Connecting, Care and Agency: The Nature of Environmental Education at an Outdoor Education Centre.

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy

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Abstract

This thesis reports on a study designed to investigate the nature of environmental education (EE) at one well-established school board operated outdoor education centre called Faraway Dale located in Ontario, Canada. The specific research questions that guided the study were: (a) What are the structures that characterize environmental education for educators at the outdoor education centre? (b) What are the main understandings of environment and education that guide outdoor educators work with environmental education? (c) What are the tensions and contradictions of providing environmental education through an outdoor centre? The primary data sources for this study were the nine outdoor educators who work at the facility. A variety of data collecting strategies were used, over a period of five months, to re-present their experiences of providing EE. Analysis of the data revealed that the nature of EE at the outdoor centre is significantly different from what occurs in mainstream, indoor settings. The overall goal for environmental education at the outdoor centre is to foster a culture that leads to healthy people and healthy environments by encouraging a more equitable interplay among people and nature. This overall goal can be divided into three structures that characterize EE at the centre. These are: connecting people to the environment, encouraging a care-based relational orientation...
towards the environment, and building agency for living low consumption low impact lifestyles. The findings also confirm that the nature of EE which educators espouse and practice is directly linked to their understandings of the terms ‘environment’ and ‘education’. The major tensions and contradictions of providing EE in an outdoor context are also illuminated. The discussion focuses on the implications of the findings for theory, practice and research in EE and the work of outdoor educators in the field.
Dedication

This thesis is dedicated to Jimmy Chulhan: husband and friend, merry heart and bold.

Acknowledgements

The work we do is never an individual effort but the result of a great collaboration with all those who touch our lives, including those who have gone before, and those we walk through life with. For all the influences that have shaped me I am grateful. However this thesis would not have been possible without the kind and direct assistance of a number of people who deserve special recognition. These include:

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1 Introduction

1.1 Background to the Problem

The upsurge of interest in environmentalism over the past decade is clear. Now, perhaps as at no other time, the idea that human actions can have negative, long term impacts on the environment that may threaten the health and wellbeing of life on the planet, seems to have captured the public imagination (Akerlof et al., 2010). While the modern environmental movement been around since 1960s (Palmer, 1998), much of the recent surge of interest in it, can be credited to growing awareness of the issue of climate change, which in itself has been prompted by a series of coinciding but largely unrelated incidents. Natural disasters like Hurricane Katrina in 2005; films like ‘An Inconvenient Truth’ (Bender, Burns, David & Gugenheim, 2006) and ‘The Day After Tomorrow’ (Gordon & Emmerich, 2004); and the fourth Intergovernmental Panel on Climate Change report (IPCC, 2007) seemed to have acted together with the popular media to convince many people of the phenomenon of human caused global warming, and its consequences for human life. Moreover the issue of global warming seems to have acted as a catalyst to convince people that concern about human caused changes to the environment which environmentalists have long cautioned about are real. As such, this issue has done much to re-energize the broader environmental movement and has been used by many as a rallying call for greater consideration of environmental consequences and actions to remediate those consequences (for example Gore, 2006; Hatherleigh & Smith, 2008; Hirshfield & Sahara, 2010; Rogers & Kostigan, 2007).

Another area that has been impacted by the surge of interest in environmentalism is education. While supporters of the environment have been advocating for environmental
education (EE) for some time now (for example Capra, 1997; Orr, 2004; UNESCO-UNEP, 1978), even to the point of claiming that all education is environmental education (Orr, 1991), commitment to EE by education systems has been temperate at best (Palmer, 1998). However in tandem with the changes discussed above, there has been a renewed commitment to EE by education authorities worldwide (for example Australian Government Department of Environment and Heritage, 2005; Danish Ministry of Education, 2009; North American Association for Environmental Education, 2004; Ontario Working Group on Environmental Education, 2007; Welsh Assembly Government, 2008). A closer look at the policy statement from Ontario, Canada exemplifies the spirit of many of these new policies which underscore the importance of EE, and outline the need for substantial efforts to implement EE across the school years:

