Student-Created Videos of Climate Change Vulnerability: Opportunity for connection and care

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Abstract

Climate change is increasingly being seen as a complex problem that requires a change in personal and practical dimensions. To support this, climate change educators need to make use of pedagogic approaches that enable students to engage in relational values of care, empathy and connection alongside understanding the problem and potential responses. Participatory approaches, whereby students engage with members of local communities to understand climate change vulnerability, have the potential to create opportunities for connection between students, communities, universities and society in theory and practice. We describe a student video project that took place in a third-year course *Sustainability and the Environment* in the Department of Environmental and Geographical Science at the University of Cape Town (UCT), South Africa. Students worked in groups to undertake and film a vulnerability assessment with individuals or organisations around Cape Town in relation to the city's water crisis. Their group submission, a documentary video, needed to tell a story about social vulnerability and adaptation to the water crisis. Through a carefully scaffolded process, students' reflections indicated that the vulnerability video process helped them to understand the concept of vulnerability and strengthen their care for and connection to those 'vulnerable' to climate impacts. This kind of process-oriented authentic learning experience holds potential for increasing climate change literacy that other educators might consider.

Keywords: *climate change education; video and film; climate change vulnerability; authentic learning; ethics and care*

Introduction

Given the urgency of climate change action, the topic is increasingly being included in university teaching curricula. To ensure that teaching and learning on climate change have the desired impact of understanding and lead to action, it is important that authentic learning opportunities are created. Filmmaking is one method of science learning that can support learners to take ownership of their learning related to climate and environmental change (Gold et al., 2018). As Chang and Pascua (2017, p. 177) suggested, students who cannot engage in climate change discourse are likely to "lose out in a climate changing

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world" both in terms of engaging in debates and in taking action. Lutz, Muttarak and Striessnig (2014) supported this, arguing that giving funding to educators rather than engineers might be more efficient and effective for adapting to climate change impacts.

In the South African context, with high levels of inequality and a highly variable climate, a socially responsive understanding of climate change vulnerability is particularly important (Ziervogel et al., 2014). Climate change impacts most on those who are highly sensitive to climate hazards and have less ability to adapt. Ensuring that students understand how climate vulnerability might differ in different cases and making them aware of the agency and adaptive capacity of people, is one way for students to understand the concept of climate change vulnerability better. Linked to this, it is important that students are able to reflect on their own vulnerability as well. These concepts are the foundation for understanding vulnerability, building adaptive capacity and strengthening climate adaptation (Adger, 2006).

This article uses the case of student-created videos of climate change vulnerability to illustrate how a student video project in a South African university context was able to build care and enable meaningful learning experiences for students. Students were able to enrich their theoretical understanding of social vulnerability through undertaking a vulnerability assessment in practice and capturing it through short digital videos. Through the process, students reflected on their own positionality and vulnerability and that of others, deepening their care for others and their understanding of vulnerability and adaptive capacity. This article starts with a short literature review of student video projects and their potential to contribute to authentic learning, after which the educational context and assessment design of the video project is explained. This is followed by an analysis of students' reflections on the process and a discussion of emerging themes. The article, targeted at environmental and climate change educators in higher education, seeks to unpack the process to inform and/or inspire others.

Student video projects and authentic learning

Digital videos, created by students for educational purposes, take various forms and are defined in different ways. The literature refers to student media production or projects (Rooney-Varga et al., 2014), digital media assignments and Learner-Generated Digital Media (LGDM) (Reyna & Meier, 2018), place-based filmmaking (Littrell et al., 2020) as well as digital storytelling (Gachago & Livingstone, 2020). Diverse theoretical orientations guide how educators approach the design of the purpose, process and genre of such videos.

