

Chapter 11

Finding hope in a world of environmental catastrophe

Elin Kelsey and Carly Armstrong

Abstract

Climate change, the Gulf oil spill, Japan's nuclear disasters, the massive impact of Canada's tar sands – 'gloom and doom' blows in from even the most trusted places. Children and adults are confronted with environmental catastrophe almost anywhere they turn: kid-friendly nature magazines, homework assignments, popular films and well-meaning docents at the zoo. In this chapter, we explore the emotional impacts of living in times of accelerating change. We argue that children need to develop a strong connection to the natural world and to be involved in community efforts to address environmental issues. We advocate for the privileging of hope and resilience. We aim to encourage readers to examine their own emotional responses and to reframe how they position themselves with respect to empowering children to embrace sustainability in our rapidly changing world.

Introduction

Climate change is one of the most important global issues of our time. With its prominence, much emphasis has been placed on the role of educators to provide relevant information to children. The hope is that, through education, the next generation will be climate-literate, capable of addressing climate change, and motivated to act on behalf of our shared environment to ensure the wellbeing of future generations (Johnson *et al.* 2000). However, what constitutes appropriate climate change education (CCE) is not well understood or well developed within the Environmental Education (EE) literature. There is a lack of concrete guidance for educators regarding complex issues like climate change in terms of the emotive responses learning about difficult issues can incite in young learners.

No tragedies before grade four

Scholar and educator David Sobel considers climate change a 'tragedy'; one of the 'big, complex problems beyond the geographical and conceptual scope of young children' (Sobel 1996, p. 27). More than a decade ago, he coined the term

'eco-phobia' to describe what happens when we lay the weight of the world's environmental problems on eight and nine year-olds already haunted with too many concerns and not enough real contact with nature. 'Ecophobia' he writes '(is) a fear of ecological problems and the natural world. Fear of oil spills, rainforest destruction, whale hunting, acid rain, the ozone hole, and Lyme disease. Fear of just being outside. If we prematurely ask children to deal with problems beyond their understanding and control, then I think we cut them off from the possible sources of their strength'.

Sobel (1996) argues that no tragedies should be taught before grade four, a contention that has important implications regarding when and how climate change should be taught at the elementary level. Sobel's conjecture is an essential starting point for a more detailed investigation of CCE because it has been widely embraced by environmental education practitioners; for example, Canadian National Parks, adopted it as a guiding principle (S. Wolff, personal communication). The research conducted by Armstrong (2010) that informs this chapter aimed to explore Sobel's conjecture in greater depth through an extensive literature review and interviews with 'experts' in fields related to the emotional development of children.

Growing concern about children's emotional responses to 'doom and gloom'

Despair about the future of the planet has garnered many labels in recent years. Glenn Albrecht (2005), Professor of Sustainability at Murdoch University invented the word 'solastalgia' – a combination of the Latin word *solacium* (comfort) and the Greek root – *algia* (pain) – to describe the homesickness one feels when one is still at home, but the environment is irreparably changed. The term has spread, leaping beyond academic journals to the mass media, garnering feature story status in national and international outlets, including the New York Times Magazine, Wired, and Worldchanging.com, and earning Albrecht centre stage attention at TEDxSydney2010. At the International Science Tellers Festival in New Zealand in November 2011, a crowd of Christchurch residents swarmed the stage following a talk in which the term 'solastalgia' was mentioned, hungry to know more about a word that so poignantly encapsulates the grief they carry following the major Earthquakes of September 2010 and February 2011.

Kriss Kevorkian (2004) created the term 'environmental grief' to explain the emotional response to the loss of ecosystems. Phyllis Windle (1995) characterizes environmental losses as 'intermittent, chronic, cumulative, and without obvious beginnings and endings' (p. 144), and suggests that these losses are difficult to mourn because there is very little social support for expressing environmental grief. Environmental despair does not appear to be limited to those living through

the aftermath of natural or human-caused destruction. Nor is it restricted by geography or age. High school students in Switzerland discussing the state of the planet share important traits in common with the medical diagnosis of depression: the bleak picture of the future; the pessimistic mood; the motive of guilt; feeling out of control, according to Albert Zeyer a Health and Science Education Researcher at the University of Zurich (Zeyer and Kelsey 2012).