Over the past decade, changes in the Earth’s environment and its natural systems have emerged as a matter of increasingly urgent concern around the world. While the issues are complex and diverse, there is a shared and universal recognition that solutions will arise only through committed action on a global, national, regional, local and individual scale. 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. (Ontario Working Group on Environmental Education, 2007, p. 2)

The document goes on to define environmental education as education about, for and in the environment and recommends its implementation across the curriculum as a part of all subjects. These ideas about the nature and practice of EE are further fleshed out in subsequent documents produced by Ontario’s ministry of education (Ontario, Ministry of Education, 2009; 2011).
Despite broad agreement and policy promoting environmental education in schools, implementing EE remains problematic (Russell & Dillon, 2010). A search of the literature suggests a number of possibilities to explain this situation including: the lack of structural supports for teachers (for example Cutter-Mackenzie & Smith, 2003; Fazio & Karrow, 2011); the incompatibility of schooling with the nature of EE (Stevenson, 2007; Tan & Pedretti, 2010) and weaknesses in mainstream EE theory itself (Barrett, 2007; Russell 1999). From the outset it is important to note that while much of the literature focuses on the first two possibilities to explain the problems facing the implementation of EE in schools, much less attention seems to have been paid to inherent weaknesses in mainstream EE theories and ideologies. Indeed, in much literature and EE programs a tacit understanding of the terms ‘environment’ and ‘education’ is assumed. Most often ‘education’ is interpreted as a cognitive, content oriented process, and ‘environment’ as the pristine, natural world. One of the main goals of EE is to increase justice based awareness and/or activism for the environment. Popular formulations of EE do not seem to adequately take into account alternative ideas about education and environment, or peoples’ various ways of valuing and thinking, that may be valid in developing comprehensive environmental education programs.

1.2 Statement of the Problem

Another consequence of the increased interest in environmentalism has been a revitalized scholarly interest in EE. A review of this literature shows that EE has caught the imagination of myriad non-traditional, and often marginalised voices like feminist, critical, and other post-modern theorists (for example Bowers, 2009; Gruenewald, 2004; Kahn, 2008; Russell, 2005) whose ideas of the environment and education add compelling new perspectives to the field. Feminists, for example, have suggested that by viewing the environment metaphorically as a
woman, we can understand more clearly how domination and exploitation of the environment have occurred. As such, EE today, perhaps more than ever, is indeed “a complex and evolving pedagogical field” (Sauvé, 2005, p. 11), a still fluid discipline with an array of possible avenues for pursuance, as suggested by Russell, Bell, and Fawcett (2000).

One such avenue acknowledged by Russell, Bell, and Fawcett (2000) which exists in the Canadian context (and other international contexts) is the outdoor education centre. For some, the kinship between outdoor education and environmental education is patent. For example, speaking on behalf of the Council of Outdoor Educators of Ontario (COEO), Foster and Linney (2007) assert:

Early sequenced and repeated experiences in the outdoors develop a kinship with nature that can evolve into an informed, proactive, and lifelong stewardship of our natural environment. (p. 53)

And Sauvé (2005):

…outdoor education is one of the most effective means of learning about/within the natural world and imparting an understanding of nature’s inherent right to exist by and for itself— humankind’s place in nature being definable only in context of this ethos. (p. 14)

In congruence with these perspectives, one of the largest school boards in Ontario, which itself operates several outdoor education centres, states on its website:

Outdoor Education offers students curriculum based, “beyond the indoor classroom” learning experiences. The aim of these experiences is to awaken students to their
connection to the built and natural world around them. (Toronto District School Board, 2011)

These latter statements imply that in addition to acting as an additional source of EE, outdoor education can act as an alternative orientation to EE, providing something that indoor learning experiences cannot.

