Fostering empathy in the teaching of natural hazards

Kit Marie Rackley

Kit outlines practical approaches to teaching natural hazards that foster empathy, and an awareness of their impact on people.

When starting a new topic on natural hazards, it is typically an exciting prospect for students and even teachers. There are so many images, video clips and outputs from popular culture that can be tapped into to give an immersive and engaging learning experience. Almost every week there is no shortage of news items focussing on a current natural hazard event, allowing teachers to keep those case studies fresh and timely. Then we have climate change, effectively one big disaster movie of multiple threats and hazards.

This is the crux of the issue and the focus of this article. Through my own teaching experience, and from what I have observed, it is easy to be caught up in the spectacle and awe of natural hazards in order to motivate students, sometimes not fully appreciating that behind every single statistic is a personal tragedy. The environmental and societal challenges we are facing today need not just knowledge and understanding, they need conversation, context, and empathy.

Geography and the ability to empathise

Of the curriculum ideologies identified by Rawling (2000), building empathy would appear to fit naturally into a progressive educational (child-centred) or reconstructionist (radical) one. Those aim to develop attitudes of respect for others, social capital and an acceptance of multiculturalism. However, I would argue that empathy is a skill that enables an appreciation of the ideas of others, develops co-operation and improves critical thinking – all desirable traits for anybody being prepped for the job market, and therefore compatible with utilitarian or vocational ideologies. If the development of empathy through the curriculum is transcendent, it will sit well with 'powerful knowledge'. As Mark Enser put it: 'Powerful knowledge isn't knowledge that pupils would otherwise encounter in their day-to-day lives …'. It allows students to 'better explain and understand the natural and social worlds' and 'go beyond the limits of their personal experience.' (Enser, 2021)

Regardless of what curriculum ideology prevailed in the past and what combination of these one may subscribe to today, aiding the development of empathy in children has become an increasingly necessary process at both primary and secondary phases. In her book Anne Dolan states that powerful geography can develop empathy in children, allowing them to understand and participate in the environment in which they live (Dolan, 2020). Empathy as a skill helps in acquiring knowledge and understanding of identity and diversity, and instils values and attitudes for social justice and equality. Now that students' eco-anxiety has made climate change arguably a safeguarding concern for schools (Rackley, 2021), these key elements are crucial for empowering young people in the face of unprecedented challenges.

Students must understand the effect of physical natural hazards on people and places, but what can we do in the classroom to develop empathy and avoid treating natural hazards and climate change as some form of academic entertainment? Here are just a few ideas from my own teaching and through observations of effective teaching by others. While the examples may be from less recent events, it is the methodologies used which are the focus. Indeed, articles such as those written by Alistair Hamill (2021) which focus on more recent events can complement the following ideas.

Observing beyond the spectacle

On Friday 11 March 2011, each period of my school day was spent simply doing one thing: watching the news, live, as it covered the devastating scenes of the tsunami, triggered by an earthquake, sweeping the east coast of Japan. It made for vibrant discussion and helped demonstrate processes and impacts, but I was left hollow at the end of the day when I realised that I too had been captured by the spectacle. Take a look at Figure 1, a picture of the earthquake's aftermath. What are your eyes immediately drawn to? How long did your thoughts linger on what first captured your attention? You most likely demonstrated 'anchoring' and 'salience'

Figure 1: US Navy responders in the aftermath of the Tohoku earthquake in March 2011. **Source:** © pkotegorov/flickr (CC BY 2.0).

biases (over-focusing on the first or obvious thing, and that which grabs our attention), and when it comes to devastating scenes these biases can be particularly strong. After recognising this in myself and the students I taught, I developed my own method of analysing still images, screenshots or freeze-frames – called *foreground*, *background*, *four-corners* and *space*, which works with all age groups (Figure 2).

The image can be on the whiteboard or a physical resource, but, using Figure 1 as an example, the first step is to address the aforementioned biases by asking students to make observations or generate questions only on everything in the foreground, such as the rescue workers. The focus can include imposing components in the near-background, such as the damaged building on the left. Then draw the focus on to the background: the apparently unscathed building, the washed up boat, the wandering person, and the hills. Concentrating next on the four corners, and 'space', draws attention to areas that often get ignored, as they are outside the 'vignette' of human vision. We now notice the stripped-out building insulation, the condition of the road, the misty sky.

