Activism or Brainwashing? A Study of Teachers’ Efforts to Mitigate Allegations of Indoctrination While Teaching ‘for’ the Environment

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Abstract

This study presents findings from a small-scale qualitative research project that investigates how environmental educators teach for the environment (that is, fostering active student participation in environmental initiatives) while mitigating charges of indoctrination from parents, colleagues, and administrators. Data was collected for this research through semi-structured interviews with two Ontario educators. Key findings include environmental educators’ practices of bringing outdoor learning indoors, familiarizing themselves with Ministry of Education documents, utilizing pedagogies rooted in student-directed learning, and making environmental learning relevant to their community of learners through the use of current events and cultural connections as significant strategies developed to alleviate the tensions created when teaching for the environment.

Keywords: environmental education, indoctrination, teacher practices
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1.0 Introduction: Research Context and Problem

The future of all humanity depends on the environment. In the last fifteen years over 10,000 natural and industrial disasters have occurred worldwide killing millions of people, threatening human security, and destroying natural resources (United Nations Environment Programme, [UNEP], 2015). Currently, shifting weather patterns due to climate change impact economic growth and food security on a global level (UNEP, 2015). In Canada, mild winters have caused difficulties maintaining ice roads vital to many Northern communities (Statistics Canada, 2008). Additionally, mild winters in the interior of British Columbia have contributed to the spread of the mountain pine beetle, resulting in the loss of pine trees across millions of hectares of forest (Statistics Canada, 2008). As we continue to confront environmental issues such as these, environmental education has become increasingly important.

Due to its unique position within society, “the school system provides the largest organized base for environmental education and action” (Nagra, 2010, p. 154) Thus, the role of education is crucial to the improvement of existing environmental crises. As stated by Roberta Bondar and the Working Group on Environmental Education (2007),

Schools have a vital role to play in preparing our young people to take their place as informed, engaged, and empowered citizens who will be pivotal in shaping the future of our communities, our province, our country, and our global environment. (p. 6)

Identified benefits of environmental education that further emphasize its importance in overcoming environmental crises include increased environmental awareness and proenvironmental attitudes among students participating in environmental programs (Farmer, Knapp & Benton, 2007; Stern, Powell & Ardoin, 2008).
In response to the growing environmental concerns we face globally, environmental initiatives have been created across both national and international platforms. Not only has the Canadian government proposed a Pan-Canadian price on carbon (Environment and Climate Change Canada, 2016), but in December of 2015, Canada and 194 other countries reached the Paris Agreement during the 21st Session of the Conference of the Parties (United Nations [UN], n.d.). In 2009, the Ontario Ministry of Education (OME) created a document titled “Acting Today, Shaping Tomorrow: A Policy Framework for Environmental Education in Ontario Schools”. This policy promotes student knowledge as well as active participation in practicing and promoting environmental stewardship (OME, 2009). Specifically, the document emphasizes environmental education as learning about, in and for the environment. Additionally, the policy encourages leadership among various levels of the education system in promoting responsible environmental practices. Regarding teachers as stakeholders in the policy framework, the OME (2009) states that they “are encouraged to develop the knowledge, skills, and perspectives that will enable them to teach confidently about environmental issues and expose students to varied points of view” (p. 11).

Despite and the identified benefits of, and Ontario’s stated commitment to environmental education, research suggests that many teachers are having difficulties implementing environmental education into their practice (Powers, 2004; Tan & Pedretti, 2010). The range of challenges that teachers report include uncertainty around the meaning of environmental education, practical barriers including limited class time and teacher resources, beliefs that environmental education is discipline specific to science or outdoor education, and concerns regarding the controversial nature of environmental education topics (Ham & Sewing, 1988; Parlo & Butler, 2007; Robertson & Krugly-Smolska, 1997; Tan & Pedretti, 2010). Of these
challenges, perhaps the most complex is the idea that environmental education often suggests a call to action or some type of social reform that presents a strong political viewpoint. As understood by Stevenson (2007), this underlying premise of environmental education contradicts the traditional purpose and structure of schooling focused on the maintenance of social order. Introducing environmental education that challenges dominant societal beliefs then becomes problematic (Stevenson, 2007). Furthermore, due to the power imbalance of teacher-student relationships, when teachers engaging in environmental education transform the value orientation of students regarding the environment, they run the risk of being seen as indoctrinating rather than educating (Tan & Pedretti, 2010). Within contemporary conceptualizations of education, educating ‘for’ the environment can therefore be seen as controversial. Advocating particular positions becomes contradictory to the development of autonomous thought (Jickling, 1992). Thus, teaching environmental education beyond learning ‘about’ or ‘in’ the environment towards the action orientation of teaching ‘for’ the environment is often avoided (Tan & Pedretti, 2010).

1.1 Purpose of the Study

The purpose of this qualitative study was to discover how primary and junior teachers create opportunities for students to learn ‘for’ the environment in ways that do not elicit charges of indoctrination from parents, colleagues, or administrators. In order to build student capacity and facilitate the development of skills required to meet future challenges, the Ontario Ministry of Education (2009) suggests that opportunities for environmental education must, “promote changes in personal behaviour and organizational practice” (p.4). Teaching ‘for’ the environment must extend student understanding beyond learning ‘in’ and ‘about’ the environment through active participation in environmental initiatives. Not only does this participation foster
community engagement, the Ontario Ministry of Education (2009) emphasizes positive implications of such collaboration on both student motivation and success.

Additionally, I hoped to learn what outcomes primary and junior teachers observe for their students as a result of these learning opportunities. While research exists to support the benefits of environmental education in the broader sense (Bartosh, Tudor, Ferguson & Taylor, 2006; DiEnno & Hilton, 2005; Farmer, Knapp & Benton, 2007; Kruse & Card, 2004; Stern, Powell & Ardoin, 2008), there is room for further exploration regarding outcomes specific to environmental education as learning ‘for’ the environment. Furthermore, I hope to share these findings with educators and the educational research community so that these practices may inform the practice of environmental education in Ontario classrooms.

1.2 Research Questions

The primary question that guided this study was: How does a small sample of elementary teachers integrate environmental education across the curriculum in ways that create opportunities for students to learn ‘for’ the environment?

Subsidiary questions to further guide this study include:

- What does learning “for the environment” mean to these teachers in theory and practice?
- What experiences prepared and support these teachers in their approach to integrating environmental education?
- What resources or factors contribute either positively or negatively to the implementation of environmental education as learning ‘for’ the environment in their practice?
- How do these teachers mitigate concerns and charges of indoctrination from parents, colleagues, and administrators?
1.3 Background of the Researcher

The field of environmental education has become increasingly important to me as I establish myself within the city of Toronto. Raised in rural Alberta, my experiences as a child provided me with a deep understanding of the ways in which human interactions impact the environment. I learned to hunt as a method of sustainable food practices, and suffered first hand the effects of water pollution as the river providing water to my community was contaminated. Living among wildlife, bear and cougar safety was taught before being dismissed for recess during my primary school years followed by outdoor survival that was an essential part of my schooling experience through the junior years. My immersion in a pro-environmental childhood has helped me to develop an ecological consciousness that I strive to maintain in my new urban lifestyle.

While my own environmental attitudes were fostered through an informal education, my investment in this research stems from a curiosity as to how ecological attitudes are developed in both a formal and urban context. I would like to learn from teachers who have successfully integrated environmental education within formal education without being accused of teaching from a politically biased perspective so that I may better support my future students. In seeking to better understand how environmental education is taught in public schools, I recognize the benefit this research may have in aligning future employment with my own values. My interest in environmental education is directly related to the relationship between my own experiences and their impact on the development of my identity as an environmentalist.

1.4 Preview of the Whole

To respond to the research questions I have conducted a qualitative research study using purposeful sampling and semi-structured interviews to interview two teachers about their
strategies for creating opportunities to learn ‘for’ the environment in their classrooms without eliciting charges of indoctrination. In Chapter Two, I review the literature in the areas of environmental education and perceived barriers to its inclusion in contemporary classrooms. Then, in Chapter Three, I elaborate on the research design and include information about the participants, data collection, and limitations. In Chapter Four, I report my research findings and discuss their significance in light of the existing research literature, and in Chapter Five, I identify the implications of the research findings for my own teacher identity and practice, and for the educational research community more broadly. I also articulate a series of questions raised by the research findings, and point to areas for future research.
Chapter Two: Literature Review

2.0 Introduction

In this chapter I review the literature in the areas concerning the definition of environmental education, conceptualizing environmental education, and environmental education in schools. More specifically, I review documents beginning with the Tbilisi Declaration in order to trace the development of environmental education into policy. Additionally, I will review various models of environmental education as identified by the literature. Next, I consider the controversy surrounding the use of the word “for” in defining environmental education in contemporary schools. Finally, I overview the research regarding teachers’ perceived barriers to including environmental education in their classrooms as well as the kinds of learning experiences related to environmental education that are being used in schools and what benefits have been identified from them.

2.1 Definition of Environmental Education

In order to discuss the role of environmental education in schooling we must first understand what environmental education is and how it has developed in both policy and in practice. While the Ontario Ministry of Education refers to environmental education as being ‘about’, ‘for’, and ‘in’ the environment, it is important to understand how research literature in the field explains each approach, as well as comprehending Ontario’s position on environmental education among the various models of environmental education that are practiced today.

2.1.1 Development of environmental education into policy

The field of environmental education is continually evolving and as a result, the phrase “environmental education” is difficult to define. Identified as nature study as early as 1891, environmental education began with the intention of developing an understanding and an
appreciation of the natural world (Stapp, 1974). Ideas about conservation of nature and natural resources were later incorporated into environmental education throughout the early 20th century, yet it was not until international conferences of the 1970s that contemporary definitions of environmental education started to form (Flogaitis, Dakolia, & Agelidou, 2006).