Yet despite such positive endorsement, a review of the scholarly literature suggests that the relationship between outdoor education and EE is ambiguous. In fact, in much of the existing literature, outdoor education and environmental education are simply treated as separate disciplines with their own histories, goals and outcomes. Of the scholars who do explore the link, there are those who endorse the link between the two, and there are those who doubt the ideological compatibility of outdoor education with environmental education. The crux of the latter group’s argument is that outdoor education, which they define simply as education in the environment, may be ambivalent, even averse to environmental education which includes education about and for the environment (for example Brookes, 2003; Loynes, 2002). To complicate matters further, both sets of scholars have been able to support their positions with empirical studies investigating the link between outdoor experience and environmental learning since studies exist whose results support both positions.

Dillon et al. (2006) add another dimension to the issue. In a comprehensive review of research on the value of outdoor learning, they conclude that while the link between environmental learning and outdoor experience may be valid, the relationship between the two may be very complex, so that simply providing outdoor experiences (one view of outdoor education) may not be adequate in educating about and for the environment (environmental education). Readings of some of the more recent perspectives on EE (mentioned above)
correspond with this conclusion and provide insight on how the relationship between outdoor education and environmental education can be improved. For example, supporters of critical place-based environmental education (for example Gruenewald, 2004), advocate for an approach that encourages students to tackle local environmental concerns, by questioning and reconstructing knowledge and challenging the norms within which they live. Here place based knowledge is combined with complex notions of epistemology and critical theory to produce an alternative approach to environmental education. A review of the existing literature on outdoor environmental education shows a limited consideration of these types of perspectives.

From the beginning of the research process it was my belief that environmental education is a complex phenomenon, with diverse meanings and modes of expression. One way to deepen our understanding of it would be to study its various avenues of pursuance. It was also clear to me that the relationship between outdoor education and EE is a valid but complex one. The problem then was to gain a better understanding of the nature of this relationship and the intersection between these two areas. How is environmental education enacted in an outdoor context? What does environmental education mean in an outdoor context? Does the outdoor context provide opportunities for environmental learning that other contexts cannot? If so, what are the theoretical and practical implications of these differences? Since very little research exists on how EE is enacted at the outdoor education centre, I chose to examine the nature of environmental education in this specific context by examining the perspectives and experiences of outdoor educators who work there.
1.3 Purpose

The purpose of the study was to explore the nature of environmental education at an outdoor education centre. I attempted to do this by using a phenomenological methodology which focused on the experiences and perspectives of the outdoor educators working at the centre. The use of a phenomenological methodology meant that EE was treated as a phenomenon in context. As such, the specific purpose of the study was to capture the essence, essential structures, logic and interrelationships of environmental education at an outdoor education centre. I chose to use a phenomenological methodology since this seemed to me the best option for studying an essentially human phenomenon (Husserl, 1931). It allowed for the inclusion of emotions, thoughts, opinions and other non-physical data (all parts of experience) that other methods of research do not. I chose to study the problem through the experience of outdoor educators based on the well-established precedent that educators possess valuable experiential wisdom about questions of education (Clandinin & Connelly, 2000; van Manen, 1997). Also within the context of the outdoor education centre, outdoor educators may be the only constant; visiting students and teachers and even the centre itself are variable, elusive aspects to study.

1.4 Context and Research Questions

The study site was a large well established outdoor education facility within the province of Ontario with strong links to the formal education system. In fact, it is one of several facilities run by one of the largest school boards in the province. The data sources were nine professional outdoor educators who have been working at the centre for over a decade.

One major research question guided the study. During the research process this main question was divided into three parts.
What is the essential nature of environmental education at an outdoor education centre?

a. What are the structures that characterize environmental education at the outdoor education centre?

b. What are the main understandings of environment and education that guide outdoor educators work with environmental education?

c. What are the tensions and contradictions of providing environmental education through an outdoor centre?