This approach works exceptionally well with enquiry skills and tools such as the critical thinking question generator (GA, 2018) or the development compass rose (TIDE, 1995). However, depending on the image and the objectives for using it, this method alone doesn't necessarily build empathy. Instead, it provides a solid foundation for observations and discussions that support it.

Creative arts: a chance for cross-curricular approaches

One technique useful for building empathy is 'hot-seating'. Hot-seating works by having a character who is questioned by a group of students not just about the topic under discussion, but also about their personality, motivations, thoughts and feelings. The technique is also useful for developing questioning skills. Some kind of stimulus is used, which involves an identifiable character. This could be one of the rescue workers or the wandering person seen in Figure 1, or it could be someone who is featured in a news article. The teacher is sometimes in the hot-seat (this is called 'teacher-in-role (TiR)'), or if a teacher is not comfortable with this role they can use the stimulus and other necessary information to, ahead of time, brief a willing student or colleague to take it on.

The earthquake that hit Haiti in 2010 produced exceptionally powerful personal stories. One such story focused on Hector Mendez, a Mexican rescue worker (Figure 3). The journalist, Moni Basu, used clear and emotive language to describe Hector's motivation, hope, determination and pain (Basu, 2010). I used this as a stimulus for a year 7 lesson about the Haiti earthquake. Figure 4 shows some questions that were asked

Figure 2: A four-step process to address anchoring and salience bias when using imagery.

Figure 3: Mexican rescue workers take part in a search for victims in the aftermath of the 2010 earthquake in Haiti. **Source:** Alamy.

Figure 4: Questions asked of 'Hector' (via teacher-in-role hot-seating) by a year 7 class about being a rescue worker in Haiti.

of me 'as Hector' when TiR hot-seating. For homework, the students were asked to come up with questions they would like to ask Hector. They weren't given a copy of the news story, but brief information about Hector as outlined in it: that he was a volunteer, that he has helped out in many hazardous events which became disasters for the people affected, etc. On most occasions, the news article itself provides possible answers, and on others my geographical knowledge was used to appropriately and reasonably fill in gaps. The questions that can't be answered are almost always related to thoughts and feelings. These are the most challenging to answer and require empathy skills of the hot-seater. I tackle this by thinking 'how would I feel?' One thing to be mindful of when hot-seating is that it is not used to reinforce stereotypes or appropriate cultures. When it comes to marginalised voices, ensure you are very confident that your own experience is relevant, or you have spoken to or researched the viewpoints of people who are part of such groups. The aim is to express thoughts and feelings as a result of a geographical process or event, not on the basis of someone's background or culture.

Another technique is a 'freeze-frame'. Based on a stimulus, groups of students devise a living picture posing as statues to generate a scene. Figure 5 shows a group of students in a freeze-frame in the aftermath of an earthquake. This technique also offers an opportunity for cross-curricular skills building. Key stage 3 students practise 'analytical drawing' in art, which lends itself naturally to geographical sketching. In this instance, students who are seated used their sketchbooks to sketch the scene depicted by the living statues. Each group had 10 minutes to pose as a living picture, while the rest of the class sketched. An extra element was added for the last two minutes of each freeze, when I interviewed the 'statues' with an imaginary microphone, asking them questions such as 'How long have you been digging for?', 'What were you doing when the earthquake hit?', 'You look distressed. What is upsetting you?', 'What building did this use to be?' The responses were used by the artists to add annotations to their sketches.

Figure 5: Using 'analytical drawing' and freeze-framing to sketch how people might respond in the aftermath of a natural hazards disaster. **Photo:** © Kit Rackley.

