



GLOBAL CHALLENGES, LOCAL NARRATIVES: PARTICIPATORY CLIMATE EDUCATION FOR GIRLS

Case Study Final Report
South Africa

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Case Study Summary

Climate communication and education (CCE) is recognized as a priority in the Paris Agreement and the UN Sustainable Development Goals. The Monitoring and Evaluating Climate Communication and Education (MECCE) Project has highlighted the urgent need to increase the quality and quantity of CCE globally across education, government, civil society, business, media, and communications sectors. Teaching and learning about climate change in schools is widely acknowledged to be fundamentally important for children and young people as they navigate the uncertain effects of climate change.

However, teaching and learning about climate change is limited in schools. Teachers are not equipped to teach about climate change, and governments are not including environmental learning in school curriculums. But young people around the world are concerned about climate change and are eager to learn, share what they already know, tell their stories about how they experience the effects of climate change, and find ways to inspire others to learn and respond.

The purpose of the research was to explore a potential new direction in climate change communication by finding out what young people understand, want to know, and want to teach other young people. This case study focused on developing young girls (14-18), most of whom were members of the Black Girls Rising program, as co-researchers. The young people who participated in the case study indicated a keen awareness of environmental degradation and a commitment to engage in education and communication inter- and intra-generationally. The cohort predominantly lives in Khayelitsha and Gugulethu, townships in the Western Cape, South Africa. They have direct experience with the socio-economic and environmental consequences of climate change. However, the girls felt, and feel, ill-equipped to engage in the conversation outside of their immediate peer group.

The co-researchers included Anelisa Mgedezi, Unako Ngindana, Yola Mgogwana, Zenande Nazo, Milani Bushula, Umphiwe Ngedle, Neve Piorkowski, Xoliswa Fuyani, and Mary Murphy. Additional participation was sought using a peer-to-peer model, whereby the co-researchers gathered data using an online form directly with their peers. The research was conducted in the Western Cape with young girls from different socio-economic backgrounds. A total of twenty-seven individual data sets were gathered. Twenty-five were under eighteen years of age. All participants were female, and all lived in the Western Cape.

CCE Initiative

In the last two decades, there have been unprecedented exogenous and endogenous shocks to our economic system, including the immeasurable impact of the COVID-19 pandemic and the legacy of the 2008 global recession. These economic shocks weave through and within a framework of political and social upheaval caused by climate change and war. Precedence has been exceeded with such frequency and severity that our ability to resolve the negative impacts is being overtaken by our need to measure and monitor the human and social casualties.

The pandemic displayed our vulnerability as global citizens. It also demonstrated our collective agency through the dramatic galvanising of resources, technology, institutions, and policy

¹ The views in the report are not necessarily endorsed by the MECCE Project, which funded the research. This report was republished in 2025 following additional copy editing to increase the report's clarity.

development and implementation. But as history continues to show, agential impediments continue to be curtailed by a structure defined by the massification of education and universalization of culture that continues to expose and depict inequality and duality in our social systems. Borders are breaking down through direct political action in response to the climate crisis, and children are taking to the streets because of a failure of our educational systems. The February 2022 invasion of Ukraine exemplifies the continued erosion of sovereignty and sanctity of national boundaries and state borders. Our economies have become weapons of war to manifest a globalised equitable, world.

A UK treasury-funded report published in February 2021, “The Economics of Biodiversity,” showed no hesitancy in stating that “our institutions have failed to address the environmental/climate crisis.” Educational institutions, in particular, have failed to support teachers and equip young people to meet these existential risks. The challenge for delivering environmental education is that nearly half (47%) of national curriculum frameworks out of 100 countries reviewed by UNESCO had no reference to climate change. With a similar percentage of national education documents making little-to-no reference to environmental themes. Further, teachers around the world feel ill-equipped to teach about climate change. For example, a March 2021 report by the Brookings Institute states that “in the U.S., 60 percent of teachers report they do not teach climate change because they believe it is outside of their subject area”. According to Gough, Chi-Kin Lee, and Tsang, “One major challenge for the green school movement is the engagement of all schools and the sustaining of their involvement in the green school programs.” A third or less of the number of schools in a country are participating in green school programs. These participants tend to be more primary than secondary schools.