For the study I interpreted the phrase ‘essential nature of environmental education’ to mean the main structures/characteristics that describe the conceptualization and practice of environmental education. Also for questions b and c the term ‘understandings’ encompasses ideas, beliefs, meanings and opinions that outdoor educators hold with respect to the terms ‘environment’ and ‘education’.

1.5 Personal Interest

I agree with those who assert that research is a personal process, one where it is difficult to separate the researcher from the researched (Lincoln & Guba, 1985). So that to fully appreciate the findings and implications of a study one must, to a certain extent, understand the researcher. In this section I attempt to provide the reader with that foundation, something of my experience and background, which will help him or her to understand my motivations for doing the study and the fundamental assumptions inherent within it.

It seems to me that I have always been interested in environmental education but only lately came to a full realization of this interest. My primary passion is to expand opportunities for
environmental education for K-12 students. This interest evolved over the years, stemming from my childhood which I spent in an immersive natural environment; and grew through my undergraduate experiences where I studied botany/ecology, and later as secondary science teacher for 10 years.

My love of nature began early. I grew up on a developing tropical island where the landscape and lifestyle immersed me in nature and the outdoors. The island itself was beautiful, teeming with life and natural wonder. The house I lived in was made to let the outdoors in. Large windows and porches blurred the edges between outdoors and indoors. One could always hear the outdoors, the rain beating on the roof, birdsong and other animal sounds. I also lived a low consumption, low impact lifestyle. This meant for many years my family owned very little, and what we had was used, repaired and reused many times before it was thrown away. My parents were subsistence farmers. This meant we lived with the land, in close connection with its natural rhythms and cycles. Tacitly, it seems, I learnt the basic things about growing food and raising animals. I knew the names of most of the common plants and animals around and was well aware of the ecological relationships among them. I was aware of the change in the seasons and the phases of the moon. I could tell from the smell of the air and the look of the clouds if it was going to rain. Looking back now, I believe that spending a lot of time in an immersive natural environment engendered a great love for nature and the outdoors within me. This was further fostered through my formal schooling. Science classes and my later studies of botany and ecology provided me with much knowledge about nature and its workings. This knowledge had the effect of deepening my sense of wonder and appreciation for nature.

It is important to note that during these formative years I had no experience with anything called ‘environmental education’. My work in environmental education started in my teaching
years. By this time environmental components had crept into science curricula, and as a secondary science teacher I was expected to be an environmental educator. My early attempts at environmental teaching were not very successful. My teaching strategy was a traditional science-based one. It consisted of providing students with ecological/science content about the natural world and information about environmental issues. It was my naïve expectation that in learning about the natural world students would care, and by being appraised of how it was being destroyed they would be motivated to act to protect it. As time passed it became apparent to me that this approach was flawed. Increasingly, I became aware that what I was seeing in my students’ eyes at the end of my environmental education classes was helpless sadness rather than enlightened concern and empowerment. These experiences became increasingly disturbing to me; more so because as an educator one of my fundamental beliefs is that education should lead to positive growth and empowerment.

I was spurred to look for answers to this problem and began on the educational journey that led me to pursue graduate studies and eventually to do this research study. I began within the field of science education. Studies into the nature of science and science education introduced me to the weaknesses of traditional content-based science teaching. I was introduced to humanistic science education and began working within this framework. It suggested alternative science-based approaches to EE such as the SSI (Socio-scientific Issues) approach (Zeidler & Keefer, 2003) and the STSE (Science, Technology, Society & Environment) approach (Pedretti & Nazir, 2011). However these approaches were not without problems of their own. As time passed, I began to question the very nature of environmental education and its relationship to science education. Readings from within both fields fueled my doubts. The idea that environmental education is a diverse field with multiple avenues of pursuance, some of which may not be primarily science education based grew in my mind. I began wondering about the
possibilities these alternative avenues might hold, especially how they could expand EE opportunities for a greater population of K-12 students. At the same time, I began thinking of my own life journey. It occurred to me that as an environmental educator I may not have fully taken into account my own process of environmental learning especially the rich nature and outdoor experiences I had always had. In my readings I came across several other avenues for EE. Outdoor education was one of these. Based on the realization that my own passion for the environment seemed to be intrinsically linked with outdoor experience and immersion in the outdoors, I chose this as subject of my doctoral thesis.