Rooney-Varga et al. (2014) used student media projects where American science majors in an advanced university course on climate change created public service announcements (PSAs) as a culminating assignment. This was part of a broader project, the Climate Education in an Age of Media Project that involved various phases, from pre- to post-production. The aim of their project was to "elicit active, affective, social, and analytic learning of climate change science content, with the goals of increasing engagement and intrinsic motivation

and fostering deeper learning about climate change through students' efforts to educate others" (Rooney-Varga et al., 2014, p. 598). Rooney-Varga et al. (2014, p. 598) reported that student producers and viewers showed gains in climate literacy and their "qualitative analysis of student experiences revealed high levels of intrinsic motivation and engagement with the project, critical thinking, social learning, an interest in climate change that reached beyond the course, and a sense of empowerment and agency". A study with high school students who made short videos about the impacts of climate change on their communities also found it allowed students to make "personally meaningful connections with climate change" and that this can "inspire a sense of responsibility and agency among students" (Littrell et al., 2020).

While digital storytelling (DST) has multiple definitions as well, it most often takes the form of personal narratives and involves particular processes and ethical practices that educators and students need to consider (Gachago & Livingstone, 2020). As explained by Gachago and Livingstone (2020), there is a specific flavour of personal DST that is widely adopted in higher education contexts, some having found a niche as a qualitative research methodology in fields such as health sciences and health education and teacher education. As will be discussed later in this article, while this project was aimed at getting students to make videos using different vulnerability assessments methods, the process of making videos as a group project became a methodology in itself. Sometimes the digital storytelling processes can be embedded alongside other approaches. Gachago et al. (2013) piloted an approach that combined a digital storytelling process with participatory learning and action techniques and a reflective essay for teaching on and with difference in a final-year South African pre-service teacher education programme. Their aim was for students to share and listen to each other's stories of difference. Gachago et al. (2013) found that through sharing and listening to each other's stories, students began to engage with the unspoken power dynamics that govern classrooms and their lives and this provided the opportunity to disrupt some of their assumptions.

There are often overlaps between different approaches to student video projects, with a common interest in the educational value of the process rather than videos as final products. Another commonality is the intersection of curriculum content, pedagogical design, technology and ethical practice although some scholars may emphasise some dimensions more than others. This article focuses on scaffolding student reflection in particular, where students were supported in thinking through their learning and implications of their engagement in the vulnerability assessment and video process. For the purposes of this study, we use the term 'student video projects'. Among the various approaches to student-created videos, it is uncommon to find student video projects that emphasise positionality as part of a scaffolded reflective process focused on community voices rather than personal narratives of students.

We found authentic learning principles (Herrington & Oliver, 2000) and connected authentic learning (Herrington, Parker & Boase-Jelinek, 2014) useful for informing the design of the project. Authentic learning principles involve an authentic context and tasks

and activities that reflect the way knowledge will be used in real life. Authentic learning expects students to engage in constructing knowledge collaboratively through these tasks and experience the different roles and perspectives of people. Central to this approach is promoting reflection and articulation that makes tacit knowledge explicit. To support this, students need coaching and scaffolding as well as opportunities for authentic assessment.

We argue that explicit attention to positionality can help to enrich reflection as part of authentic learning. While reflection is a popular pedagogic strategy, reflective learning activities can sometimes be quite superficial. Such activities can be more meaningful and authentic if students engage with their own positionalities in relation to others. Positionality and reflection are entangled, requiring students to question their world view and the position they adopt about a research task and its social and political context (Holmes, 2020). Engaging with one's positionality, central to climate change adaptation, is an ongoing process that requires both self-reflection and reflexivity.

Educational context and assessment design

Course background

Around 75 students take the third-year course, *Sustainability and the Environment*, in the Department of Environmental and Geographical Science at the University of Cape Town (UCT), South Africa. About half the students come from the Science faculty and the other half from Humanities. There are usually about 10 international students from outside Africa, 15 African students and the rest are South African.