“Students are rarely involved in making significant changes to their learning. Education reforms typically focus on curriculum, teachers, teaching, and assessment; but seldom focus on helping students to become owners of their learning and learning environments.”

- Professor Yong Zhao, University of Melbourne/ University of Kansas

Although the foundational aspect of the CCE initiative being studied was embedded in deeper debates and concerns about the gaps and challenges of climate change education delivery in formal education settings, this case study was predominantly concerned with public pedagogy, Indigenous knowledge and how to support young people as they become, as Zhao states, ‘owners of their learning.’

We wanted to open a conversation about how young people who live in marginalised communities whose conditions are exacerbated by climate change, who have a palpable and visceral experience of climate change, and who want to find a way to ‘know enough’ to build their confidence and sharpen their commitment to communicating inter- and intra-generationally. As one co-researcher explained, “I want members of my community to listen to me about environmental issues and to trust me when I suggest things we can do to help make a positive change.”

Case Study Methods

The case study was a mix of ethnography, narrative inquiry, and action research. We broke the process down into several stages/phases:

Stage 1 – Needs Analysis

The initial focus of the case study was to understand the needs of the participants both as individuals interested in climate change and as co-researchers committed to active

engagement in CCE. Their questions centred on two main points:

1. How much/what amount of knowledge and understanding is needed to communicate effectively and confidently about climate change?
2. How is it possible to explain environmental degradation impacts on water and food that participants can see, feel and experience, with what climate change is, i.e. 'something that happens in the air'?

Stage 2 – The Big Questions

We started the day with the 'big question': why does climate change matter, and what do you want to know about it? These were some of the issues and concerns motivating the co-researchers to find out more.

- I want to know how climate change changes.
- I want to know more about it because I don't have enough information.
- I want to understand how it affects people. For example, what is the connection between the shortage of water and climate change – I don't see the connection.
- I want to know how it affects things around the world, in particular, plants.
- I want to find out what other renewable energy sources we can use that are green, cost less, and can work for marginalized communities.
- I want to help people understand more about climate change without them disagreeing with me. How do I educate others?
- I am not sure what climate change is – what's up in the sky that causes bad weather?
- I am interested in the climate change narrative, which is mainly coming from the Global North and how to trust where the information and science are coming from.
- I want to know more about how climate change impacts people living in underprivileged communities. Climate change impacts rich people differently.

In the end, we pieced our collective understanding together and found that climate change is global. It is caused by six gases. The biggest one comes from fossil fuels (oil, coal, and gas). It started during the industrial revolution. We can trust the data because we can measure Carbon way back in time. Climate change affects everyone. But it's hardest on marginalized communities. It's difficult to make it easy to understand.

Stage 3 – Benchmarking Understanding

We then spent time identifying the intersections with lived experience within a framework of global policy prescriptions. There were debates about mitigation and adaptation, with an overwhelming conclusion that adaptation is critical to protecting against the impacts of climate change. However, there was a sense of powerlessness over the ability to adapt and affect mitigation strategies and targets. The conclusion was that those most responsible for climate change are more equipped economically and politically to adapt to their environments, while those who have made negligible contributions to the climate change crisis are the ones feeling the most impact. This sparked deeper conversations about social and environmental justice.

Stage 4 – Embedding the Learning

Participants individually and collectively embedded their awareness and understanding through reflective journaling and song.

Stage 5 – Taking Action

It was difficult to overcome the lack of trust regarding climate change communication because of the overwhelming evidence and strong perception of the Global North's dominance in the climate change narrative. The young people had a keen awareness that they were impacted in a direct way by climate change as individuals and members of their communities. They had very little say in what needed to be done, however. Young people are finding it very difficult to communicate about climate change with their peers and elders. As one participant put it: "It's hard for me as a young person to challenge the thinking of older people."

Stage 6 – Data

A key question and concern that emerged was where data comes from and how data are generated and used. It was hoped that developing skills on how to gather data would instill confidence and strengthen voices when engaging in climate change conversations. We based a full day's workshop on data design, gathering and analysis.

Before the in-person workshop, we designed an online questionnaire that was used as a survey instrument. In this stage, we used a peer-to-peer method for gathering data. Each of the co-researchers gathered data directly with three peers.

A total of twenty-seven individual data sets were gathered. All identified as female. Twenty-five participants were black, two were white, twenty-five were under eighteen years of age, and all lived in the Western Cape.