1.6 Fundamental Assumptions

No researcher comes to the research process as a blank slate (Lincoln & Guba, 1985). Every person holds a number of fundamental assumptions or presuppositions that serve as a foundation from which they think and act. The phenomenological research process requires that the researcher ‘bracket’ fundamental assumptions (Stewart & Mickunas, 1974). Bracketing involves being aware of one’s fundamental assumptions, declaring them and to the best of one’s ability suspending them, during the research process, so as to ensure what is being reported is what is really there and not what one wants to see.

This study is underpinned by several fundamental assumptions, ideas that have influenced the development of the research project, and the collection and the interpretation of data. These assumptions include:

1. Environmental education is a necessary part of K-12 education to ensure the long-term health and wellbeing of all life on the Earth.
2. The nature of environmental education is not well-established. It is still a fluid evolving field. Two important ideas that determine the nature of EE practiced are educators’ understandings of the environment and education. Because orientations to both of these aspects can be derived from a number of traditions, many interpretations of environmental education are possible.

3. A diversity of avenues for the pursuance of EE currently exists. While science-based EE is a valuable, well developed avenue, it is not the only one. Indeed, it is possible that science education with its pervasive ideology has inadvertently inhibited other perspectives and the broader evolution of EE.

4. Outdoor education is a valid avenue for environmental education but the two are not synonymous. While there may be areas of congruence, outdoor education can be expected to possess tensions and contradictions of its own that will impact the nature of environmental education it is able to provide.

1.7 Significance

The study is significant at several levels. As noted previously the intersection between outdoor and environmental education is poorly understood. This study directly addresses this knowledge gap by examining the work of outdoor educators in providing EE for the K-12 population. At a broader level the study contributes to the body of knowledge about environmental education, particularly about why the implementation of EE is so problematic. In this study I found that the nature of EE in this outdoor context varies considerably from the mainstream indoor context. Outdoor educators possess alternative ideological precepts about the environment and the nature of education which makes their ideas about and practice of
environmental education different from mainstream settings. These findings suggest that rather than being of one type, EE may have multiple natures. Furthermore, while these different types of EE may not be easily reconcilable, they may be necessary to meet the needs of different types of learners. Indeed in this study outdoor educators suggested that their particular approach makes EE accessible to a segment of the student population who are currently underserved by the school system.

These findings and conclusions are of special significance to places like Ontario, where many outdoor education centres exist in a communal relationship with formal school systems and as such possess the potential to touch a large proportion of the school age population. At a broader level the study compels us to question the certainty of many of the fundamental assumptions of mainstream EE theory. Its findings challenge us to re-examine the question of what it means to be environmentally educated and how this should happen. It also underscores the need for EE to expand, to include alternative value systems and ways of knowing so as to increase accessibility to environmental education.

1.8 Scope and Limitations

The study described here focused on the work of nine outdoor educators at one outdoor education centre. The reader should bear in mind that outdoor education is in itself a diverse endeavour. It can take many forms, including trips to outdoor centres, stays at residential field centres, field trips in outdoor settings, camping trips, ecological field studies, greening projects and Outward Bound programs. It can take place in one facility or span a large geographical area; it can be a single two hour trip or a highly organized lengthy program that spans several months. Indeed, for some, any trip outdoors with an educational goal can be considered outdoor
education. This means that the results of the study may not be generalizable to outdoor education as a whole. Furthermore, because outdoor education centres tend to work as self-contained, individual entities, the results may not be generalizable to all outdoor education centres. As such, it is highly possible that a similar study of another outdoor education opportunity would yield findings that are different from what is reported here.