In 1977 the United Nations Educational, Scientific and Cultural Organization (UNESCO) held the first ever Intergovernmental Conference on Environmental Education in Tbilisi, Georgia, USSR. In UNESCO’s (1978) final report from the conference, known as *The Tbilisi Declaration*, the goals of environmental education were established as developing knowledge about the environment and environmental problems, as well as developing skills and attitudes necessary in order to transform existing situations for the better. In other words, by UNESCO’s definition, environmental education must promote behaviour to improve current environmental problems, teaching for the environment, in addition to engaging learners in education about the environment. *The Tbilisi Declaration* (1978) further defined environmental education through the recommendation that the role of education be interdisciplinary in the holistic examination of “ecological, social, cultural and other aspects of particular problems” (p. 12). In addition, *The Tbilisi Declaration* (1978) highlighted the importance of using problems familiar to the learners of environmental education by which “environmental education involves learning from the environment as well as about the environment” (p. 12). These recommendations echo Lucas, (1972) who had earlier defined environmental education more specifically by proposing the characterization of environmental education programs as being ‘about’, ‘for’, or ‘in’ the environment.

Thirty-five years after Lucas proposed that the environment be considered the content, purpose, and source of environmental education, the Working Group on Environmental
Education, convened by the Ontario Ministry of Education Curriculum Council in 2007, solidified Lucas’s proposition as they defined environmental education below:

Environmental education is education about the environment, for the environment, and in the environment that promotes an understanding of, rich and active experience in, and an appreciation for the dynamic interactions of:

- The Earth’s physical and biological systems
- The dependency of our social and economic systems on these natural systems
- The scientific and human dimensions of environmental issues
- The positive and negative consequences, both intended and unintended, of the interactions between human-created and natural systems. (Bondar et al., p.6)

This definition written by the Working Group on Environmental Education (2007) was created as part of a report written for the Ontario Ministry of Education (OME) on the state of environmental education in Ontario schools. As a result, the OME uses this same definition in the document outlining environmental education in Ontario schools titled “Acting Today, Shaping Tomorrow: A Policy Framework for Environmental Education in Ontario Schools”.

2.1.2 Models of environmental education

Across the varying definitions of environmental education is the shared understanding of the value of education in the betterment of human-environment relationships (Sauvé, 2005). Nevertheless, dramatic variations in pedagogical approaches to practicing environmental education occur. In reviewing literature concerning theoretical and practical approaches to environmental education, Sauvé (2005), identifies fifteen ‘currents’ or frameworks to better conceptualize the pedagogical landscape of this field. Examining currents with deeper historical roots in the field of environmental education, Sauvé identifies (among others), naturalist,
conservationist, and scientific currents. More recent pedagogies commonly mentioned include, socially critical (Payne, 2015; Robottom & Hart, 1995), feminist (Clover, Follen, & Hall, 2000; Gough, 1999), and sustainability currents. As previously mentioned, the naturalist current aims to develop an appreciation of, and connection to, nature. Conservationist approaches work to develop skills related to preservation and management of the environment, while scientific pedagogies enact environmental education solely through the study of environmental science and the scientific method. Socially critical environmental education examines the social dynamics underlying environmental problems. The feminist current integrates feminist values into human-environment relationships and sustainability currents promote economic development that considers ecological sustainability. Depending on the way in which teachers position themselves with respect to the environment and education, different perspectives and environmental education practices are formed (Flogaitis et al., 2006). While multiple scholars have categorized various typologies of environmental education (Robertson & Krugly-Smolka, 1997; Sauvé, 1992), Sauvé’s fifteen currents most thoroughly demonstrate the extent of environmental education today.

2.2 Learning ‘for’ the Environment

The following section reviews literature related to controversy surrounding the use of the word “for” in defining environmental education in contemporary schools. While learning in and about the environment have been widely accepted as suitable goals of environmental education, the action orientation inherent in the phrase “teaching for the environment” has resulted in disagreement among researchers as to whether or not this is an appropriate objective in public education. This conflict is discussed below.
2.2.1 Conflicting interpretations

Despite the use of the phrase “education for the environment” in policy documents, the literature demonstrates conflicting views regarding the appropriateness of such terminology. On one hand, environmental education as education ‘for’ the environment is believed to promote anthropocentric views that promote values inconsistent with the purpose of education (Gough, 1987 as cited in Jickling & Spork, 1998; Jickling, 1992). On the other hand, education ‘for’ the environment allows for formulation of critical thought pertaining to environmental and political issues, resulting in a commitment to personal and social change that would enhance or preserve the environment (Fien, 1995; Stevenson, 2007).

Jickling (1992) argues that if the goal of education is to facilitate critical thinking and autonomous thought then teaching ‘for’ the environment becomes contradictory. What is concerning here is the positioning of environmental issues within public education. To teach ‘for’ anything is to advocate actions based on the assumption that what is being taught ‘for’ is uncontested (Jickling, 1992). Encouraging pro-environmental attitudes places value disproportionately on particular environmental issues to the extent that environmental education has been used to “promulgate, indoctrinate, and propagandise” (Jickling & Spork, 1998 p.315), a position considered in direct opposition to the goals of many educators. Furthermore, Jickling (1992) states, “the prescription of a particular outlook is repugnant to the development of autonomous thinking” (p. 8).

In addition to Jickling’s criticism regarding environmental education as the dissemination of biased environmental attitudes, is the idea that educating ‘for’ the environment suggests an anthropocentric view of the environment. Quoted in Jickling and Spork (1998), Gough (1987) expresses this argument skillfully:
While it has been recognized that environmental education ought not to be merely education in or about environments, I am not convinced that the popular slogan of 'education for the environment' is much of an improvement. Apart from being somewhat patronizing and anthropocentric (who are we to say what is 'good for' the environment, and which environment is 'the environment', anyway?), this slogan maintains the sorts of distinctions that tend to work against a deeply ecological world view—distinctions between subject and object, education and environment, learner and teacher (p. 321).

By comparison, Stevenson (2007) suggests that environmental education stimulates the critical evaluation of environmental concerns while providing opportunities to engage in environmental improvement. Furthermore, the methodology by which environmental action is promoted must be considered. Advocating environmental education with an emphasis on finding scientific and technological solutions promotes a technocratic rationality that ignores the root causes of such problems (Fien, 1995). Therefore, environmental education should encourage pedagogy that generates personal and social changes to benefit social justice and ecological sustainability (Fien, 1995). These sentiments are echoed by Short (2010) who writes, “in spite of persistent apprehensions about coercive influences in EE [environmental education], participation in environmental protection is inherent in the goals of EE” (p. 9). If environmental education is to be effective in developing the knowledge, skills, and attitudes necessary to provoke meaningful change then it must address the underlying foundations of environmental problems (Linke, 1976). Even before students are able to discuss potential solutions to environmental problems, they should be encouraged to explore their complexities whereby causes and contributors to the problem can be linked to nearly every action we take daily.
2.3 Environmental Education in Schools

Despite government policies promoting environmental education, the literature suggests that numerous barriers perceived by educators inhibit the inclusion of environmental education in their practice. This section reviews those barriers as well as the identified outcomes of environmental experiences in education and their benefits. In doing so, I hope to highlight potential gaps in existing literature that my research may contribute to filling.

2.3.1 Perceived barriers

As previously mentioned, the Ontario Ministry of Education (OME) published official policy on environmental education in 2009. Through that document, “Acting Today, Shaping Tomorrow: A Policy Framework for Environmental Education in Ontario Schools”, the OME (2009) stated their commitment to further environmental education in Ontario with “an emphasis on personal and social values and active stewardship” (p. 25). Despite this commitment, research shows that barriers to including environmental education in the classroom still exist (Tan & Pedretti, 2010). Furthermore, these barriers still remain within the four categories identified by Sewing in 1986 – conceptual, logistical, educational, and attitudinal.

Broad conceptualizations and pedagogical approaches make it difficult for teachers to determine both the scope of environmental education and what its goals are (Ham, Rellergert-Taylor & Krumpe, 1988; Robertson & Krugly-Smolska, 1997). Although the OME has created a framework for environmental education, policy documents provide little insight into the conceptualization of such complex terms. Blum, Nazir, Breiting, Goh and Pedretti (2013), indicate the issue is further complicated by the entanglement of environmental education and education for sustainable development (ESD). The coexistence and simultaneous use of various meanings of environmental education and ESD within diverse local, national, and international
contexts, complicate the interpretation of such concepts in the classroom. For example, as Blum et al. (2013) describe, the notion of development may refer to both economic development, but also to socio-cultural development. In some contexts, ESD suggests a goal of enhancing student awareness of the conflicting interests related to natural resource consumption where in others, it promotes the equitable sharing of resources on a global level (Blum et al., 2013; Sauvé 2005). Additionally, environmental education is often considered a precursor to education for sustainable development, while also being used in policy documents to describe education that emphasizes learning about and conserving the environment, regardless of its impact on economic or social development.