Stage 7 – Analysis and Practice

The interrelated processes of understanding data as building blocks of knowledge, gathering data, analysing, and interpreting data facilitated a sense of empowerment and ownership as researchers.

The overall aim was to open tiny windows into the machinations and architecture of data to stimulate discussion about where/how knowledge is generated. The process was a small attempt to engender nuggets of radical practice.

Case Study Findings

Our thinking was framed by Boaventura de Sousa Santos (2014) and Raewyn Connell's (2007, 2011) work, which reminds us that "research is usually imagined as the gathering of data, but there is much more to it. Clarifying language, generating new concepts, relating ideas to each other, building interpretations – these too are necessary steps in producing knowledge."

The open distrust in climate change data also stems from historical social critiques of researchers from the Global North extracting knowledge without benefit. Our research did not necessarily break down distrust, but it may have eroded some of the wariness. It did not, however, change the fundamental disjuncture between empirical understanding of climate change and global policy strictures. Participants are openly caught between a will and commitment to climate change mitigation and the immediacy and need for adaptation.

Views among participants about data origins also mirror the "vigorous and exciting debate about how to create a world social science that mobilizes the social experience and intellectual resources of the South..." (Connell, 2011, p3).

We attempted to overcome some epistemological dominance by ensuring the young core team members were named as co-researchers. However well-intentioned and actioned this was, there was a level of superficiality to that objective.

1. Although naming individuals as co-researchers and ensuring consent and inclusion are sought and built, it will take a longer process of engagement and work to deepen the impact and outcomes.
2. There was a real keenness to be a co-researcher, but what does that mean, and how can a sense of agency and empowerment be deepened, especially given the almost-synonymous relationship between research and The Academy, as well as the structural dominance of social science thinking?
3. The young people are very aware that there is something deeply wrong with the environment because:
 - a. Elders share their observations and experiences of the environment over time.
 - b. They can see it and feel it.
4. But how can they jump from the knowing to the doing? What steps are needed in between?

Our findings do not present a guide to how a young person impeded by internalised structures catalysed by education and political and economic disenfranchisement can engage in conversation about globalisation, let alone engage actively on the global stage, where policy decisions that affect them are being made. Globalisation mirrors the scaled inequities, injustice, and divisions experienced at a local level by the most marginalised, particularly in the Global South. There remains an uneasy fit when expressing disproportionate inequality in the international geopolitical and socio-economic system. But, the disproportionately associated impeded access does not dilute or diminish the level of commitment, interest, awareness, and dedication to climate action demonstrated by the project participants. Their ongoing work is humbling and inspiring.

Case Study Impacts

1. An understanding that the divisions between the Global North and the Global South have a profound impact on knowledge acquisition and trust.
2. Initially, trust in climate change data was very low because of an awareness/belief/perception that the 'Global North controlled the climate change Narrative. There seemed to be a shift toward the end.
3. The interconnections between social inequality, like the Digital Divide, have a significant effect on how young people in South African townships can communicate; both receive information, filter understanding, develop awareness and knowledge and the ability to share their understanding, commitment and ideas for action intra- and inter-generationally. The Digital Divide, therefore, has a significant impact on climate communication and education.
4. More focused resources are needed for those on the edges of the climate change conversation.
5. Stories represented in song, poetry, performance, and animation appear to be an ideal conduit and channel for delivering understanding, awareness and inspiration among participants and their peers.

Applicability and Scaling of the CCE Initiative

Inequalities in the global system were foregrounded early in the project. Facilitating more horizontal interaction with peers in the Global South would help encourage rendering and reshaping the vertical and two-dimensional structure of climate change knowledge acquisition and dissemination. Strong and rigorous attention to removing impediments caused by the Digital Divide needs to be built into climate communication and education frameworks. Ongoing commitment to strengthening knowledge and resource access is needed for those most marginalised by/because of/through the climate crisis.

Acknowledging climate change as an additional layer to the burgeoning social inequities in areas like Gugulethu and Khayelitsha cannot be understated. More forums could be opened so young people, particularly young women, can share their stories and offer radical ideas. We have more work to do to capture their voices and represent it/them in an animated story.

“Climate change first switched me on to the environmental crisis. Hope is real. And there’s real hope. I look forward to changing the world.”

- Umphiwe Ngedle, a passionate climate change researcher



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