leadership to New Zealand's response to climate change? The articles presented in this issue help us to consider this question from a range of perspectives.

Students leading the way

In 2019, youth around the world voiced their concerns about climate change through the School Strike 4 Climate movement. Stimulated by the protest actions of Swedish girl Greta Thunberg, thousands of school students in

Aotearoa and elsewhere mobilised themselves using social-media campaigns to conduct three "strikes", calling on governments and society (School Strike 4 Climate NZ, 2020) to more urgently address the climate issues that are threatening to impact their future. Our opening article by Ria Bright and her PhD supervisor Chris Eames examines the emergence of this student voice across our country and the educational value from participation. This timely examination responds to the calls in *The New Zealand Curriculum* for students to develop the key competency to participate and contribute to society (Ministry of Education, 2007), to develop political literacy through citizenship as promoted through *Pūtātara* released in late 2019 (Ministry of Education, 2020b), and the urgency of the climate crisis. Ria's work has highlighted the increasing levels of climate anxiety among our youth, and their own focus on developing political literacy and achieving social justice through their education. It seems only right that those who are likely to inherit the responsibility of dealing with the impacts of this crisis lead the way in this issue!

Teachers' proactive responses

In tackling such a complex global issue, where can teachers begin? Three contributors provide practical insights about how teachers can provide personally relevant, constructive learning opportunities that leave students feeling more empowered and better equipped to be part of the changes that are needed across communities and society. First, Sylvia Reynolds, a primary-school teacher, reflects on the need to look beyond the "seductive" low-hanging fruit of sustainability: recycling. She shares her journey through the discomfort of realising that "surface, feel-good, quick fixes" may not be enough to achieve meaningful, effective actions to mitigate climate change. Her contribution demonstrates how important it is that teachers can find ways to feel comfortable with complexity, and act with sensitivity to the emotions that may arise for students, and for themselves.

Next, Robyn Zink introduces the concepts of interrelatedness and *whakawhanaungatanga* as pillars on which to build place-based, empowering climate-change learning opportunities. Rather than starting from a focus

on “the problem”, she encourages approaches that foster young people’s deep connections to their places. Through becoming better acquainted with their own places, young people can begin to develop achievable visions for a future in which people and other species can flourish. Her article suggests how schools—and local and regional agencies—can support young people to develop the tools and confidence not only to imagine the changes they want, but to be part of real changes in their places and communities.

Simon Taylor and Ben Jones round out this section, describing a futures-thinking inquiry approach developed and trialled in a cross-curricular junior secondary-school classroom. In this school, students explored different ways to think about possible futures. As they learnt more about climate change, they applied “futures thinking” to the design and construction of diorama models of their community, envisaging how people might live, grow food, and travel in different possible versions of the future. Simon and Ben’s small study suggests this approach can be engaging for students, providing a way to help students build knowledge about climate change, and how it connects with human choices and actions. Simon and Ben also note school-level factors that can enable and hinder the allocation of time for cross-curricular inquiries such as the one they describe.

A national overview

The guest editors of this special issue each contribute towards building a national picture of schools’ engagement in climate-change education. Rachel Bolstad reports on her team’s research into how English-medium schools across New Zealand address climate change in their infrastructure and leadership priorities as well as within teaching and learning. She draws on survey results and key informant interviews to explore how New Zealand’s education system is currently contributing towards ensuring a safe climate for the future, as well as what more could be needed. Chris Eames and co-authors Jennie Ritchie, Sally Birdsall, and Andrea Milligan offer an introduction to—and analysis of—New Zealand’s first national-level climate-change learning programme, a resource released by the Ministry of Education last year (2020a). They consider its teacher resource and wellbeing guide, with emphasis on how teachers can work to its strengths and take next steps.

Teacher–educator perspectives on climate-change education

As with any complex problem, there are a multitude of possible solutions. The remaining articles, including He Whakaaro Anō and Q&A, look at climate-change

education in a range of ways and remind us that diversity is important in finding ways forward.

It is not at all surprising that one of the key concerns in climate-change education is dealing with the anxiety it might provoke. Sally Birdsall suggests that hopeful teaching can help teachers navigate through this. She draws on environmental education, peace, and political education research to suggest eight strategies and approaches to guide our work. Using these can help stave off the paralysis of inactivity that can befall our young people as they grapple with such a huge and complex issue, and empower them to act.

The importance of empowerment is built upon in the work of Sara Tolbert, Glynne Mackey, Richard Manning, Bronwyn Hayward, Hūhana-Suzanne Carter. They use the SEEDS framework of ecological citizenship to build teacher and student capabilities, and highlight the value of two elements within this framework, social agency and ecoliteracy development, as key to addressing sustainability problems such as climate change. Social agency is characterised as learning how to make a difference with others. They describe how, in their teacher education work, development of ecoliteracy includes an attachment to place, and they explore this attachment specifically in relation to indigeneity and colonisation.

Sarah Hopkinson develops the colonisation theme further as she considers the role of Pākehā in relation to Te Tiriti o Waitangi. She draws on three principles of the Treaty of Waitangi—partnership, protection, and participation—to inform curriculum design and consider how people treat one another and the environment around them. Her dual focus on decolonisation and regeneration is a strong provocation for readers to examine what is currently unsustainable in environmental, social, cultural, and economic relationships and how we can work together to find balance in our complex systems.

Lastly, Rose Hipkins responds to a teacher’s enquiry about how to fit the teaching of climate change and sustainability into the traditional content and skills of the core science strands. She responds by examining complex systems, as science learning can be enabled by knowledge of these systems. Rose explores the human capacity to think about systems and illustrates how stock and flow diagrams may help. The complexity of climate change demands both holistic thinking and identifying the parts of the system, and acknowledges the need to adopt an integrated curriculum approach to the issue, and the challenges in doing so. There is a clear recognition here of the need for more teacher support in addressing these challenges.

The special issue engenders a sense of joint responsibility for addressing the climate crisis. Everybody within the education system has an important role to play, from students and teachers, to leaders and teacher

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educators, to policy makers and infrastructure designers. Responding to climate change involves emotional work and cultural work, especially when reaching beyond the low-hanging fruit of recycling and extending beyond the bounds of Western reductionist science. It is a challenge to keep climate-change education positive and empowering at the same time as remaining critically conscious about knowledge systems and power dynamics at play in any solution proffered. We hope that the articles help teachers to make a start or, better still, deepen their practice. We suspect that the collection represents some of the forerunners in climate-change research and practice, a crucial field that we hope will grow and strengthen in the coming months and years. As this issue was in the final stages of production, on 2 December 2020 the New Zealand Parliament declared a climate emergency. We echo the call for more resourcing and research in this space so that teachers are better able to address these critical

issues in ways unique to Aotearoa. Future contributions to *Set* are welcome.

*Chris Eames, Rachel Bolstad,
and Josie Roberts*

References

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