Logistical barriers reported by teachers include limited instructional time and funding available for environmental initiatives (Ham, Rellergert-Taylor & Krumpe, 1988; Ham & Sewing, 1988; Parlo & Butler, 2007; Robertson & Krugly-Smolska, 1997; Tan & Pedretti, 2010). Increasing pressure to raise student performance on standardized tests places considerable stress on teachers to spend instructional time on ‘established’ curriculum (Robertson et al., 1997; Parlo & Butler, 2007). This notion supports Sewing’s (1986) concept of attitudinal barriers by highlighting teacher’s beliefs that environmental education is discipline specific. As Ham et al. report (1988), “[t]eachers [commonly] view EE [environmental education] in a scientific context despite considerable evidence of its legitimacy in other subject areas” (p. 30). While several pedagogical approaches to teaching environmental education have emerged from what was once concerned with only the study and appreciation of nature, recent research reiterates teacher beliefs that environmental education belongs solely within the science curriculum (Robertson & Krugly-Smolska, 1997; Tan & Pedretti, 2010).

Parlo and Butler (2007) have suggested it was “the death of EE [environmental
education] in teacher preparation programs” that hindered the extent that environmental education is being enacted in classrooms today (p. 32). With inadequate teacher training in the field of environmental education, teachers are ill prepared to integrate such material in practice (Parlo & Butler, 2007). While Sewing (as cited in Ham & Sewing, 1988) defined these educational barriers as teachers’ hesitations concerning their own competence in teaching environmental education, current research also suggests educational gaps may be related to a lack of curriculum resources and professional development opportunities (Parlo & Butler, 2007; Powers, 2004; Tan & Pedretti, 2010). Additional reference to teacher preparation programs highlights their focus on pedagogical methods, not critical, or environmental education theory (Beckford, 2008; Robertson & Krugly-Smolska, 1997).

Perhaps the most commonly cited attitudinal barrier among teachers is the fear of controversy associated with contradictory stances inherent in environmental education (Flogaitis et al., 2006; Greenall Gough & Robottom, 1993; Ham & Sewing, 1988; Robertson & Krugly-Smolska, 1997; Stagell, Almers, Askerlund & Apelqvist, 2014, Tan & Pedretti, 2010). As has already been shown, teaching ‘for’ the environment requires teachers to position themselves along the continuum of, as Jickling (2003) describes “leaning toward” or “leaning away” from advocacy positions. This daunting task becomes restrictive as, “teachers are not completely certain that they are permitted to do many of the things that are necessary to accomplish the lofty social and political goals of environmental education” (Robertson & Krugly-Smolska, 1997; p. 318). Additionally, research has shown that teachers view structurally-targeted actions on environmental issues, such as engaging with political parties and NGOs within the public sphere, as being the least appropriate actions taken when educating for sustainable development (Stagell et al., 2014). For other teachers, hesitation regarding environmental education concerns the
uncertainty between the role of a “teacher as a facilitator to student-driven actions, and the teacher as a coercive advocate” (Short, 2010 p. 13). Research reporting on teachers who are incorporating environmental education into their practice suggests they do so with positive media coverage that legitimizes engagement in controversial, political activities, or by ‘teaching both sides’ of controversial issues and allowing students to decide for themselves (Greenall Gough & Robottom, 1993; Tan & Pedretti, 2010). Still, many teachers choose either to exclude environmental education or to teach based on already accepted practices.

### 2.3.2 Identified benefits

Consistent with the research reporting teachers’ beliefs that environmental education is discipline specific, research regarding the outcomes of environmental education typically investigates its benefits through science or outdoor education related experiences (Farmer et al., 2007; Stern, et al., 2008). Through separate research studies aimed at assessing long and short-term outcomes of student experiences in environmental education programs, both Farmer et al. (2007) and Stern et al. (2008) investigated student experiences at the Great Smoky Mountains Institute in Tennessee. The findings of both studies suggest that participation in environmental education programs increases pro-environmental attitudes, intentions, and awareness (Farmer et al., 2007; Stern et al., 2008), however both studies investigating the same environmental education program can be seen as a significant limitation to the generalization of their findings. Furthermore, while Farmer et al. (2007) suggested student participants retained long-term environmental and ecological content in addition to a perceived increase in proenvironmental attitudes, Stern et al. (2008) concluded long-term gains existed with regards only to environmental awareness. Conflicting results suggest further research is necessary in order to determine long-term outcomes of environmental education.
In addition to reporting on learning experiences related to environmental education and the benefits those experiences hold for student attitudes and beliefs, Bartosh et al. (2006) suggest that, “by incorporating environmental education instructional approaches teachers can help their students become better readers, writers, and thinkers…” (p. 165). Furthermore, schools incorporating environmental education programs have consistently performed better than traditional schools on state standardized tests (Bartosh et al., 2006). This research highlights the benefits of implementing environmental education across various curriculums, further demonstrating the impediments of teacher beliefs that environmental education is discipline specific.

Beyond participatory outdoor experiences and environmental cross-curricular learning, ecojustice and justice-oriented citizenship education suggest larger societal benefits of environmental learning (Martusewicz, Edmundson, & Lupinacci, 2015; Westheimer & Kahne, 2004). More specifically, ecojustice education examines the cultural assumptions and beliefs that structure human relationships with our world (Martusewicz et al., 2015). In doing so, Martusewicz et al. (2015) suggest that the benefits of this work will help to “develop citizens who are prepared to support and achieve diverse, democratic, and sustainable societies because these are keys to our very survival” (p. 10). Similarly, Westheimer and Kahne (2004) describe justice-oriented citizenship education as a method of engaging students in “informed analysis and discussion regarding social, political, and economic structures.” (p. 243). Consequently, this work aims to challenge injustices (including environmental injustices) by addressing their root causes (Westheimer & Kahne, 2004).

In reviewing the literature, outcomes immediately following participation in informal environmental education programs have been identified in addition to outcomes related to using
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a constructivist learning approach (Barney, Mintzes & Chiung-Fen, 2005; DiEnno & Hilton, 2005; Kurse & Card, 2004). Additionally, research regarding ecojustice and justice-oriented citizenship education highlights the potential for societal changes that positively impact the environment (Martusewicz, et al., 2015; Westheimer and Kahne, 2004). Unfortunately, while these approaches offer implicit action components, little research exists on environmental education programs specifically designed to promote learning ‘for’ the environment. It is in this gap that I hoped to engage in new research contributing to the already existing literature.

2.4 Conclusion

In this literature review I examined research on defining and conceptualizing environmental education, controversy regarding goals of educating ‘for’ the environment, and current practices of environmental education in contemporary schools. This review examines the extent that attention has been paid to barriers teachers face implementing environmental education into practice. It also raises questions about the appropriateness of environmental education within the realm of schooling and points to the need for further research in the area of environmental education programs grounded in the aim of education ‘for’ the environment. In light of this, the purpose of my research is to learn how primary and junior teachers are successfully integrating environmental education that emphasizes learning ‘for’ the environment without eliciting charges of indoctrination.

This research study approaches the issue of environmental education using semi-structured interviews with primary and junior educators in Canada. The study addresses how teachers conceptualize educating ‘for’ the environment within their classrooms, the practices they use to cultivate such learning, and how they mitigate the potential for parent or administrative concerns of indoctrination. By considering how educators present and engage in
these complex and often controversial concepts, it is my hope to provide better understanding of
the practice of environmental education, and from there inform further teacher training and
policy development.
Chapter Three: Research Methodology

3.0 Introduction

In this chapter I describe the research methodology. I begin with a review of the general approach, procedures, and data collection instruments. Following that, I elaborate more specifically on participant sampling including sampling criteria and recruitment methods and strategies. I explain data analysis procedures and review the ethical considerations pertinent to my study. Additionally, I identify a range of methodological limitations, as well as discussing the strengths of the methodology. Finally, I conclude the chapter with a brief summary of key methodological decisions and my rationale for these decisions given the research purpose and questions.

3.1 Research Approach & Procedures

This research study was conducted using a qualitative research approach involving a review of existing literature regarding environmental education and semi-structured interviews with two teachers. Collecting detailed data produced through flexible methods, qualitative research explores contextual understandings of social or human problems in natural settings (Creswell, 1998; Mason, 2002). As Bogdan and Taylor (1975) describe it, qualitative research typically embodies the phenomenological aim of understanding how the world is experienced. Similarly, Mason (2002) suggests that qualitative research “is concerned with how the social world is interpreted, understood, experienced, produced or constituted” (p. 3).

The value of research grounded in understanding constructions or experiences of reality from participant perspectives is its ability to report without judgment. Qualitative researchers act as learners rather than experts, working to understand a particular phenomenon through the lived experiences of their participants (Creswell, 1998). While quantitative research often looks for a
comparison of groups seeking to identify a relationship between variables (Creswell, 1998), my research purpose is concerned with teachers’ lived experiences. Consequently, qualitative methodology is a more suitable approach for this endeavour.

3.2 Instruments of Data Collection

The primary instrument for data collection used in this study was the semi-structured interview protocol (located in Appendix B). In a semi-structured interview, questions organized by particular themes are prepared along with prompts intended to elicit more elaborate responses in the hope of learning more about a particular subject or research question (Qu & Dumay, 2011). While in a structured interview participants are asked pre-established questions from a script, allowing a limited number of response categories, semi-structured interviews are more flexible. Participants are able to respond more openly, potentially shifting attention to areas not previously considered by the interviewer. As Peräkylä & Ruusuvuori (2011) suggest, “by using interviews, the researcher can reach areas of reality that would otherwise remain inaccessible such as people’s subjective experiences and attitudes” (p.529). This open response format of the semi-structured interview aligns closely with my study focus as I consider teachers’ perceptions regarding their own experiences. While interview questions are prepared in advance of the interview, allowing participants to respond openly, to define concepts such as environmental education or indoctrination in their own words allows for an infinite number of responses, thus providing more rich and detailed data for analysis.