Over the past few years, Elin Kelsey has been facilitating hope and environment workshops with kids, including children from more than 90 countries at the UN International Children's Conference for the Environment in Stavanger, Norway in 2008. Amidst the celebrations of the good works these very environmentally active children are engaged with, she asked them how they feel about the environment. The answers reflect a genuine sense of worry. As Jeffery, an eleven year old from Malaysia, says, 'You always hear about this worrying news like, time is running out. We're all going to sink and drown because the ice in the polar pack is melting ... life as we know it might end.' Dominic, a ten year old from Romania answered simply: 'Worried. Always. In Romania, there are many dangers for destroying the country because of pollution. In Romania, very few people care about the environment.' Juliana, a fourteen year old from Namibia replied: 'Yes. Because of the changes. My grandmother told me in the olden days the weather didn't change as much as it changes now. As human beings that cause all of this, it hurts me, and for the future generations. We leave them a disastrous world.'

Feelings of hopelessness also exist within the scientific community. A recent editorial in the journal, *BioScience*, reads: 'We contend that there is a continuing culture of hopelessness among conservation biologists ...and that will influence our ability to mobilize conservation action among the general public' (Swaigood and Sheppard 2010).

This 'culture of hopelessness' also exists among educators (Kool and Kelsey 2006). In preparation for the opening of a new exhibit about climate change at the Monterey Bay Aquarium, staff and volunteers were invited to participate in a series of facilitated workshops about their feelings around the climate change issue. Despite the social barriers that might be expected in a workplace venue, these volunteer docents and staff educators were quick to share how angry, discouraged and hopeless they felt about the state of the planet, how alienated they felt from family and friends who were enmeshed in materialistic cultures, how ashamed they were of the contradictions between their full knowledge and horror of climate change's impacts and their own lifestyles.

Recognition of the psychological impacts of climate change is growing. In 2010, both the Australian Psychology Society and the American Psychological Association called for the development of research into climate related emotions.

In some sense, these responses might be considered a success. One could argue that the key thing environmental education has done over time is to raise awareness of the peril of messing with the biosphere. Surely, these emotional responses are an indication that the message has not only been received, but also embodied. Yet clearly an educational movement that leaves its participants in despair, hopeless, immobilized by dread, or, so disenfranchised they resort to hyper-consumerism (a notion explored within Blühdorn's (2000) concept of post-ecologism), is neither morally defensible nor likely to lead to sustainability outcomes. So where do we go from here?

The importance of making spaces to acknowledge feelings

We need to acknowledge the enormity of environmental problems, and share our feelings of frustration, anger, sadness, fear and hopelessness. We need to create spaces and opportunities to help kids explore and share their own feelings. We also need to move beyond the narrative of 'gloom and doom' toward more hopeful narratives grounded in resiliency, well-being, happiness and health (Brown and Kasser 2005, Fritze *et al.* 2008, Kelsey 2010, Kidner 2007, Macy and Brown 1998). As Julian Agyeman, Professor and Chair of the Urban and Environmental Policy and Planning Program at Tufts University in Massachusetts, puts it: 'Well-being and happiness are the key social issues that will get people talking about social and environmental sustainability' (J. Agyeman, personal communication).

Barrows (1998) argues that the real problem regarding children and difficult environmental content arises when children are forced to hold their feelings and ideas inside and do not have a supportive space to discuss what they experience in the world and how it makes them feel. This suggests that it may be misguided to think we can choose an appropriate time, as implied by the notion of *no tragedies before grade four*, for children to gain awareness of a global issue like climate change. Instead, there is a need to recognize that children observe their communities and sense the challenges and changes therein. Creating a space to discuss children's experiences emerges as an important part of helping them to navigate the challenges faced by their communities in relation to climate change and other potentially frightening environmental issues.

Encourage children to think creatively and critically

Given that many environmental issues are characterized by complexity and inter-relatedness, helping young learners develop the tools to deal with complex challenges, and the means to see connections between the many facets of a problem is critical (Armstrong 2010). Critical thinking can be related to assessing different pieces of information, their authenticity, by whom the information was provided and for what purposes. For educators, this can mean giving students the skills for discussion, research, and inquiry so that they have the tools to think creatively. It also means creating opportunities for learners to develop the ability to engage in moral and ethical reasoning and to understand how ethics relate to issues and challenges they encounter in a rapidly changing world.

Reject scare tactics and teach environmental education as love for nature and life

Gomes and Kanner (1995) argue for the need to let go of a 'shame and blame' approach to environmental messaging. They favor approaches that honour relationships and loving responses to environmental challenges. Spending time in nature and learning the intricate relationships found in the natural world are effective means for fostering wonder and respect (Chawla 1999, Orr 1990). Playing outdoors and participating in nature-based activities emerge as priorities for educators who wish to inspire students in the elementary years to become environmental stewards (Sobel 1996).