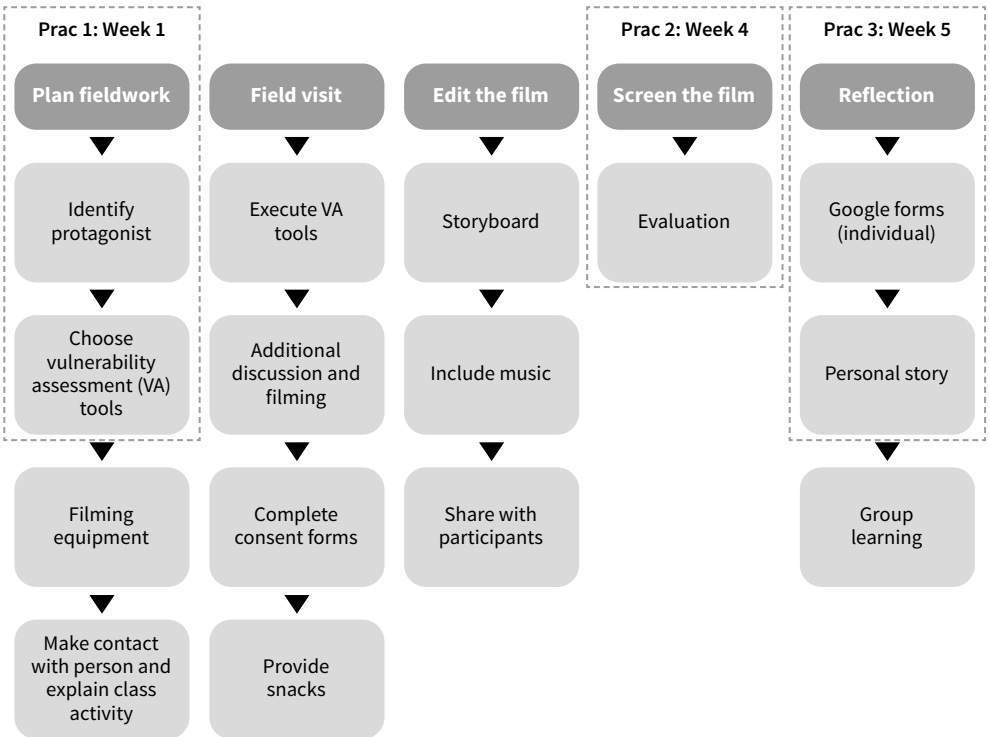
One of the three sections of the course focuses on vulnerability and adaptation to climate change. The concept of vulnerability taught draws on the Intergovernmental Panel on Climate Change (IPCC) framing that includes understanding sensitivity to climate hazards and adaptive capacity to reduce exposure to climate risk (Pörtner et al., 2022).

In order to get students to engage with the theoretical topic of climate vulnerability from a personal level, a vulnerability video project was assigned as their practical. This included a series of two-hour sessions that enabled students to engage with lecture material in a hands-on manner. Students were required to work in groups to undertake a vulnerability assessment with individuals or organisations around Cape Town and produce a short video from this. From 2016 to 2022 (apart from two years of online teaching during COVID-19), the groups were required to make a video that captured a story of vulnerability. This article focuses on the video process and draws on the 2018 assignment to illustrate the process in detail. The 2018 assignment was chosen because the class was asked to focus on stories around the recent drought, providing good examples of climate change impacts, vulnerability and adaptation.

Class vulnerability video assignment

The vulnerability video assignment was run over five weeks as shown in Figure 1. In the first two-hour classroom practical session, students were introduced to the task (see open access assessment guideline). They then had three weeks to do the vulnerability assessment filming and editing, after which there was another two-hour practical session where all the videos were screened to the class and assessed during a 'video festival'with prizes for the top three films. During the following week they were asked to fill in an online form individually to reflect on the process (with questions outlined in Box 1) and then at the subsequent practical, they engaged in a series of activities to explore their individual and group learning.

Figure 1: *The video assignment process (boxes represent the time spent in the classroom during the practical sessions)*



Box 1: Questions that students responded to individually before the final practical

- What did you learn and/or gain from doing the vulnerability video exercise?
- What were the challenges with the process (including resources, experience, access, topic, group dynamics, etc)?
- Would you recommend this as an exercise in future? If so, why? If not, why not?
- How did it help you understand the concept of vulnerability (if not covered above)?
- At any point in the process did you reflect on your own vulnerability, either in relation to the people you were filming or in relation to your role in the group? If so, please can you share.

In 2018, the groups were asked to focus specifically on assessing vulnerability of an individual or group to the Cape Town drought. In 2017 and early 2018, the drought crisis intensified in Cape Town making everyone aware of it as individuals were expected to use only 50 litres per person per day and heavy restrictions were put in place for businesses (Ziervogel, 2019). This resulted in everyone being impacted by the crisis in some way.