Despite its limited generalizability the results of the study are still valuable. Because they act to some extent in isolation, the possibility exists that each outdoor education context may have evolved a different interpretation of environmental education. The context chosen for this study is a large, well established facility within the province of Ontario with strong links to the formal education system. Data was collected from nine well-experienced, professional outdoor educators who have been working together in the same place for a number of years. Seen in this light, the response to environmental education developed by these educators is a valid one that should be of interest to all environmental educators and scholars. The study adds to the richness of the field and can assist in addressing the problems currently facing K-12 educators in providing EE for all students.

1.9 Summary

This chapter serves as an introductory frame of what is to come. In it, I introduced the problem that the thesis seeks to address and outlined the research that was done. I also provided the reader with some insight into the fundamental assumptions that underpinned the study, the personal experience that led me to do the work, and my views concerning the significance, scope and limitations of the study.
Within this chapter I asserted my position that environmental education is essential for all K-12 students, but problematic to achieve in practice. While this problem is undoubtedly complex, it is argued that one dimension which is under-explored in the literature is a consideration of weaknesses in mainstream EE theory itself. The increasing complexity of the field and the diversity of avenues of pursuance were interpreted as an opportunity for research into this problem. The premise was presented that in-depth study of the various avenues of EE could provide information and perspectives to assist the evolution of EE more generally. Based on this premise, outdoor education was identified as a valid, understudied avenue for EE, and the basic tenets of the research study subsequently undertaken described.

The structure of the rest of the thesis is as follows. Chapters 2 and 3 present a review of the relevant literature. These chapters are structured to introduce the reader to perspectives needed to understand the findings and discussions which are presented in latter chapters of the thesis. Chapter 2 reviews current perspectives and issues in environmental education, while Chapter 3 reviews the literature on the overlap between outdoor and environmental education. In Chapter 4 detailed descriptions of the methodology and research design employed to carry out the research study are presented. Chapter 5 presents the findings of the study. Finally, Chapter 6 presents a summary of the findings and discusses them, especially focusing on how these findings corroborate, refute and expand the existing literature and their implications for theory, practice, research in EE and outdoor education. I end the thesis with a personal reflection and my directions for future work in the field.
2 Environmental Education: Paradigms and Possibilities

The next two chapters form the review of the literature. They present a critical discussion of what the literature offers about the topic under investigation. EE can be characterized, rather paradoxically, as a field of diverse possibilities in theory and dominant paradigms in practice. In this chapter I explore the complex nature of environmental education, through its history and diverse ideological roots. This leads to a discussion of the main theoretical models that have been developed for EE, and is followed by an exploration of the main paradigms through which EE is enacted in mainstream settings and the problems these efforts encounter in practice. I also explore the possibilities for diverse understandings of the terms environment and education as fundamental ideas that determine the nature of EE in theory and practice. Throughout the chapter alternative possibilities suggested in the literature are presented. The next chapter will explore the nature of outdoor education and its intersection with environmental education.

2.1 A Field of Increasing Complexity and Diversity

For many, the origin of EE can be traced to the release of the 1975 UNESCO document on environmental education known as the Belgrade Charter. Nearly two decades later Robottom and Hart (1993) suggested three possible orientations (paradigms) for EE: positivist, interpretive and critical. They equated the positivist orientation with a scientific understanding of the world, knowledge creation and dissemination. Applied to EE it focused on teaching students knowledge about the environment and adopted traditional behaviourist theories of education. In their categorization Robottom and Hart presented the critical and interpretivist orientations to EE as alternatives to the dominant positivist orientation. Both are underpinned by constructivist theories of education and alternative understandings of knowledge. Applied to EE, a critical
orientation emphasized action for the environment and the learner as an active generator of knowledge and solver of environmental problems. It also allowed for the inclusion of socio-political dimensions of environmental issues. They presented the interpretivist orientation as somewhere between these two. Applied to EE, the interpretivist orientation emphasized active experiences in/with the environment in a bid to make students personally knowledgeable but not necessarily active for the environment. This latter orientation also tended to be ambivalent to socio-political aspects of environmental issues.