The importance of the human-nature relationship and concerns about how quickly children are being separated from the natural world are widely discussed among environmental education practitioners and scholars (Kahn and Kellert 2002, Kellert and Wilson 1993, Metzner 1995, Moss 2012, Roszak 2001). Metzner (1995) contends, 'the entire culture of Western industrial society is dissociated from its ecological spectrum' (p. 64). Kellert (1993) lists a range of 'adaptational advantages' that result from basic experiences in nature: 'enhanced physical skills and material benefits, greater awareness, increased protection and security, opportunities for emotional gratification, expanded kinship and affiliational ties, improved knowledge and cognitive capacities, greater communication and expressive skills, and others' (p. 65).

Edward O. Wilson coined the term 'biophilia' to describe what he believes is humanity's innate affinity for the natural world. In their landmark book *The Biophilia Hypothesis*, Kellert and Wilson (1993) warn of serious consequences for human well-being as societies become further estranged from the natural world. Richard Louv (2005, p. 100) built upon that theme, inventing a psychological

condition called 'nature deficit disorder' to highlight the health risks associated with being dislocated from nature.

Armstrong's (2010) study identified the vital role that positive emotions, such as gratitude and love, play in motivating a person to act on behalf of the environment. Every interview participant discussed the need for children to be provided with outdoor experiences that would help them to bond with nature, feel more hopeful, and become familiar with the natural environment where they live. One participant in the study articulated that outdoor experiences 'inspire wonder and awe in children and hopefully just strengthen any kind of connection they might find with being outside' (Armstrong 2010, p. 35). This finding suggests that we need to create approaches for teaching troubling environmental issues that recognize the deep emotional influence of the ecological crisis and provide opportunities for students to experience positive emotions in the natural world. Developing a relationship with the natural world will provide motivation and energy to address the negative news and environmental challenges faced later in life.

Move beyond the narrative of climate change as a tragedy

While Sobel (2007) characterizes climate change as an environmental tragedy of our times, individuals in Armstrong's (2010) study were not keen on framing it as such for young children. Instead, the need to deconstruct the very idea of 'tragedy' was stressed by David Hicks and Enid Elliot, both interviewees within Armstrong's (2010) study. Both Hicks and Elliot felt that there were aspects of climate change that not only could but *should* be taught to younger students, albeit in a sensitive manner. In general, the participants agreed that foundational learning in early years was important for enabling later learning about environmental issues and critical thinking on later topics. For example, Hicks explained 'children could for example ... come to high school knowing that the world is changing in many ways and part of it is to do with climate and that's affecting people, habitats and so on, but we don't have to do it in this sort of tragic context' (p. 34). Hicks also explained that in elementary school he thought it would be appropriate to teach about the difference between renewable and non-renewable fossil fuel based energies, local renewable energy projects that have been established, Hicks explained, 'I think even with under ten year olds ... what are some of the differences between getting your energy from renewable sources ... wind and water on the one hand and burning coal, for example ... one might also just talk about pollution, rather than ... heading into climate change ... if kids have learned about renewable energy sources and so on and are interested and excited ... they're on route to ... having the sort of consciousness that they need to develop as they get older to be able to look at climate change' (p. 34).

The framing of potentially troubling environmental issues emerges as a key consideration when contemplating what information to include for younger students. The issue is not that children needed to be aware of an enormous, daunting problem but that by teaching children about certain aspects of climate change they will be better prepared to address the issue in the future. Without trivializing the issue, climate change may need to be explored in the classroom in a way that is rooted to the local community and the impacts experienced there. Generally, it was felt that there were likely instances where a little bit of information, passed along in a sensitive manner may indeed assuage greater fears garnered from fragmented information that have the potential to be emphasized by a child's vivid imagination and ability to empathize with other beings.

Barrows (1998) emphasized the importance of acknowledging students' experiences and accepting that many children are already aware of environmental issues, such as climate change, and that by ignoring their awareness and failing to discuss difficult issues adults may inflict greater anxiety, frustration, or other difficult emotions upon children. The evidence presented above, that exhibits children's anxiety and concern for the environment supports Barrows' contention. The need for educators to be extremely critical about not only the students in their charge and their needs, but also about themselves and their own motivations for teaching about climate change emerges as an important consideration. Rather than imparting climate change content simply because students 'need to be aware' of the problem, educators must be critical about why they think it is important for their students to know about climate change. With younger children, if it is not on their radar, educators may be more likely to achieve the goal of creating pro-environmental behaviour by building that child's bond with nature instead and fostering self-efficacy through community involvement.