Groups were instructed to choose two participatory vulnerability assessment tools to use in their video process, from a range that were presented during class and in the first practical, including focus groups, transect walks, pair-wise ranking, mind mapping, role-play and oral histories. A second presentation was given on digital storytelling and how to make a short film, including getting informed consent from participants (see consent form). The licensing of multimedia was discussed in relation to finding openly licensed and royalty free multimedia to use in their videos and sharing their video publicly online, if appropriate. While videos were encouraged to be shared publicly, this depended on the preferences of the participants and their consent to sharing the video beyond the classroom space. Those videos that were shared publicly were uploaded onto the UCT Future Water YouTube channel because of the drought focus. The Future Water Institute conducts engaged research on water sensitive approaches and promotes collaboration and knowledge sharing across various sectors of society and thus encouraged the sharing of the videos.

Students were asked to work in groups of four, resulting in 19 groups in total. They were actively encouraged to find and work with classmates they did not know. While students of different social backgrounds occupy South African classroom spaces, their friendships and relationships are still often based on common social backgrounds, shared language and culture, and deeply rooted beliefs and assumptions that impact on their conscious or unconscious choice of social engagements (Gachago et al., 2013). For this assignment we told them that being with people different to themselves was part of the learning experience and would strengthen their video as it would help to bring in diverse perspectives. Once groups had formed, they discussed the focus of their video, who they thought they would

like to meet with, and piloted two vulnerability assessment methods. They then planned the process and the steps they thought would be needed to produce a two-minute video.

After the first practical, students were expected to organise their own field visits. Many drew on their personal networks to link with individuals or groups to interview, making the fieldwork less daunting. Ethical research practice was discussed in the first session, detailing protocol around participatory research and the importance of reciprocity. Students were encouraged to discuss their concerns, such as safety or how to adapt their projects, with the lecturer during class or when planning fieldwork. Because many groups reached out to personal contacts, safety was not a concern for most. Consent forms, adapted from a student video project in a Film and Media Studies course at UCT, were shared with students. All people that were filmed were required to fill in these forms to capture their preferences around confidentiality.

All videos were required to be uploaded before the second practical. The practical session took the form of a 'video festival' with popcorn and prizes. All evaluations were done online using Google forms. The 'judges' comprised the co-authors who were running the project and two guest postdoctoral fellows. Each video group evaluated the other groups' videos as well, with these marks being used to select a 'people's prize'. Rubrics of how the video would be marked were circulated before and used as the criteria for assessing the video.

Between the second and third practical, students were asked to fill in a Google form reflecting on what they had learned individually. The third session started with the students graphically documenting their individual reflections, before they worked in groups to respond to several questions on three themes, namely, understanding vulnerability in theory and practice, the process of doing fieldwork and talking to 'vulnerable groups' and their role in the process. Lastly, they were asked to present their findings on a flip chart to the class and have a brief conversation on lessons learned with other groups.

Creating a video as a learning experience

The videos that students produced reflected a diversity of spaces across Cape Town. 'Vulnerable' individuals included a grandmother, a landlord, traditional healers, farm workers, car washers, flower sellers, animal carers, waitresses, guest house staff and people collecting spring water. Even when similar activities were chosen, these tended to be from different perspectives. For example, one group selected a township-based car wash and another group chose to focus on a commercial car wash in a shopping mall. One group interviewed a flower seller while another focused on a man whose family business is growing flowers for the flower sellers.

Videos depicted middle-class residential areas, informal housing in township areas, farms as well as the racial and linguistic diversity among people residing in these spaces. Some groups filmed people speaking in their home language and then used English subtitles. The videos all foregrounded the people and spent little time emphasising assessment tools and the students themselves. The majority of the videos had a main protagonist and therefore, an individual and personal narrative.

One of the videos was about Mama Moehale's informal township business, in which she makes ginger beer. Linked to the drought, water management devices were installed in some households including Mama Moehale's, which reduced the amount of water available. Despite this, Mama Moehale, who is a pensioner, made a plan to ensure her business could carry on. The students used oral histories and brainstorming as tools to document this story and created a video that showed Mama Moehale as personable and resourceful. It was an excellent video because it captured the everyday story of an elderly person doing her best during a crisis and valued her unique perspective.