3.3 Participants

In the following section I review the sampling criteria I established for participant recruitment, sampling procedures and the methodological reasoning behind them, as well as a range of avenues for teachers recruitment. I have also included a section wherein I introduce
each of the participants, their teaching experience and background related to environmental education.

### 3.3.1 Sampling criteria

Each teacher participant included in my research must meet the following criteria:

- Teachers will teach in either the primary or junior grades (K-6)
- Teachers will have demonstrated leadership and/or expertise in the area of environmental education (e.g., leading professional development, completed additional qualifications in environmental education, completed a graduate degree with an environmental focus, etc.)
- At least one participant will have encountered charges of indoctrination due to teaching environmental education at some point during their career

In order to address how teachers are teaching environmental education beyond learning ‘about’ and ‘in’ the environment, the participants I have interviewed must demonstrate leadership and/or expertise in the area of environmental education. I have chosen not to exclude teachers based on a particular number of years teaching, as policy documents published by the Ontario Ministry of Education have only been available since 2009. My interest in interviewing teachers in the primary and junior grades is due to my qualifications as a primary/junior teacher and hopes of better preparing myself for work in those divisions.

### 3.3.2 Sampling procedures

Qualitative research often seeks to explore both the depth and complexity of a particular phenomenon. Consequently, sampling becomes both strategic and practical as it allows researchers to focus on a particular group within resource-based limitations (Mason, 2002). While random sampling ensures the characteristics of research subjects appear in the same proportions as they do in the total population (Bodgan & Biklen, 1992), purposeful sampling,
which has been used in this study, utilizes subjects based on their relevance to research questions as determined by the fulfillment of sampling criteria (Mason, 2002). Given the small-scale nature of my particular study, I also applied convenience sampling whereby participants are included who are available or volunteer and are easily recruited (Johnson & Christensen, 2004). As a teacher candidate I relied on existing contacts and networks established through the community of teachers and mentor teachers established during my time in the Masters of Teaching program at the Ontario Institute for Studies in Education to recruit participants. Additionally, I attended professional development conferences hosted by teacher education programs such as the Pollinating Partnerships event and I contacted teacher associations and/or school boards such as the Council of Outdoor Educators of Ontario (COEO) to provide them with an overview of my research study. I provided the participant criteria and asked that these individuals/organizations distribute my information to teachers they believe may fulfill the criteria. This method of participant recruitment, whereby I provided my information rather than asking for the names or information of potential participants, was to ensure that teachers are volunteering rather than feeling pressure or obligation to participate.

3.3.3 Participant biographies

In order to remain anonymous, participants have been assigned pseudonyms and will be referred to using those pseudonyms exclusively.

Chloe

Chloe is a grade one teacher in the Greater Toronto Area. In her sixth year of teaching at the time of the research Chloe had taught full day kindergarten, a grade two/three split, and a grade five/six split. Chloe has worked in three different schools throughout her teaching career, each with different perspectives and commitments to environmental education. Her interest in
environmental education developed after participating in professional development related to outdoor learning in full-day kindergarten. Chloe later completed her three-part specialization in environmental education through additional qualifications courses. She was also awarded a fellowship opportunity recognizing her work related to geographic education.

**Paige**

At the time of the research, Paige had just started working as a Vice Principal at a small, rural, elementary school in a publically funded board in Southern Ontario. Prior to this position, Paige taught for eight years on reserve in a First Nations school serving students in Kindergarten through grade eight, during which she taught kindergarten through grade three. Her experiences working in a First Nations community led Paige to include environmental education in her teaching practice. Additionally, Paige spent last year teaching at an outdoor education facility running programs based on experiential learning with students from Kindergarten to grade 12. Through her Master’s research on Indigenous perspectives related to the environment, as well as living in a small community with access to outdoor spaces, Paige brings both a personal and professional passion to her work with environmental education.

### 3.4 Data Analysis

When describing the goal of data analysis Johnson & Christensen (2004) state that it is “to be able to clearly summarize your data and generate inductive theories based on the data” (p. 521). The difficulty in doing so lies in the large amounts of data qualitative research typically generates (Patton, 2002). First, interviews must be transcribed, and then coded using research questions as interpretive tools. As Patton (2002) describes it, this process involves “identifying significant patterns, and constructing a framework for communicating the essence of what the data reveal” (p. 432). This development of data analysis also includes discussion of where these
themes or patterns fit within the existing literature explored in Chapter Two. Additionally, I have considered what ‘null data’ (that which participating teachers do not speak to) exists, and the significance of these omissions.

### 3.5 Ethical Review Procedures

Using semi-structured interviews as an instrument of data collection in qualitative research poses multiple ethical issues. When considering such issues, Johnson and Christensen (2004), describe three basic approaches, deontology, ethical skepticism, and utilitarianism. While deontology proposes ethical issues be judged by some universal code, ethical skepticism argues that concrete rules or codes cannot be formulated as they are relative to culture and time (Johnson & Christensen, 2004). Dissimilar to both deontology and ethical skepticism, utilitarianism proposes that ethical judgments depend on the consequences of a study for both the researcher as well as each participant (Johnson & Christensen, 2004). This cost-benefit analysis seems most applicable to my research however particular considerations have been made in order to mitigate the potential for negative costs to participants associated with my study. For example, all participants were assigned a pseudonym, identities remain confidential, and any identifying markers related to their schools or students have been excluded. Furthermore, all data was stored on my password-protected computer and will be destroyed after a period of five years. In doing so, information shared by a participant that may jeopardize their position within a particular system is kept anonymous (DiCicco-Bloom & Crabtree, 2006).

Prior to conducting interviews, participants were asked to sign a consent letter (Appendix A) providing their consent to be interviewed as well as audio-recorded. As recommended by Patton (2002), this consent letter provides an overview of the study including the purpose for collecting information and how it will be used; it addresses ethical implications such as
confidentiality, and specifies expectations of participation (one 45-60 minute semi-structured interview). Qualitative research methods are highly personal and as such, they require greater consideration for ethical and informed consent (Bodgan & Biklen, 1992; Mason, 2002; Patton, 2002).

As highlighted by DiCicco-Bloom and Crabtree (2006), researchers may not always know what data interviews will uncover. Consequently, DiCicco-Bloom and Crabtree (2006), recommend participants verbally provide consent several times during the research process. Additionally, participants were be notified of their right to withdraw from participation in the study at any stage of the research study. This has been made explicit in both the participant consent letter as well as during the interview process. Furthermore, participants were given the opportunity to review the transcripts and to clarify or retract any statements before I conducted data analysis.

3.6 Methodological Limitations and Strengths

The most significant limitation to my research study is the narrow ethical parameters I had been approved for which include only interviewing teachers. Consequently, it was not possible for me to interview students or parents, or to conduct observational or participatory methods of generating data. As described by Mason (2002), observational methods allow researchers to include data based on an epistemological position that suggests, “not all knowledge is articulable, recountable or constructable in an interview” (p.85). Furthermore, the limited data sources of my study prohibited me from using theory triangulation, which may have provided a stronger explanation of my research findings (Johnson & Christensen, 2004). Similarly, the small sample size of my research (only two teachers) did not allow me to generalize my findings. While my research may inform the topic at hand, generalizing the
experience of teachers more broadly speaking in the field of environmental education was not possible.

Patton (2002) stresses the common, yet problematic practice of considering the credibility of a small purposeful sample on the basis of the logic of larger, probability sampling. This comparison is impractical due to the judgment of sample size separate from its context. Smaller samples often provide greater depth of responses in contrast to the breadth of data possible from a larger number of participants (Patton, 2002). This depth of responses exemplifies the methodological strength of my research. By interviewing a small sample of teachers, I am better able to understand the complexities of their lived experiences than a survey could allow for.

3.7 Conclusion

In this chapter I have described my qualitative research approach, using semi-structured interviews and purposeful sampling. As previously discussed, using such procedures has allowed me to obtain greater depth in my research as my purpose is based on teachers lived experiences rather than a comparison of particular variables more common in quantitative research.

I have discussed how I selected research participants and recruited them through professional development and community organizations. Additionally, I have explained how I analyzed my data, looking for common themes and divergences as relevant to the research questions. I have spoken to the ethical concerns and considerations made to mitigate such issues in my research. Lastly, I have identified some of the methodological limitations including the narrow ethical approval parameters that permitted me to only interview teachers. While such limitations prevent using theory triangulation and the ability to generalize my findings, the small sample size and semi-structured interview approach provided the opportunity for greater depth of participant responses. Next, in Chapter Four, I report the research findings.
Chapter Four: Research Findings

4.0 Introduction

In this chapter I present and discuss findings from data analysis of two semi-structured interviews conducted with elementary school educators (K-6). With demonstrated leadership, and commitment to environmental education, these educators were selected as participants for this study as its purpose was to learn how educators teach environmental education ‘for’ the environment while mitigating charges of indoctrination from parents, colleagues, and administration. I will review findings from these interviews through sub-themes, which I will then connect to existing literature. These findings are categorized into four main themes:

1. Educators define environmental education as the development of relationships between stakeholders of environmental learning while spending time in the environment

2. Environmental educators identify interpersonal and institutional factors that act as barriers to the implementation of environmental education

3. Environmental educators recognize experiences of professional learning and collaboration that prepared and support their approach to integrating environmental education

4. Environmental educators utilize pedagogies rooted in student-directed learning while ensuring their own knowledge of ministry policies in order to mitigate charges of indoctrination from parents, colleagues, and administrators
4.1 Educators Define Environmental Education as the Development of Relationships Between Stakeholders of Environmental Learning While Spending Time in the Environment

In describing their understanding of environmental education, participants outlined both theory and practice. They defined environmental education as developing an appreciation for nature through spending time outdoors, developing student connections to place, and developing a social conscience related to environmental protection. These definitions are important as they contextualize participant practices related to mitigating charges of indoctrination.