Create communities that engage children as active participants

A common thread running through Armstrong's (2010) findings is the importance of a strong, supportive community. A sense of community within the classroom and a connection to the wider community beyond school is important to CCE. Students of all ages need to see that their communities are addressing important issues and achieving success in regards to climate change and other community issues through direct participation in community activities. A sense of community also needs to be nurtured within the classroom by allowing each student their turn to speak and to be listened to and by offering the opportunity for students to express their emotions. One participant explained, 'children need to have experiences with finding joy and celebration in life and also realizing that there are things that are difficult, but... together as communities, we can work them through' (p. 30). This

finding supports the need for children to be a part of community responses to environmental challenges, 'so that children can see themselves as more of a part of a community rather than somehow this rests on them all alone' (p. 31).

These ideas are well supported in literature. Finger (1994) argues that youth require training in small, incremental ways and that there is a need to counter-balance fear with productive activity within environmental programming. Chawla and Flanders (2007) point out that effective programming has an extended duration of time, offers both opportunities to learn and to practice skills and provides opportunities for success in achieving valued goals. Moreover, Chawla and Flanders, (2007) argue that a sense of competence is key to healthy development as it contributes to an individual's sense of self-worth; they explain: 'people are more likely to contribute to a group when they have confidence in themselves and their capabilities, while at the same time, individuals are more likely to feel self-confident when they are surrounded by a strong, supportive group' (p. 445). Involvement in community initiatives to address climate change would provide the opportunity for CCE to be empowering, confidence building, and solutions-based aiding in the re-framing of climate change from tragedy to being embedded in local context (Armstrong and Kelsey 2011).

Schools and other educational facilities (i.e. nature centres) can be a strong nucleus from which to build the community cohesiveness for which the participants in Armstrong's study and others advocate. Students need to feel that they have a strong role in determining how their community will evolve over time. Fostering this sense of self- efficacy should be an important focus for educators at the elementary and secondary levels.

Hicks and Holden (2007), discuss the importance of involving students in visioning work regarding the future of their community. This involves in-depth discussions with children, youth and others to provide an opportunity for them to think creatively and imagine preferable futures for their community. This visioning work can also provide an opportunity to discuss and design potential modes of achieving those futures. This consideration was also emphasized in Armstrong's (2010) study; the role that visioning exercises play in empowering students and giving them an experience where they can look critically at their community and learn that 'you can visualize where you want to get to... and one can participate in creating change' (p. 32). Through visioning work, students' concerns can be brought to the fore in a sensitive manner.

Actively engage children with environmental issues

The importance of stories in education is highlighted throughout *The biophilia hypothesis* (1993) by several authors who advocate for the inclusive of storytelling that does not privilege one tradition or mode of knowing over another. Nabhan and St. Antoine (1993) touch on this in their chapter when they assert that Western education systems privilege certain stories over others, especially Western stories over Indigenous stories. CCE programs would benefit from the incorporation of traditional knowledge and lore into curriculums and by the inclusion of direct exposure to plants and animals with specific emphasis on wild species, which would provide local knowledge and also foster a sense of biophilia.

Shapiro (1995) views participation in positive activities as an essential part of empowering people to engage with environmental issues. Shapiro (1995) writes, 'environmental restoration work can spontaneously engender deep and lasting changes in people, including a sense of dignity, belonging, a tolerance for diversity, and a sustainable ecological sensibility' (*ibid.*, p. 225). He explains that the personal transformation that occurs through participation in restoration work is different from that associated with wilderness trip experiences and argues that restoration work has a longer lasting and continuous impact because through the process people begin to release 'often repressed, but nonetheless crippling emotions – guilt and shame, grief and despair, loneliness and powerlessness – associated with going along with the relentless machinery of corporate consumer culture' (*ibid.*, p. 227).

The positive benefits to both students and teachers of participating in school-yard naturalization projects or other community restoration projects may have deep and long-lasting impacts, particularly when linked to the school's curriculum. Extensive time outdoors, participating in community efforts to improve the local environment, and excursions to meet with elders and learn from their accumulated wisdom emerged as important components of CCE policy and practice in Armstrong's (2010) study.

