

Place-Based Environmental Education to Facilitate Connectedness and Sustainable Behaviour

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Abstract

This research report explores the importance of place-based environmental education in a world rapidly deteriorating due to human behaviour. Social and cognitive barriers facing environmental education such as environmental concern, obstacles for environmental educators, ecophobia, and social class are addressed. Potential methods of diminishing and overcoming these barriers are explored. When properly implemented, environmental education can foster connectedness to, concern for, and caretaking of the natural world. It is recommended that we take action to bring effective environmental education methods like those included in this report into practical application, as doing so may change the prognosis of the Earth's natural environment for the better.

Keywords

Environmental education — sustainability — psychosocial barriers

As stewards of the land, we have a responsibility to protect and maintain the natural environment around us (Worrell & Appleby, 2000). Unfortunately, as made evident by current issues around global climate change and habitat loss, we have not been doing as well as we ought to be (McMichael, 2014). One possible explanation for our mistreatment of the environment is a general lack of knowledge – how can we protect nature and local places if we do not know how? This is why environmental education (EE) is important. Educating children (and adults) about the environment can give them a sense of what they ought to do to preserve it and why (Samuelsson & Kaga, 2008). That being said, there is a difference between knowing what we ought to do, and actually doing it (Falk, 1947). People tend to do what they want – what is important to them – and things we do not understand or feel connected to neither tend to elicit concern, nor inspire action (Falk, 1947). This is why facilitating connections between people and local nature is vital.

Environmental concern is best cultivated through sustained contact with a place, and contact with a place can best be sustained when the place is local and easily accessible on a frequent basis (Fisman, 2005). Contact with the local environment is an effective catalyst of concern because our local environment feels more personal – simply being reported statistics or shown images of environmental disasters elsewhere does little to influence us. We tend to apathetically perceive these forms of second-hand information as distant and un-relatable to our personal lives (Lachapelle, McCool, & Patterson, 2003).

While forming these connections through environmental education is important, it is not always easy to do, as environ-

mental educators are faced with various challenges (Hudson, 2001). For example, there exists amongst environmental educators, a perceived lack of access to settings in the natural environment wherein lessons could be conducted safely (Ernst & Tornabene, 2012). Worries about losing track of students, or of students accidentally injuring themselves (i.e. twisting an ankle on an environmental obstacle, or coming into contact with poison ivy) in open, natural settings can cause teachers to avoid trips to these places as a preventative measure (Ernst & Tornabene, 2012). For teachers to feel more comfortable in outdoor education settings, it is best for them to have good perceived behavioural control, and this can be increased in settings they personally enjoy, with clear boundaries and paths for ease of monitoring students during activities (Ernst & Tornabene, 2012).

Another challenging barrier facing EE is the concern that environmental issues may be scary or depressing for young children, and environmental sustainability may be too abstract for them to comfortably comprehend (Samuelsson & Kaga, 2008). These types of concerns, while unfortunate, are understandable considering that learning about the severity of the current rate and impact of climate change can upset young children in a way which catalyzes the development of ecophobia (McKnight, 2014; McMichael, 2014). Ecophobia is a pessimistic attitude towards one's capacity to understand and influence the state of the environment that can be caused when elementary-aged students are exposed to too much negative information about environmental issues at a time during EE (McKnight, 2014). The development of ecophobia is problematic, as it may prevent students from understanding and acknowledging the fact they can make a positive difference through individual actions towards sustainability (McKnight,

2014; Samuelsson & Kaga, 2008).

There also exist some unfortunate barriers challenging environmental educators on an institutional level (Hudson, 2001; Lachapelle, McCool, & Patterson, 2003). Recent trends in political and public educational policy development have led to an elementary curriculum with less emphasis on science, EE, or sustainable development to make room for more class time spent focusing on math and reading skills (Ernst, 2007; Hudson, 2001; Lachapelle, McCool, & Patterson, 2003). This challenge facing environmental educators is especially problematic, as not only does it diminish class time available for EE but it does not support, and may even discourage educators from making efforts to incorporate more EE into lesson plans to meet the goals of their superiors on the board of education.

Social class may also influence EE, especially if we recognize parents as the primary source of education for their children across the majority of topics touched on in elementary school (Jeynes, 2007). Parents faced with raising children in low-income neighbourhoods tend to be more fearful and concerned about the safety, or lack thereof, of their children playing outside in local spaces (Fisman, 2005). As a consequence, these children tend to be granted little opportunity to explore the local natural environment as per boundary restrictions set by nervous parents (i.e. children must always be within earshot or eyesight from the home) (Fisman, 2005). Moreover, the discussed parents may also pass this local anxiety to their children who may learn to be weary of the outdoors by observing their parents' concern (Jeynes, 2007). These factors may buffer the connection between children and their local environment that would be better facilitated through more free outdoor activity (Fisman, 2005).