Another video showed Moses, whose business, 'Fresh cut flowers', was impacted by the drought. It started with him sharing photos of his mother who had run the business before and also showed the area where there used to be a river flowing that was now dry. In three minutes the video was able to tell a story about the challenge of maintaining the business finding ways to adapt despite water shortages.

While students were encouraged to not be concerned with producing technically sophisticated videos, we were surprised by the standard of videos. Improved camera quality on mobile phones and the variety of user-friendly free software are factors that contributed to the success of the project. Students did not request additional technical assistance and few students reported experiencing technical issues.

Student reflections of vulnerability video assignment

Learning from the process

Students enjoyed the opportunity to engage in a novel activity. One student shared that "it was lovely to be able to represent vulnerability not in yet another essay but by using a video". Another shared that it assisted them to recognise their own abilities and gave them the opportunity to do their own research, which is often limited at undergraduate level: "I learnt that I am capable of doing research without the facilitation of my lecturers if I really put my mind to it".

Some expressed concern about the film medium from an ethical perspective and were aware of the politics involved in representation:

> I've always loved filming and photography but at the same time I've always been aware of how it may be exploitive to walk into someone's life and film them like an animal in a zoo. It's important to learn how to do it respectfully and always get consent.
>
> I learned that it's important to let those that are vulnerable take charge in how they want their story to be told.

Contesting binaries: Theory and practice, university and beyond

Students saw the fieldwork process and videos as closer to 'real life' than the classroom. This facilitated their understanding of the theory in a way that was different to the kind of

knowledge traditionally experienced and valued in academia. This is captured by some of their quotes:

> Learning about real life vulnerability issues from relevant people who experienced its effects allowed me to have a deeper understanding of the concept of vulnerability as compared to just learning it through lectures.
>
> The exercise certainly helped put the theory we learnt in class into a real-life perspective. The essay we did on the approaches helped too but this video assignment helped more as you were physically involved.
>
> I got to see vulnerability more in action and also through this video approach knowledge was not restricted to academia.

Students' choice of words such as 'real life' and 'in action' suggests that they learnt to value knowledge beyond the university and see it in a way that offers something different to university 'lectures' and 'academia'. This opportunity to engage with and value local knowledge is very important. Calls to decolonise curricula in South African universities (Hlatshwayo et al., 2022) and elsewhere have emphasised the role of recognising and including marginalised perspectives and local knowledge (Ngcoza, 2019). In the context of climate change adaptation, appreciating the complexity of social vulnerability and the importance of local knowledge is really important too (Naess, 2013). Students reflected as follows:

> We usually read other people's examples that explain concepts as fairly black and white. What we learned was that the concept of vulnerability, coping and resilience is incredibly complex and different for everyone.
>
> The practical gave us an opportunity to have discussions with various types of people we normally would have never met and walk on land we've seen on maps, but would never have visited. As such, the exercise gave us a much broader and in-depth insight into the topic. Ultimately, we learned, at least in our case, that the situation was way more complex and grey.
>
> The complexities of the concept and how it's hard to combat because vulnerability is a very individual lived experience. It showed me what a vulnerable place looks like and how someone living there feels and interprets their situation. It showed me that vulnerability is not just an academic topic but a real-world problem.

Care and connection

Students experienced the video assignment as an embodied, authentic and experiential learning opportunity which included social interaction between group members and community participants:

> I sometimes find learning at UCT can get lonely and it's great that we could do an exercise that was fun and interactive.

> It was really fun to film and get outside the bubble of UCT student life. We had to wake up really early to catch the Philippi farmers.

Student reflections expressed an appreciation for the affective and the connection between emotional work and knowledge. They also appreciated the academic topic of valuing local knowledge and diverse perspectives:

> I really learned first-hand from the people themselves, what they are vulnerable to and how they feel their vulnerability may be reduced. It offered a new perspective to the ones being offered in class and that is extremely valuable. I realised the importance of gathering information from the local residents themselves. The emotional connectivity to their vulnerability was also really eye-opening.
>
> How to approach and learn from people who may not be in the academic field, but have great insight to world issues. I learned the indescribable value of knowledge from indigenous, hands-on people.