4.1.1 Teachers believe that spending time in the environment is essential to developing an appreciation of nature necessary for environmental learning

Introducing environmental education through spending time outdoors was articulated by both participants as fundamental to effective education ‘for’ the environment. For Chloe, going outside on a regular basis helps to provide concrete, meaningful connections to the environment that make environmental education in the classroom more relevant. She stated, “Going outside is the starting point and then once [students are] developing a sense of place outside… then we can bring that learning back inside.” Similarly, Paige highlighted the potential for taking regular classroom activities outdoors when she described, “Whatever you…can teach inside, you can teach outside. You know take your math manipulatives bucket outside, take some clipboards and do your writing outside…take those anchor charts outside.” Incorporating nature or the outdoors into daily routines allowed students to recognize the environment as part of their everyday lives. Furthermore, Chloe described her belief that taking field trips to natural spaces was also an important part of her teaching practice. Making the environment the sole purpose for a trip highlighted its importance in both the lives of students, as well as the community.
When reflecting on the Ontario Ministry of Education definition of environmental education as learning ‘about’, ‘for’, and ‘in’ the environment, teachers regarded learning ‘in’ the environment as a way of developing love or respect of nature. While Chloe articulated this connection directly, Paige also suggested that learning ‘in’ the environment includes “actually going on an outdoor adventure or experiencing things like cross-country skiing or…making honey or squeezing apples.” Here, both participants described environmental education as it relates to the naturalist current described by Sauvé (2005), which aims to develop both an appreciation of and connection to nature. In doing so, the naturalist current of environmental education is often considered necessary, as participants have suggested, to further learning regarding human interaction with nature.

4.1.2 Teachers believe that environmental education benefits students beyond learning ‘about’ the environment by making connections to physical and social places

Participants indicated they believe that environmental education helps students to connect to both physical places as well as their role or position within a community. For Paige, personally connecting students to their land base is critical to fostering a desire for land preservation. Likewise, Chloe communicated her belief that, “once children realize that their place matters, and realize that they have a connection to that place… the natural inclination for many people is to want to protect it and to want to do something about it.” Chloe also suggested environmental education fosters a broader connection between students’ understanding and connection to their position in the world. Participation in environmental education helps students to develop a sense of agency in civic participation.
In addition to establishing personal connections, educators believe environmental education enables students to make connections that deepen their understanding across curriculum subject areas. For Chloe, this meant presenting curricular subjects through an environmental lens, which she described through her math program,

Basically all of our measurement unit this year was about the Antarctic ecosystem so my students…created life size models of different Antarctic wildlife… [T]hey made…a humpback whale out of meter sticks…krill out of centicubes, and then they compared the sizes and… I was asking probing questions like, “how many krill do you think one whale needs to eat everyday?”… and then they’re able to then reflect more on like “do whales have enough krill in Antarctica and questions like that.

This relationship, between students’ connection to place and their commitment to personal and social change is present through the literature (Fien, 1995; Stevenson, 1987, 2007). While research emphasizes learning related to critical thought as influential to learners’ commitment to environmental conservation, participants felt that connecting students to the environments in which they live is also critical.

4.1.3 Teachers believe that developing a social conscience among students is central to environmental education specifically ‘for’ the environment

While participants highlighted the importance of spending time outside to promote environmental preservation, they also articulated their belief that environmental education must aim to develop an environmental conscience among students directly. Outlining how she creates opportunities for this development, Paige described sustainability projects introduced within her school community such as gardening that eventually advanced to include a larger tree planting
initiative. Chloe also mentioned sustainability projects within her school community such as creating a pollinator garden and recycling programs.

Other opportunities for student development that participants referred to were made possible through partnerships within the community. Examples included working with the Toronto and Region Conservation Authority’s “Watershed on Wheels” Program, and partnering with local farms or business owners. An emphasis on community relationships was expressed by Paige who felt that students are “working on behalf of the environment” through the learning opportunities created in their community.

This perspective, that environmental education must involve student action, is common throughout the literature where researchers suggest that the promotion of environmental protection is essential to the value of environmental education (Sauvé, 2005; Short, 2010). Additionally, participants indicate attitudes that support Short’s (2010) assertion that participation in environmental initiatives by young students should not be dismissed due to their potentially insignificant impact on the environment. Empowering, small-scale successes were reported as being important to developing life-long commitments to environmental stewardship.

4.2 Environmental Educators Identify Interpersonal and Institutional Factors that Act as Barriers to the Implementation of Environmental Education as Learning ‘for’ the Environment in Their Practice

While the previous section identified what environmental education meant to participants, this section categorizes the various challenges educators face implementing environmental education into their teaching practice. Participants identified school-related barriers, school board policies, limited environmental program availability, and negative perceptions as significant obstacles to teaching environmental education. Recognizing such
difficulties provides a deeper understanding to the realities of environmental education, as they exist today.

4.2.1 Environmental educators identify school-related factors as barriers to implementing environmental education ‘for’ the environment

Perhaps the most significant factor contributing negatively to the implementation of environmental education ‘for’ the environment voiced by both participants is a lack of instructional time. More specifically, participants revealed how meeting curriculum expectations, alongside the pressures to perform on standardized tests, makes implementing environmental education challenging. As Chloe explained, “for a lot of people environmental education is still seen as an add-on.”

In addition to identifying a lack of time as challenging to implementing environmental education, participants stressed the lack of space for environmental initiatives as being a deterrent. Paige described this challenge at her previous school as she explained that the outdoor space available to her was the side of a ravine next to a cemetery. While she made use of what little space she had, Paige expressed that this location posed difficulties and may have prevented other teachers from utilizing it as an opportunity for environmental education.

Supporting previous research, Paige also commented on the lack of funding available for environmental initiatives. Both the cost of field trips as well as the price of materials for environmental learning has been cited as a logistical barrier to the implementation of environmental education (Ham & Sewing, 1988). Additionally, Chloe illustrates an attitudinal barrier described by Sewing (1986) who suggests that teachers believe environmental education is discipline-specific and as a result, are unwilling to devote significant time to it.
4.2.2 Environmental educators identify school board policies and limited environmental program availability as barriers to implementing environmental education ‘for’ the environment

Participants indicated that they believe many educators consider environmental education important, but are discouraged from implementing it into their teaching practice due to school board policies and regulations. Paige stated, “you've got to be careful with kids always, always, always, but when you're constrained by, picky things, people lose their steam because they're like “well I don't want that headache”, right? So that's a concern. That's a challenge.”

For Chloe, the lack of availability and structure of environmental programs provided through community organizations poses significant challenges. Not only do these programs require teachers to register before the school year begins, thereby negating the potential for inquiry or student-directed learning, but these programs are as Chloe said, “stretched thin, they are overbooked every year…even if every teacher wanted to do them they wouldn’t be able to.” As a result, what environmental educators regarded as an easy opportunity or entry point to incorporate environmental education is not widely available.

These factors again, point to barriers identified by Ham and Sewing (1988) who suggest teachers are discouraged from implementing environmental education due to a lack of available resources similar to those described above. While the creation of environmental education programs described by Chloe suggests progress regarding the lack of instructional materials described Ham and Sewing (1988), the limited availability of such programs highlights current displays of these barriers. Additionally, Paige’s concern regarding safety and liability issues in schools provides a specific example of the logistical barriers discussed in the literature.
4.2.3 Environmental educators identify negative perceptions as barriers to implementing environmental education ‘for’ the environment

Both Chloe and Paige emphasized the impact unsupportive teaching environments had on their ability to include environmental education in their teaching practice. While participants mentioned name-calling and sideways glances from colleagues critical of how much time was spent outside with students, the role of administration was emphasized as a more significant challenge. In some situations principals seemed hesitant for students to be outside for safety reasons, other experiences revealed administrative concerns about the time environmental education took away from traditional curriculum areas. Similarly, parent feedback for Chloe was noted as having an impact on her practice. Although feedback was unrelated to environmental content, Chloe did receive what she described as “probing questions” from the families of students who were struggling academically about how much time her class spent outside.

In addition to reporting the perceptions of colleagues, administration, and parents as a barrier to including environmental education in their practice, participants emphasized teacher insecurities as the greatest obstacle. Paige expressed teachers’ perceived lack of knowledge many times throughout the interview suggesting that, “People are kind of nervous…about their own skills, they don't really want to take 30 kids on their own outside…they doubt their own skills, they feel they need to be an expert in something.” Chloe also mentioned teacher perceptions when she spoke of the internal pressure that teachers put on themselves to do everything required of teachers, and to do it all really well. Here, both participants confirm barriers defined by Sewing (as cited in Ham & Sewing, 1988) as teachers’ insecurities regarding their ability to effectively teach environmental education.
Furthermore, as was previously mentioned, the literature frequently identifies the view of environmental education as discipline-specific as a barrier to inclusion. With administration focused on raising test scores, teachers are encouraged to spend time on “established” curriculum (Parlo & Butler, 2007). Robertson and Krugly-Smolska (1997) also found that parent values had a notable impact on educators’ ability and desire to teach particular environmental concepts. They noted that where concepts may present information or principles contradictory to the beliefs of parents, teachers were hesitant to incorporate them into their lessons. This research reflects the experiences of Chloe who, although she continued to incorporate environmental education into her teaching practice, expressed a feeling of responsibility to respond to parent questions regarding her curriculum priorities and teaching practices.