An important next step for educational policy will be to acknowledge the importance of and great need for students to participate in outdoor activities and community initiatives on a regular basis. This will include building an understanding among the public about why such learning opportunities are critical for students. Involving students in greening school grounds, community restoration projects, regular hikes in local parks or woodlands, and other activities that bring students closer to nature need to become routine for students around the world. Such activities will enable children and youth to build a personal relationship with the natural world through exploration and contemplation. Contemporary learning outcomes can easily be applied to many of the activities listed above, signifying that there

is no need for outdoor and community activities to ‘take away’ from regular learning. Many such projects are already underway around the world, including, for example: the Center for Ecoliteracy in California, the community restoration and gardening work being done by the Evergreen Foundation in Ontario, and initiatives like Ontario’s EcoSchools. A conscientious effort needs to be made to ensure that such experiences are the norm, rather than the exception for today’s students.

Pursue sustainable happiness

Research from the fields of environmental psychology, positive psychology and resilience provide fresh understandings about the way more hopeful narratives about climate change might be structured (Fuller *et al.* 2007, Gifford 2007, Groopman 2004). ‘Sustainable happiness’ according to Catherine O’Brien of Cape Breton University is ‘happiness that contributes to individual, community and/or global well-being, without exploiting other people, the environment, or future generations’ (O’Brien 2008, p. 289).

Happiness is at the heart of who we are and turns out to be an ideal entry point for underscoring the interdependence of all life on the planet. For the group of student teachers attending the first course in Sustainable Happiness at Cape Breton University in 2010, spending class time exploring why some people are happier than others, or the links between happiness and health, were intriguing but unfamiliar territory. Who would you choose, for example, if asked to interview the happiest person you know?

Happiness is a universal desire. But in a consumer society, where consumption and happiness tend to be inextricably linked, it is easy to confuse the ‘path to the ‘good life’ as the ‘goods life.’(Kasser 2006, p. 200). And in industrialized countries the pursuit of happiness is often at the expense of other people and the natural environment.

Happiness research suggests that ‘authentic happiness’ is associated with positive health and well-being (Seligman 2002). Authentic happiness is derived through relationships with family, friends, meaningful work, and engagement in our community rather than relentless striving for material possessions. There is also evidence that once basic needs are met, substantial increases in income do not translate into substantial increases in happiness (Diener and Seligman 2004; Stutz 2006). The over-consumption in consumer societies is neither the ultimate path to authentic happiness nor the path to sustainability.

The concept of sustainable happiness draws attention to the positive and negative consequences of how individuals, communities and nations pursue happiness. In a globalized world, everyone's actions have repercussions on distant lands and people. Some impacts are merely short-term while others have enduring effects. Sustainable happiness, according to Kelsey and O'Brien (2011, p. 3) 'can guide the daily actions and decisions of individuals to account for far-reaching consequences; it reinforces the need to consider social, environmental and economic indicators of well-being so that community happiness and well-being are sustainable at the national and international level, for now and into the future.'

Conclusion

Our times are characterized by accelerating uncertainty and complexity. The myriad issues (environmental, economic, social) faced by contemporary society create a landscape of upheaval that requires serious questioning of societal values and norms. The multiple challenges and the effort required to move toward solutions require high levels of self-efficacy and an increased locus of control, but also the energy and knowledge to do so. Those of us concerned about and working toward sustainability must deeply reflect upon our own motivation for addressing complex environmental issues and the modes we have chosen for addressing them. For environmental education practitioners, this requires awareness of our reasons for educating the public on environmental issues and how we engage audiences in environmental content. As was illustrated in this chapter, simply teaching individuals about the troublesome challenges is not enough. Sustainability education needs to involve the development of skills and tools for addressing several complex and troubling issues simultaneously. Creative thinking, community building, problem-solving, communication skills and the ability to envision and move toward preferable futures – all these and more are essential aspects of environmental education. Moreover, it is critical that in working with youth to address sustainability issues, students are provided with opportunities to laugh, play, and participate in the natural world. A space needs to be made for the emotive responses to environmental crises. Reflecting upon what gives our communities and ourselves strength will aid us in finding ways to engage the wider community in sustainability solutions.

There are communities, cities and countries that are already on the front lines of climate change. Those already being deeply influenced by climate change need support in dealing with chaos that ensues after a climate change impact. The young children in those communities, some of whose thoughts were presented above, need our compassion and our action. Working with these communities can provide greater insight into emotional responses to troubling environmental

issues, which can assist us in developing capacity and skills for addressing troubling issues with children.

Future areas of research might include investigating the resiliency of communities impacted by climate change, exploring children's emotional responses to environmental education, and trialing of various approaches suggested in this chapter. There are no steadfast guidelines to follow- each community, classroom, and student will require an approach tailored to their unique needs and challenges. It is hoped that by utilizing the principles and concepts put forward in this chapter, that those educating for sustainability will have insight into how to plan effective and responsible education programs.

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