Privilege and perspective

Student reflections suggest that many of 'the vulnerable' who were videoed were in a less privileged class position in society than the students. Many students reflected on their own privilege and how they gained a greater awareness of their positionalities and assumptions:

> The group of students we interviewed didn't have access to clean drinking water or flushing toilets at their schools – something I take for granted every day. It was definitely a very moving experience.
>
> None of us have been so financially vulnerable that we have had to choose between washing or making an income. It is not a choice that any of us thought that people would have to make.
>
> A lot of the environmental or health risks that were discussed in these videos are hazards that I myself am exposed to every day, however because of my fortunate position and background, I am less affected by these hazards than other people may be.

However, some students' privileged positionalities also made them feel vulnerable in other ways:

> I still felt uneasy about the power that I had as a university student and the way I was invading and interrogating her personal life in order to conclude how sad her living conditions were. The fear of being robbed crept in at times.

The assignment enabled them to learn things in practice through a relational experience, that had been shared during class intellectually but not viscerally:

> Initially starting the exercise, I thought that a topic such as 'vulnerability' would lead us to dealing with people in miserable situations where we as a group would be able to do next to nothing to help. However, after interviewing Mama Pat, I learned and experienced the

> extreme capability that people can have in facing vulnerability. Her situation is extraordinary and was a source of inspiration to me and my group.
>
> I had the opportunity of going into an informal settlement and inside a 'shack' for the first time. It gave me a more realistic idea of the lived experiences of people living under those circumstances. We study the conditions and speak about 'informal' living a lot in class, but experiencing it first hand is very different and essential.
>
> Assessing the Philippi Horticultural Area that provides Cape Town with 70% of fresh vegetables shows how dependent, but also unaware we are of the farmers that feed us. I realised that no matter how hard I try, I can never fully know what it would be like to have grown up in a township, live on the streets or face so many challenges to your day-to-day life. It was definitely a humbling experience.

Some of the reflections indicate a reciprocal learning experience with the individuals they worked with:

> When interviewing and filming the people in the video I realised that while I had preconceived notions about them, they also had preconceived notions about me. While we were filming a video of their vulnerabilities, they were learning about some of ours both through communication and how we worked.

In their group reflections, some students mentioned feeling uncomfortable with taking participants' time and that they thought the benefits for them were insufficient. Others talked about the importance of their interviewees being pleased to have these videos, that they would use in other circumstances. These issues were discussed as part of the research process and ethics. These personal reflections, related to positionality, power and ethics are such an important part of learning, yet are often hard to achieve in a classroom setting. Combining the classroom theory with the practical fieldwork and video-making process provided a number of opportunities to combine personal and academic reflection and authentic learning.

Discussion

Educators and students need to be open to new modes of learning and engagement to care for, connect with and understand diverse perspectives and contextually relevant environmental issues. In the context of the global challenge of climate change, responses are required across scales from the individual, to household, to business, to city to country. At the same time a change in personal values and practical responses is required, making it more critical than ever to build connection and care.

While it is tempting to celebrate student videos and students' uses of technology as a final product, if we want to be response-able educators we need to think about such learning activities as part of an intentionally designed process that can facilitate meaningful and authentic learning experiences for students. Students' feedback in the UCT example demonstrates that they appreciated the video assignment as an alternative to the

conventional essay format, but this cannot be viewed in isolation. The scaffolding of the task, structured reflections, fieldwork experience and learning from community members played equally important roles in deepening students' understandings of concepts central to climate change literacy.

Teaching students about what it means to be vulnerable to climate change and how different people might adapt is hard in a classroom setting. Similarly, teaching ethics and fieldwork 'skills' in a classroom is not enough. Vulnerability and adaptation to climate change can feel quite abstract to students. Despite examples being given, it is often hard for students to identify with climate change vulnerability, meaning they have a limited literacy of the complexity of climate change and how best to respond. Through this video exercise, students experienced a range of people's stories around particular social vulnerability to the drought, both through watching all the videos and their group's in-depth process. This place-based learning through filmmaking has been identified as a way of making science more accessible to learners as an important part of climate change education (Gold et al., 2018).