4.3 Environmental Educators Recognize Experiences of Professional Learning and Collaboration That Prepared and Support Their Approach to Integrating Environmental Education

Despite mentioning challenges they face, participants also highlighted many supportive factors to implementing environmental education into their practice. Professional learning opportunities, supportive educational environments, and positive community interactions were cited by participants as being central factors in supporting environmental education. Reporting on these findings, other educators may find resources to assist in the development of their own environmental education practice.

4.3.1 Environmental educators recognize professional learning and development as supportive in implementing environmental education

Both Chloe and Paige discussed the impact professional learning and development had on their teaching practices related to environmental education. While describing the development of
her interest in environmental education, Chloe referenced the influence of a professional development session about outdoor learning in the full-day kindergarten program and the value of play-based education. Following this session Chloe began implementing outdoor learning into her practice, leading her to complete Additional Qualifications (AQ) courses on environmental education.

Paige made similar references to professional learning influences on her teaching practice with regards to completing her Master’s Degree. Engaging with research related to First Nations’ ways of knowing and understanding environmental education was significant in both Paige’s understanding and implementation of environmental education ‘for’ the environment.

Unsurprisingly, the importance of teacher education and professional development in the implementation of environmental education is emphasized throughout the literature (Powers, 2004; Parlo & Butler 2007; Tan & Pedretti, 2010). Where research points to inadequate teacher training and a lack of professional development opportunities as a potential explanation for the minimal environmental education enacted in teacher practice, participants confirmed the positive impact of such learning on their practice.

4.3.2 Environmental educators recognize supportive educational environments as a contributing factor to their ability to implement environmental education

Despite their awareness of the challenges unsupportive educational environments posed to their practice, both participants acknowledged the benefits of working within schools and communities that encourage environmental education. For Paige, working in a First Nations community that emphasized human relationships with nature and interactions with the earth allowed her to introduce environmental education more directly. Environmental education in her class was tied to First Nations culture that the community participated in, significantly
decreasing the possibility of parent pushback. In Chloe’s experience, working in a school with an alternative mandate to teach environmental education meant working with colleagues and administration with similar goals and mindsets to her own.

Although Chloe voiced her concerns regarding the limited availability of specific sustainability programs, both she and Paige conveyed the importance of working with community members and organizations in fostering environmental learning. Examples of such partnerships included connecting with nearby garden centers to access affordable plants and materials as well as collaborating with local business owners to improve neighbourhood accessibility. Paige also noted the value of these relationships when working with parents, colleagues, and administration that were not as supportive.

Farmer et al. (2007) and Stern, Powell and Ardoin, (2008) identify benefits related to student participation in environmental education programs, yet research regarding outcomes specific to environmental education partnerships with community organizations is limited. Subsequently, participants’ voices contribute to literature identifying community partnerships as valuable in working to solve real-world problems through pedagogical approaches related to environmental education such as place-based education (Martusewicz et al., 2015).

4.3.3 Environmental educators recognize the impact positive community interactions had on supporting environmental education

Participants noted that positive feedback from parents affirmed and encouraged the implementation of environmental education in their teaching practice. Chloe described one occasion in particular where a parent thanked her for helping her daughter to connect with the environment while teaching her the previous year. Chloe emphasized this feedback when explaining some of her decisions to bring environmental education into her classroom. She
stated, “I find it’s mostly kind of like anecdotal little things like that…that I know it’s of value”.

Paige shared similar stories, while also highlighting parent feedback directly related to environmental initiatives she had developed. After implementing a gardening project where parents were invited to participate and expand the project into the community, parents responded the following year, requesting that the project be continued annually. This engagement by parents and specific request for continued environmental learning allowed Paige to incorporate environmental education more confidently.

While earlier findings confirm research by Robertson and Krugly-Smolska (1997) that suggests teachers are hesitant to incorporate concepts of environmental education that might contradict parent beliefs, participants provided further support for this research through describing the opposite effect of parent views. Specifically, participants indicated that where parent values aligned with principles of environmental education, they were encouraged to continue implementing environmental learning.

4.4 Educators Implementing Environmental Education Specifically ‘for’ the Environment Utilize Pedagogies Rooted in Student-Directed Learning While Ensuring Their Own Knowledge of Ministry Policies in Order to Mitigate Charges of Indoctrination from Parents, Colleagues, and Administrators

Both Chloe and Paige identified environmental education as being extremely important to them and their teaching philosophy. While they were introduced to environmental education at different times and through varied experiences, their dedication to teaching ‘for’ the environment is clear. Additionally, despite working in different communities throughout their careers Chloe and Paige had each encountered parents, colleagues, or administrators that did not support their emphasis on or approach to environmental education. Consequently, both participants
highlighted practices throughout their interviews, such as familiarizing themselves with Ministry documents, utilizing student-directed pedagogies, and making environmental learning relevant to students as strategies to avoid confrontation with parents, colleagues, and administrators. With this information, I believe that understanding how educators teach ‘for’ the environment while mitigating charges of indoctrination will improve the practice of environmental educators.

4.4.1 Environmental educators mitigate charges of indoctrination by familiarizing themselves with Ontario ministry of education documents

Connecting environmental learning to curriculum expectations was expressed by both participants as being central to minimizing allegations of indoctrination from parents, colleagues, and administrators. Paige described how she did this through both curriculum subject areas as well as sections of the Ontario elementary report card where teachers report on Learning Skills and Work Habits. Taking students outside and engaging them in environmental learning provided opportunities for students to demonstrate their development in responsibility and collaboration categories.

Chloe also articulated the connections environmental lessons made to curriculum subject areas, yet she provided additional insights regarding how those connections have shifted in her practice to allow more explicit learning ‘for’ the environment. Specifically, Chloe described the three overall expectations for each strand in the Ontario science curriculum as they related to environmental skills, inquiry based skills, and knowledge-based skills respectively. Shifting her focus in science to emphasize the first overall expectation (related to environmental skills) in each strand has enabled her to incorporate more lessons related to learning ‘for’ the environment.

Beyond making curriculum connections, Paige highlighted the importance of knowing other Ministry policies and regulations. By familiarizing herself with safety regulations and
ensuring she always followed protocols when working with students outside, Paige felt she was more confident in managing students, and more willing to incorporate environmental education into her practice.

Participants indicated that making curriculum connections and knowing Ministry policies was important in avoiding allegations of indoctrination while Short (2010) also advocates for further protocol development and documentation related to student learning in environmental education. Specifically, Short (2010) suggests that teachers document culminating student actions as well as their influences in reaching those actions in order to protect teachers from allegations of coercion.

4.4.2 Environmental educators mitigate charges of indoctrination by utilizing pedagogies rooted in student-directed learning

Throughout her interview, Chloe emphasized her focus on facilitating student learning by asking students questions. Encouraging critical thinking through asking questions, and allowing students to draw their own conclusions was explicitly stated by Chloe as a technique used to avoid confrontation with parents who have views contrary to her own. For example, Chloe described a lesson based on exploring liquids and solids in the environment that also incorporated experiments on the effects of oil on bird feathers. During this exploration, Chloe suggested potential questions she might ask students such as, “How have the feathers changed?” Extending the lesson into Social Studies, Chloe might also ask, “Based on that experiment that we did with bird feathers, why do you think people are worried about pipeline[s]?” By incorporating multiple perspectives and excluding her own viewpoint, Chloe articulated these types of questions were common in her practice to avoid confrontation. Similarly, Paige described the role student research plays in her teaching practice as a strategy to discourage
parent complaints. While teachers facilitate the research process, student findings are based on their own values and interpretations. Paige seemed to speak for herself and Chloe when she said, “you want [students] to develop a voice.”

Participants made multiple references to the opportunities in their practices for student-driven inquiry. Chloe explained that, “it comes down to the way you teach and present information, and if it’s student driven, if it’s inquiry focused, you’re not indoctrinating kids, kids are drawing their own conclusions”. Chloe illustrated this clearly when describing a lesson on littering and waste management. Taking students to Lake Ontario and counting pieces of garbage prompted student discussions around the effects of garbage on the water and fish living in the lake. This led to students collecting waste that was brought back into the classroom where they investigated the effects of litter on water through scientific experiments. While this was not her initial plan for the lesson, student-led inquiry resulted in engaging environmental learning Chloe was able to support, without directly enforcing.

Here, participants confirm Stevenson’s (1987, 2007) suggestion that student-driven inquiry is central to effective environmental education ‘for’ the environment. Unlike Stevenson (1987, 2007) however, participants found this practice promoted contemporary goals of schooling, rather than contradicting them. It was because these strategies aligned with objectives of their schools that they were successful in mitigating charges of indoctrination. Consequently, while participants contradict previous research, their experiences contribute to the literature by demonstrating current school philosophies and their impact on teacher practices.
Environmental educators mitigate charges of indoctrination by making environmental learning relevant to their community of learners

Participants described using current environmental issues relevant to their students’ local communities to minimize the potential for pushback. Chloe explained how she incorporated news articles related to current environmental issues into her teaching. In doing so, Chloe was able to highlight various perspectives and bring in advocacy voices that weren’t her own. These various perspectives made information available to students without imposing Chloe’s values, which could have resulted in parent allegations of indoctrination. Paige also noted the value in teaching environmental education through current events, as projects were more meaningful to students. For example, Paige referenced environmental issues related to water quality on First Nations’ land. Specifically, Paige mentioned opposition to the Dakota Access Pipeline by the Standing Rock Sioux in North Dakota as an issue she would have brought up if still working in a First Nations community.