Real-time, real stories

Building empathy from geographical issues such as the impacts of natural hazards can be synergistic with promoting appropriate use of social media and online blogs. Thanks to hashtags (for example #HurricaneIda, #DixieFire and #Lytton #Heatwave from 2021), social media automatically curates thousands of first-hand accounts of disasters resulting from natural hazards. Once the primary impacts have passed, the hashtags will provide a window into the long-term impacts and responses. Tweets or posts with these hashtags then remain forever accessible so long as the platform they are hosted on exists, providing a cache of stimuli and potential curriculum artefacts. In Figure 6, Twitter user ErinInTheMorn's (Erin, 2021) posts about her anxiety about the impacts of Hurricane Ida as it hit her home town on the coast of Louisiana in August 2021. Although individuals such as Erin may have made the choice to post in the public domain, we must be mindful that these are real people choosing to disclose their lived experiences. Use of social media in this manner requires moderation and sensitivity, and so therefore can in itself be a good exercise in empathy building. It also promotes safe and appropriate use of online platforms, especially since it is increasingly a valuable tool for investigating geographical events (Fearnley, 2020).

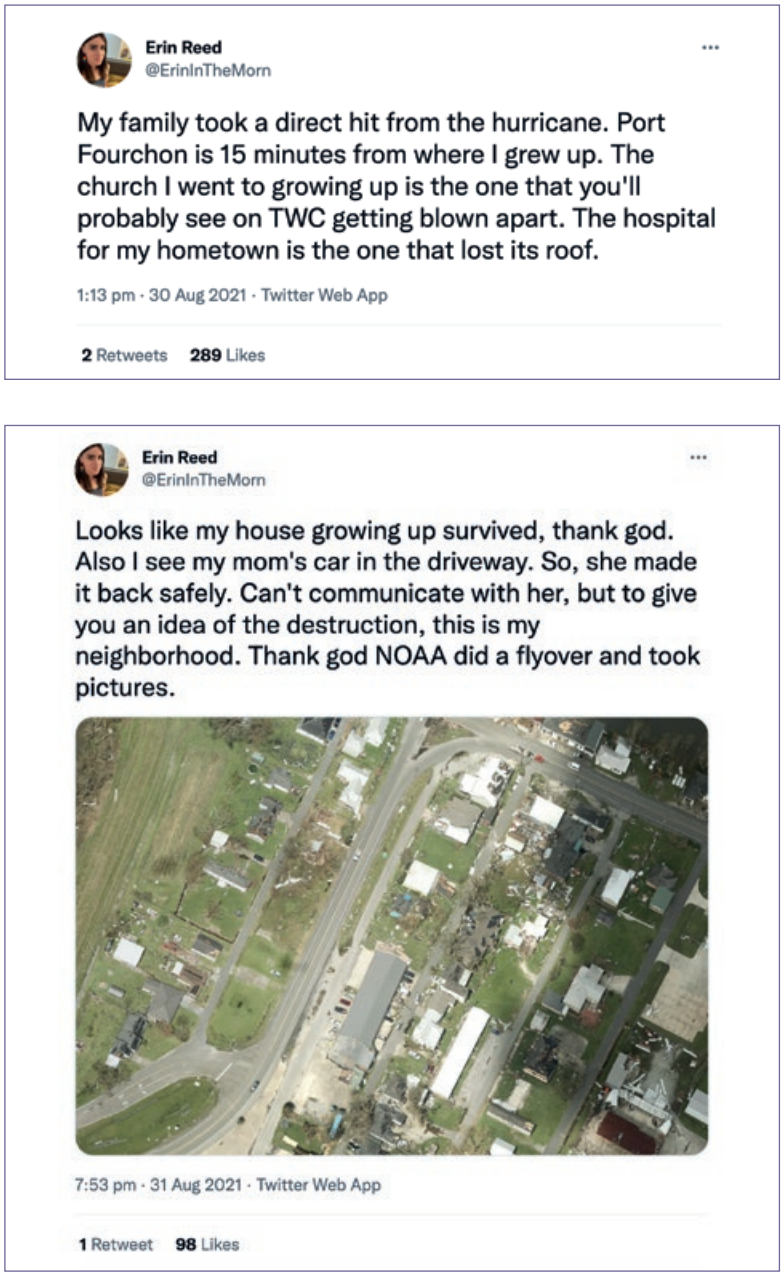

Figure 6: Posts from a Twitter user whose family home is located in an area of Louisiana that was hit by Hurricane Ida. Reproduced with permission.