In many of the videos, people's ability to adapt and take responsibility came through. The students were really touched by this and many spoke of how their perceptions changed, about capacity or privilege. The assignment required engagement with individuals who were vulnerable to drought. By its nature, it encouraged students to connect with other people across Cape Town.

O'Brien (2018) argued that in order for adaptation to have the desired goal of reducing climate risk and positive societal transformation, it needs to be supported by three spheres of change, namely the practical (behaviour and technical responses), political (systems and structures) and personal (beliefs, values and worldviews). In a classroom, it is easy to teach about the practical responses and there is growing literature on how systems and structures and beliefs and values need to change. Of course, getting change to happen is harder in practice than in theory. Through experiential and authentic learning, such as the climate change vulnerability video project, students actively reflected on their beliefs and values around vulnerability and adaptation. This helped them to build empathy that Chang (2015) argued is a critical component of climate change education. It is the hope that these students are likely to be sympathetic to the urgency and importance of understanding vulnerability and adaptation to climate change because they understand it conceptually, theoretically and experientially.

We argue that as part of their tertiary education, students need to be provided with more opportunities for authentic engagements with communities and people beyond their networks. Opportunities are needed that help students to recognise the importance of diverse positionalities and for discomforts to surface, as this strengthens learning. In the context of climate change as a wicked problem (Rittel & Webber, 1973), different perspectives and solutions need to be appreciated at both the intellectual and personal level. Educators need to engage with approaches that attend to positionality and empathy as part of designing such learning activities (Gachago et al., 2022; Segal, 2011). Herrington

et al. (2014) argued that making the reflective process personally meaningful to students is a key challenge. Feedback from students suggests that we were able to achieve this through the scaffolding of the vulnerability video project. We suggest that incorporating more attention to positionality in reflection activities can further expand Herrington's authentic learning principles. On reflection, we feel that we might make the concept of positionality more explicit in future vulnerability video projects, to extend this learning further.

Interestingly, the initial goal of getting students to apply vulnerability assessment methods through this video project, was only partially achieved. Although the students did choose methodologies, practise them during the practical and implement them with the participants they worked with, these methods did not feature much in the videos. The students focused more on the protagonists and their stories, with the video being the actual vulnerability assessment method. In subsequent years, the use of different vulnerability assessment tools has been dropped and the students have been asked to focus on understanding and sharing stories of vulnerability and adaptive capacity, more broadly, which aligns better with the video format.

Conclusion

This paper has provided insight into a third-year student video project that enabled students to understand the theoretical and embodied concept of vulnerability in an applied context, while strengthening their research and fieldwork skills. The fieldwork, filmmaking process and scaffolded reflections enabled students to engage in a more holistic learning experience. While students appreciated the novelty of the video project, they reported the depth of their learning as a complex entanglement of theory and practice, personal and 'other'. Students' reflections communicate feelings of care and discomfort around engaging with participants, the logistics of group work and fieldwork, ethics and positionality and less around technology.

Climate change is a growing challenge that requires the education sector to contribute significantly. Many students can be overwhelmed by the topic. Designing authentic learning activities that incorporate positionality explicitly as part of reflection is one way to help create care and connection and deepen understanding of the topic. Although action and social change is something that was beyond the vulnerability video project presented here, the reflexivity that was developed can help students to locate themselves in the challenge. Although the students could see that they could not change the lives of the people whose stories they were documenting, they could appreciate how their videos had the ability to surface climate challenges and responses and potentially be used to inspire collective action in various ways.

Notes on Contributors and their Contributions

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Percentage contribution

Areas of contribution	Author	% Contribution per area, per author (each area = 100%)
Conception or design of the paper, theory or key argument	Ziervogel	50 %
	Pallitt	50 %
Data collection	Ziervogel	70 %
	Pallitt	30 %
Analysis and interpretation	Ziervogel	50 %
	Pallitt	50 %
Drafting the paper	Ziervogel	50 %
	Pallitt	50 %
Critical review of paper	Ziervogel	50 %
	Pallitt	50 %

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