Furthermore, Paige indicated her desire to make environmental education more relevant to her students through cultural connections that reflected the student community. Throughout the interview Paige made several references to connecting environmental education with the First Nations principle of Seven Generations, which she indicated to be meaningful for Indigenous students while working within their community.

Both of these strategies are reflective of Stevenson’s (1987, 2007) notion that current events are central to environmental education. However, where Stevenson presented the structure of schooling to be incompatible with environmental learning, participants demonstrated evidence to the contrary. Schools, as Stevenson (1987, 2007) argues, typically emphasize factual knowledge and only present unambiguous problems with singular and pre-defined solutions. In
doing so, schools become contradictory to the co-operative learning and inquiry approaches to real-world problems proposed in environmental education. Conversely, participants articulated the function of using current events related to environmental education to highlight different perspectives and fostering inquiry as an asset that is central to their pedagogical approaches.

4.5 Conclusion

In this chapter I have described and discussed findings categorized into four themes: participants’ definitions of environmental education, challenges and supports related to the implementation of environmental education, and strategies participants utilize in mitigating charges of indoctrination while teaching ‘for’ the environment. Key findings from this research include environmental educators’ practices of taking students outside regularly in order to foster an appreciation of, and connection to the environment. Despite limited funding and available resources, findings also indicate the importance of a supportive school environment and fostering connections within the community when teaching environmental education. Furthermore, environmental educators’ practices of familiarizing themselves with Ministry of Education documents, utilizing pedagogies rooted in student-directed learning, and making environmental learning relevant to their community of learners through the use of current events and cultural connections were key findings related to mitigating charges of indoctrination. By considering how educators navigate the complex and controversial terrain of teaching ‘for the environment, it is my hope to provide better understanding of the practice of environmental education, to inform the practice of environmental educators, and to help support the advancement of environmental education in Canadian classrooms which I will discuss next, in Chapter Five.
Chapter Five: Conclusion

5.0 Introduction

In this chapter I present and discuss the implications and recommendations from this research study. After providing an overview of key findings from the data and highlighting their significance, I will consider the implications of this study for both the educational community as well as my own teaching practice. Responding to such implications I will then make recommendations for a variety of stakeholders related to environmental education and the educational community more broadly. Lastly, I pose areas for further research in order to promote and better inform the practice of environmental education in Ontario.

5.1 Overview of Key Findings and their Significance

As discussed in Chapter Four, educators believe that effective environmental education creates opportunities for students to develop an appreciation of nature, connections to place, and a social conscience related to environmental protection. Creating such opportunities occurred differently in different classrooms; however, teachers’ experiences teaching environmental education led them to recognize the importance of spending time outdoors. Taking learning outside on a regular basis provided an opportunity for students to appreciate the environment as part of their everyday lives, cultivating a meaningful connection necessary for effective environmental education. An accessible strategy, this finding is significant for all educators seeking to improve their teaching practice related to environmental education.

A lack of instructional time and funding in schools, restrictive school board policies, and negative perceptions of environmental education held by parents, colleagues, and administration were cited by educators as significant obstacles to teaching environmental education. These interpersonal and institutional barriers identified by participants support the literature identifying
challenges and deterrents to the implementation of environmental education (Ham & Sewing, 1988; Parlo & Butler, 2007; Robertson and Krugly-Smolska, 1997).

Despite the prevalence of barriers complicating the implementation of environmental education, participants acknowledged experiences of professional learning and community partnerships that prepared and support their approach to integrating environmental education. In addition to participating in professional learning related to environmental education, seeking supportive colleagues in educational environments as well as collaborating with supportive community organizations or individuals were identified as central factors in motivating and encouraging environmental educators. Consequently, these findings are significant in their potential to assist other educators in the development of their own environmental education practice.

Also significant in their potential to improve the practices of environmental educators are findings related to participants’ strategies to mitigate charges of indoctrination from parents, colleagues, and administrators. Educators highlighted practices such as familiarizing themselves with Ministry documents, utilizing student-directed pedagogies, and making environmental learning relevant to students as strategies to avoid confrontation. Navigating the controversial terrain of environmental education in this way, teachers were able to bring meaningful learning ‘for’ the environmental into their classrooms.

5.2 Implications

In this section I will outline implications grounded in the research findings for both the general educational community as well as my own professional identity and practice as a teacher-researcher.
5.2.1 The educational community

The findings from this research study reveal implications for the educational community related to validating environmental education as well as bringing it into practice. Primarily, and perhaps most importantly, is the perceived value of taking students outside as an entry point for environmental learning. Participants emphasized the meaningful connections students made as a result of integrating outdoor learning into their teaching practice. Furthermore, participants described a variety of possibilities to get students outside that other educators could choose to facilitate based on their own comfort level. Ranging from taking traditional classroom learning to natural spaces, to participating in experiential outdoor activities such as cross-country skiing or tapping maple trees, these examples demonstrate the potential for environmental education in all classrooms.

Educators believe that environmental education enables students to make connections that deepen their understanding across curriculum subject areas. Connecting outdoor explorations to mathematics concepts or providing rich descriptive writing vocabulary through outdoor experiences, these findings help challenge the notion that environmental education is subject specific and can only be taught through science and technology curriculum expectations. Environmental educators can create cross-curricular connections through student inquiry or project-based learning centered on environmental themes and issues.

Participants emphasized how valuable connections and partnerships with community organizations are in implementing environmental education. While community organizations that provide specific environmental programs are often unavailable or inaccessible, environmental educators found opportunities for student learning through partnerships with local businesses and other charitable organizations.
5.2.2 My professional identity and practice

Conducting research on the implementation of environmental education in Ontario classrooms has provided me with a wealth of information to consider in my own practice as both a teacher and a researcher. Strengthening my desire to continue to pursue professional learning related to environmental education is the emphasis participants placed on the impact of professional learning on their teaching practices. Leading participants to conceptualize environmental education in new ways and to broaden their beliefs of what environmental education looks like in practice, professional learning both inspired and motivated participants. Consequently, I have been encouraged through conducting this research to register for upcoming conferences related to environmental learning.

This research has additional implications related to the social and emotional impacts of teaching environmental education through pedagogy focused on creating opportunities for students to engage in learning ‘for’ the environment. Participant experiences suggest that doing this work may alienate me from particular educational communities. Working among colleagues who perceived environmental education as a waste of time, or something only ‘hippies’ did, created difficult work environments for participants. Choosing to integrate environmental education in my own teaching practice may result in similar reactions from colleagues; however, I feel that this research has prepared me for this possibility. Connecting myself with other environmental educators at upcoming conferences and aligning myself with supportive community partners are steps I will now take in order to prepare myself for the possibility of negative attitudes related to environmental learning. Additionally, participant experiences in urban areas suggest that working in similar environments may require more creativity to find spaces or make available spaces suitable for environmental learning. Utilizing strategies
mentioned by participants such as naturalizing school spaces through community partnerships or taking regular walks to green spaces in the community are approaches applicable to any urban classroom, including my own.

5.3 Recommendations

Based on the findings from this research study I believe that in order to support the advancement of environmental education in Canadian classrooms, there are several actions to be taken from a variety of stakeholders of environmental education. Specific recommendations for the Ontario ministry of education, school boards, pre-service teacher education programs, and outdoor educational facilities are made below.

The Ontario Ministry of Education published their framework for environmental education in 2009; however, the addition of mandatory expectations in each curriculum subject area related to environmental education would encourage educators reluctant to incorporate environmental learning into their teaching practice to do so. While this may not guarantee the quality of environmental education being integrated in Ontario classrooms, the inclusion of environmental education in curriculum expectations would highlight environmental education as a Ministry priority. Doing so may also encourage teachers who are hesitant to include environmental education in their teaching, due to a perceived lack of knowledge or expertise, to participate in professional development opportunities.

In order to ensure meaningful environmental learning is occurring, individual school boards should be encouraged to develop and make available to teachers more professional development opportunities related to environmental education. Additionally, the development of resources specific to environmental education for classroom teachers may facilitate the implementation of environmental education for those who cannot or do not attend professional
development. Beyond investing in professional learning and resource development, school boards have the ability to invest in the infrastructure or school green spaces that would support and encourage environmental learning. Simply naturalizing school playground areas or providing funding to schools for garden programs would enable teachers to utilize such spaces for outdoor learning that participants believed to be integral to meaningful implementation of environmental education in classrooms.

Similar to providing professional development opportunities for certified teachers through school boards, pre-service teacher training programs can better prepare teachers to integrate environmental learning across curriculum subject areas by integrating environmental education strategies into university courses. At the Ontario Institute for Studies in Education at the University of Toronto, Master of Teaching candidates in the Primary/Junior divisions are exposed to environmental topics in only their second-year science course. While the inclusion of environmental learning at OISE is important, the segregation of environmental topics to only one mandatory science course reinforces the misconception that environmental education should be subject specific.

Participant discussions of outdoor educational facilities highlighted both their limited availability and lack of inquiry-related lessons. Consequently, I believe that outdoor educational facilities could work to create programs focused on student inquiry, which may then enable teachers to continue developing ideas introduced in outdoor education centers when back in the school classroom. Similarly, I believe that closer partnerships between outdoor educational facilitations and schools would better facilitate continued environmental learning beyond one-day field trips to outdoor centers.
5.4 Areas for Further Research

The purpose of this research study was to gain greater insight into the implementation of environmental education in Ontario classrooms. While the findings from this research study, as well as existing literature, speak to the supports, challenges, and practical strategies of environmental educators, more research is needed to investigate the potential benefits of environmental education specifically related to learning ‘for’ the environment. Participant experiences working with colleagues who felt that going outside with students was frivolous, or that environmental education should be incorporated only in science courses, has prompted me to consider how these educators would respond to research specific to the benefits of environmental education implemented across curriculum subject areas, or to the benefits of learning outside more generally.