Where the use of social media platforms might not be appropriate or desirable, online blogs can be used. In September 2020 the Bridger Canyon area just outside Bozeman, Montana, USA experienced a wildfire that burnt 8224 acres. The Bridger Foothills Fire didn't make international or even national news as it was small in scale, but it made a huge impact on an individual and community level (Rackley, 2020). On Facebook, resident Jeff Vermillion wrote a blog article titled *Fire and Hope*, which has since been published and archived (Vermillion, 2020). A comment submitted by a reader says:

> *Beautifully and eloquently said Jeff. I'm a canyon resident and you captured so many of my thoughts and emotions. Where there is pain and loss, there is opportunity as well.*

Very little can compete or compare with the testimony from those who are directly impacted by a significant event, and empathetic use of such stories, offered generously by those who wish to tell them, should be a default when we are teaching the impacts of natural hazards.

Final thoughts

As outlined and practically demonstrated in this article, our subject enables us to develop the skill of empathy in young people while covering issues in the curriculum. Not only is empathy and conversation important to help develop social cohesion, but it also allows for the creation of a safe learning environment. With contextual safeguarding in mind, teachers who are thoughtful and strategic in the application of any of the ideas above or similar will be helping to normalise human emotions like anxiety and be mindful of students for whom covering these issues may be triggering or upsetting. And in an era of declining mental health in young people and environmental degradation, the subject of geography once again can demonstrate itself as a means of reconnecting with our humanity. | **TG**

Kit Rackley is a freelance educator and author at www.Geogramblings.com, and a consultant to the GA.

Email: kit@geogramblings.com

Twitter: @geogramblings

References

All websites last accessed 24/03/2022.

Basu, M. (2010) 'Rescuer was woman's last hope in Haiti: "We told her we won't leave"', CNN, 29 January. Available at http://edition.cnn.com/2010/WORLD/americas/01/28/haiti.rescuer/index.html

Dolan, A. (2020) *Powerful Primary Geography: A Toolkit for 21st-Century Learning*. Abingdon: Routledge

Enser, M. (2021) *Powerful knowledge: What teachers need to understand*. TES Online, 17 September. Available at www.tes.com/news/powerful-knowledge-what-teachers-need-understand

Erin, Trail Mom (2021) via Twitter. Available at https://twitter.com/ErinInTheMorn/status/1432315488344940551 and https://twitter.com/ErinInTheMorn/status/1432778573077749760

Fearnley, F. (2020) 'Social media as a tool for geographers and geography educators', in N. Walshe and G. Healy (eds), *Geography Education in the Digital World* (pp. 75–86). Abingdon: Routledge

Geographical Association (2018) *Critical Thinking in Practice: Practice Guide*. Available at www.geography.org.uk/write/MediaUploads/Support%20and%20guidance/683_Critical_Thinking_in_practice_guide_final.pdf

Rackley, K. (2021). *School safeguarding policy should consider climate change and eco-anxiety*. Geogramblings. Available at https://geogramblings.com/2021/04/25/school-safeguarding-policy-should-consider-climate-change-and-eco-anxiety

Rackley, K. (2020). Bridger Foothills Fire [Video]. Geogramblings. Available at https://geogramblings.com/2020/09/11/bridger-foothills-fire-video/

Hamill, A. (2021) 'Representing without misrepresenting: the ethics of case study writing' *Teaching Geography* 46, 2, pp. 53–55

Rawling, E. (2000) 'Ideology, politics and curriculum change: reflections on school geography 2000', *Geography*, 85, 3, pp. 209–20

Teachers in Development Education (TIDE~) (1995) *Development Compass Rose Consultation Pack*. Birmingham: DEC. Available at https://www.tidegloballearning.net/sites/default/files/documents/DEVELOPMENT%20COMPASS%20ROSE.pdf

Vermillion, J. (2020) 'Fire and Hope: Bridger Foothills Fire 2020' in the Bozeman Magazine. Available at https://bozmanmagazine.com/articles/2020/10/01/103732-fire-and-hope-bridger-foothills-fire-2020