These various challenges the environmental educators of today are commonly faced with all contribute to the unfortunate current lack of connectedness between young people and nature (Phenice & Griffiore, 2003). Fortunately, many, if not all of these barriers may be overcome through the proper implementation of EE activities to facilitate stronger connectedness between students and the natural world. As an anecdotal example, the activities we completed as a class during our lesson at the Camp Kawartha learning centre are effective forms of this type of EE. We were afforded experience interacting with local flora and fauna in cooperative groups and engaged in an open, EE-focused, seminar-style lesson that taught us not only about local nature but different methods of sustainable design practices used by the learning centre itself (such as grey water reuse and rammed earth as a building material).

Camp Kawartha is a good source of EE for those in the Peterborough area, but this is not the only place wherein these types of programs exist. For example, the Open Spaces as Learning Places program in New Haven, Connecticut, aims to develop a sense of stewardship in young students by letting them safely explore the urban environment and its natural

components (Fisman, 2005). In this program, students physically go out and explore the open world while learning about the history and interconnectedness of local places such as their schoolyard, local parks, ponds and their residents – be they flora, fauna, or human (Fisman, 2005). EE activities can be especially effective when conducted in maintained settings with clear paths or boundaries such as playgrounds, pavilions in open woods, or pebbly shorelines, as such settings have been found to be both preferred by educators and conducive in achieving educational outcomes (Ernst & Tornabene, 2012). Additionally, these types of activities may not only promote a stronger connection to nature, but encourage physical activity via outdoor play ('play' here meaning leisurely activities enjoyed by all ages), which can help improve physical and cognitive health in a society plagued by general inactivity and obesity (Ernst & Tornabene, 2012).

There are also effective EE activities that can be done when resources do not allow for outdoor activities during class time. For example, the "special tree" exercise can be used by educators to encourage students to take EE knowledge learned in class and apply it to their home environments (Fisman, 2005). In this simple exercise, elementary students are to choose a special tree that exists in their real life local neighborhood/near their residence to write about in a nature journal (Fisman, 2005). In one study, students who completed this exercise after drawing a cognitive map of their local play-area tended to spontaneously include these trees on cognitive maps of the same areas drawn at a later date after writing their journal entries (Fisman, 2005). These changes in drawing content are important to consider, as children's drawings are especially useful tools when it comes to evaluating their subjective levels of environmental perceptions (Barraza, 1999).

In other areas where authentic interaction with the local environment is limited in availability (e.g. no safely accessible ponds or parks nearby for inner-city children), narrative children's books can be effective in conveying key ecosystem concepts (McKnight, 2014).

EE narrative books created through the direct partnership of imaginative authors, environmental scientists, and knowledgeable educators can be especially effective (McKnight, 2014). The implementation of these types of books into EE – or even simply having them accessible for students during free time or silent reading – can help break down the aforementioned EE barrier of ecophobia in elementary-aged children (McKnight, 2014). This is because these books can inspire environmental empathy through interesting, engaging stories about the natural world presented through a positive narrative (McKnight, 2014).

Connection to nature is important not only for the encouragement of environmentally sustainable behavior, but for subjective well-being as well (Mayer & Frantz, 2004). Connectedness can be fostered through regular, positive inte-

rations with nature, which are instrumental when it comes to the development of children's sense of respect and concern for the environment (Phenice & Griffore, 2003). This connectedness can be initiated through the proper implementation of EE (Fisman, 2005; McKnight, 2014). Particularly, EE that involves children's active interaction with the environment outdoors, as there is cross-cultural research to suggest the single most important factor in developing individual environmental concern is childhood outdoor experience (Palmer, 1993). While connectivity through EE that incorporates outdoor environmental exploration and interaction can effectively foster greater environmental concern and behaviour, a student does not necessarily need to be brought outside to achieve these effects (Ernst & Tornabene, 2012; Palmer, 1993; Phenice & Griffore, 2003). For example, small-scale community projects within the school or classroom, such as caring for a class pet, or maintaining a small, indoor community garden or planters can help develop students' environmental knowledge, skills and concern (Ernst & Tornabene, 2012). EE activities such as these that involve the active, prideful participation of successfully caring for living things encourage pro-environmental behaviour outside of the classroom as well (Ernst & Tornabene, 2012). This is because learning about living nature on a small, local scale helps to lay the foundation for environmental concern in other places across the earth (McKnight, 2014). The development and extension of environmental concern through EE will likely lead to a subsequent extension in pro-environmental behaviours, as humans tend to behave in ways which address our concerns (Falk, 1947; Samuelsson & Kaga, 2008).

All-in-all, proper implementation of EE exercises and techniques most appropriate for a given situation can be used to overcome barriers and increase environmental sustainability (Hudson, 2001; Palmer, 1993). From outdoor exploration, to environmentally-promotional children's literature, there are various methods of connecting students with nature through EE to effectively promote environmental concern and, by extension, sustainable behaviour (McKnight, 2014; Samuelsson & Kaga, 2008). If we take action to bring more of these effective EE methods discussed in this report into practical application, we may change the prognosis of the Earth's natural environment for the better (McMichael, 2014; Samuelsson & Kaga, 2008).

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