The strategies described by participants of this study demonstrate a variety of teacher practices possible when integrating environmental education however further research related to teacher experiences may be helpful. Understanding the lived experiences and practices of teachers working to create opportunities for students to learn ‘for’ the environment is important to develop pre-service teacher education and professional development courses related to environmental education. As a result, I believe that further research should consider similar questions to those I have posed here but with a larger sample of participants across Ontario.

5.5 Concluding Comments

Throughout this chapter I have provided a brief overview of the findings presented in Chapter Four, which highlighted participant experiences and practical strategies integrating environmental education as learning ‘for’ the environmental in their classrooms. These findings included environmental educators’ definitions of environmental education, barriers they face
when implementing environmental learning, the experiences and partnerships that support them, and their personal strategies for avoiding confrontation from parents, colleagues, and administration when teaching controversial issues.

Implications centered on the findings described above include the recognition that outdoor learning has value, environmental education can and should be integrated across curriculum subject areas, and that making connections with community organizations and individuals is essential to creating meaningful learning opportunities for students. Additionally, this research has motivated me to participate in conferences related to environmental learning. In doing so I hope to better my own practice and understanding of environmental education as well as make connections with other environmental educators with whom I may collaborate and find encouragement should I find myself working with unsupportive colleagues.

This research study has greatly influenced the ways in which I will integrate environmental education in my future practice however additional recommendations have been made to the broader educational community and other stakeholders of environmental education. These recommendations point to a need for greater teacher education both in pre-service teacher education programs and through professional learning opportunities, as well as greater investment in the development of teacher resources and school green spaces. Furthermore, emphasizing environmental education as a priority in Ontario can be done at the ministry level by creating curriculum expectations specific to environmental education in each subject area. Outdoor educational facilities can also contribute to the advancement of environmental education in schools by working closely with classroom teachers to create outdoor programs based on student-inquiry and engage in follow-up visits or activities to promote extended environmental learning beyond short field trips.
In addition to making recommendations, I have suggested areas for future research related to the benefits of environmental education and a broader study investigating teachers’ lived experiences and their practical approaches to environmental education across Ontario. While additional research is recommended, conducting this research has revealed not only the possibilities for environmental education in my own practice, but also the importance of environmental education for all educators.
References


Appendix A: Letter of Consent for Interview

Date:

Dear _______________________________,

My Name is Margaux Brown and I am a student in the Master of Teaching program at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). A component of this degree program involves conducting a small-scale qualitative research study. My research will focus on how elementary teachers are creating opportunities for students to learn environmental education through a focus on learning for the environment. More specifically, I am interested in learning how teachers do this working ways that minimize charges of indoctrination from administration and parents. I am interested in interviewing TDSB elementary teachers who have a demonstrated commitment to environmental education and who are willing to speak to their pedagogical practices on this subject. I think that your knowledge and experience will provide insights into this topic.

Your participation in this research will involve one 45-60 minute interview, which will be transcribed and audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient for you, outside of school time. The contents of this interview will be used for my research project, which will include a final paper, as well as informal presentations to my classmates. I may also present my research findings via conference presentations and/or through publication. You will be assigned a pseudonym to maintain your anonymity and I will not use your name or any other content that might identify you in my written work, oral presentations, or publications. This information will remain confidential. Any information that identifies your school or students will also be excluded. The interview data will be stored on my password-protected computer and the only person who will have access to the research data will be my course instructor Dr. Angela McDonald-Vemic. You are free to change your mind about your participation at any time, and to withdraw even after you have consented to participate. You may also choose to decline to answer any specific question during the interview. I will destroy the audio recording after the paper has been presented and/or published, which may take up to a maximum of five years after the data has been collected. There are no known risks to participation, and I will share a copy of the transcript with you shortly after the interview to ensure accuracy.

Please sign this consent form, if you agree to be interviewed. The second copy is for your records. I am very grateful for your participation.

Sincerely,

Margaux Brown
Phone number: (xxx) xxx-xxxx  E-mail: margaux.brown@alum.utoronto.ca

Instructor’s Name: Dr. Angela MacDonald-Vemic
E-mail: angela.macdonald@utoronto.ca

Consent Form
I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw from this research study at any time without penalty.
I have read the letter provided to me by Margaux Brown and agree to participate in an interview for the purposes described. I agree to have the interview audio-recorded.

Signature: ______________________________

Name: (printed) ______________________________

Date: ______________________________
Appendix B: Interview Protocol

Thank you for agreeing to participate in this research study, and for making time to be interviewed today. This research study aims to learn how elementary teachers are creating opportunities for students to learn environmental education through a focus on learning for the environment. This interview will last approximately 45-60 minutes, and I will ask you a series of questions focused on your background, perspectives and beliefs about environmental education, teaching practices and challenges. I want to remind you that you may refrain from answering any question, and you have the right to withdraw your participation from the study at any time. As I explained in the consent letter, this interview will be audio-recorded. Do you have any questions before we begin?

Background Information
1. How long have you been teaching in Ontario?
2. What grades and subject areas do you currently teach?
   a. How long have you been teaching in this particular position?
   b. How long have you taught at this school?
   c. What grades/subject areas have you previously taught?
3. In addition to your role as a teacher, do you fulfill any other roles in the school (e.g., coach, advisor, resource teacher, etc.)?
4. Can you describe the community in which your school is situated (i.e. diversity, socioeconomic status)?
5. What is your background in environmental education? Can you tell me about the experiences you have had that have led you to develop an interest in and prepare you to teach environmental education?
   a. Personal experiences? (e.g. childhood, family, culture)
   b. Educational experiences? (e.g. undergraduate studies, graduate studies, teachers college, professional development)
      i. What experiences, if any do you recall regarding environmental education as a student? Do you feel these experiences impacted your decision to become a teacher?
   c. Professional experiences? (e.g. advising clubs, experience teaching, field trips, employment positions)

Teacher Perspectives/Beliefs
6. What does the term ‘environmental education’ mean to you?
   a. What kinds of learning experiences does EE involve?
   b. What are the learning goals?
7. The OME policy on EE defines it as “learning in, about, and for, the environment”.
   a. How would you describe the differences among learning ‘about’, ‘in’, and ‘for’ the environment?
   b. Can you tell me more about what “learning for the environment” means to you?
How do you interpret this?
8. Why do you believe that EE should be taught in schools?
   a. In your view, what are the benefits of EE?
   b. What are the benefits of “learning for the environment”?
9. What curriculum and policy documents are you aware of that connect to EE?
10. In your view, to what extent is EE being enacted in schools?
    a. What indicators of this do you see?
    b. More specifically, to what extent do you think students are being provided with opportunities to learn for the environment?
11. From your perspective, what are the key barriers getting in the way from teachers enacting EE in schools?

Teacher Practices
12. What does environmental education look like in your teaching? In what ways do you incorporate EE into your teaching practice?
   a. If I were to spend a day in your classroom, how would I know that you have a commitment to EE? What would I see and hear?
   b. What are some of the key areas of the curriculum that you connect EE to and why?
   c. Can you provide me with some example of the opportunities for learning that you have created across some of these subject areas?
   d. What are some examples of how you have taught ‘for the environment’ in these different subject areas?
      i. Learning goals?
      ii. Instructional practices / opportunities for learning?
      iii. Resources that you used? *books, video, websites, spaces, music, guest speakers
13. Are there any subject areas you do not or would not incorporate EE? If so, what are they and why?
   a. What are some examples of specific environmental topics and issues that you teach?
14. How do students respond to this teaching?
   a. What outcomes, broadly speaking, do you observe for your students as a result of implementing environmental education?
   b. And what about learning ‘for’ the environment, specifically? What indicators of learning have you observed?
   c. How, if at all, do you assess students’ learning “for the environment”?
15. How, when implementing EE as learning ‘for’ the environment, do you mitigate the potential for charges of indoctrination from parents, colleagues, and administrators? Are there particular approaches that you take? Particular resources that you use with this consideration in mind?
16. Do you make explicit your beliefs about environmental issues? Why / why not? If yes, how do you do this?
17. Can you tell me about a specific example of how you have taught environmental education as learning ‘for’ the environment?
   a. What subject/grade were you teaching?
b. What were the learning goals for this lesson/unit?

c. How were students assessed during this lesson/unit?

d. What resources did you create/use and how did you know about these resources?

e. Did this lesson/unit elicit any response (positive or negative) from parents, colleagues, or administration? If so, what responses were they?

i. How did you respond to these reactions/responses?

18. Supports and Challenges

19. What resources or factors contribute either positively or negatively to your implementation of environmental education as learning ‘for’ the environment in your practice? (e.g. supportive admin, community demographics, access to resources, student interest)

20. What, if any, concerns do you have when educating for the environment?

21. What challenges do you encounter when implementing environmental education as learning ‘for’ the environment?

   a. What are some specific challenges that you have faced?
   
   b. How do you respond to these challenges?
   
   c. How, if at all do you feel the education system might support you in meeting these challenges?

Next Steps

22. How, if at all, do you see the role of environmental education changing in schools in the future? What do you think will need to happen for EE to be taken more seriously in schools?

23. What advice, if any, do you have for a beginning teacher interested in incorporating environmental education ‘for’ the environment while mitigating the potential for charges of indoctrination from parents, colleagues, or administrators?

Thank you for your participation in this research study.