In 2005, a little over a decade after Robottom and Hart (1993), Lucie Sauvé, a prominent Canadian scholar of environmental education, described EE as “a complex and evolving pedagogical field” (p. 11). In a valuable inventory of the field, she suggested that there were at least 15 different currents or typologies at work in environmental education which could be traced to different theoretical underpinnings. Sauvé’s (2005) currents were: naturalist, conservationist/resourcist, problem solving, systemic, scientific, humanist-mesological, value-centred, holistic, bioregionalist, praxic, socially critical, ethnographic, eco-education and sustainable development/sustainability currents. Table 1 summarizes these currents.

Table 1

_Characterization of Fifteen Currents in Environmental Education_ (Source: Sauvé, 2005, p. 33)
<table>
<thead>
<tr>
<th>Current</th>
<th>Conception of Environment</th>
<th>Aims of Environmental Education</th>
<th>Dominant Approaches</th>
<th>Examples of Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naturalist</td>
<td>Nature</td>
<td>Reconstruct a link with nature.</td>
<td>Sensorial, Cognitive, Affective, Experiential, Creative/Aesthetic</td>
<td>Immersion; interpretation; Sensorial games; Discovery activities.</td>
</tr>
<tr>
<td>Conservationist/</td>
<td>Resource</td>
<td>Adopt behaviours compatible with conservation. Develop skills related to environmental management.</td>
<td>Cognitive, Pragmatic</td>
<td>Guide or code of behaviours; 5 Rs of activities; Environmental audit; Conservation project.</td>
</tr>
<tr>
<td>Resourcist</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem-solving</td>
<td>Problem</td>
<td>Develop problem-solving skills: from diagnosis to action.</td>
<td>Cognitive, Pragmatic</td>
<td>Case study; issue analysis; Problem-solving project.</td>
</tr>
<tr>
<td>Systemic</td>
<td>System</td>
<td>Develop systemic thinking: analysis and synthesis, toward a global vision. Understand environmental realities in view of enlightened decision-making.</td>
<td>Cognitive</td>
<td>Case study: environmental system analysis; Construction of ecosystem models.</td>
</tr>
<tr>
<td>Scientific</td>
<td>Object of study</td>
<td>Acquire knowledge in environmental sciences. Develop skills related to the scientific method.</td>
<td>Cognitive, Experiential</td>
<td>Study of phenomena; Observation; Demonstration; Experimentation: Hypothetico-deductive research activity.</td>
</tr>
<tr>
<td>Humanistic/</td>
<td>Living Milieu</td>
<td>Know and appreciate one’s milieu of life; better know oneself in relation to this living milieu. Develop a sense of belonging.</td>
<td>Sensorial, Affective, Cognitive, Experiential, Creative/Aesthetic</td>
<td>Itinerary; Landscape reading; Study of milieu; investigation.</td>
</tr>
<tr>
<td>Mesological</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value-centred</td>
<td>Field of values</td>
<td>Adopt ecocivic behaviours. Develop a system of ethics.</td>
<td>Cognitive, Affective, Moral</td>
<td>Analysis of values; Clarification of values; Criticism of social values.</td>
</tr>
<tr>
<td>Holistic</td>
<td>Holos, Gaia, All, The Being</td>
<td>Develop the many dimensions of one’s being in interaction with all aspects of the environment. Develop an “organic” understanding of the world and participatory action in and with the environment.</td>
<td>Holistic, Organic, Intuitive, Creative</td>
<td>Free exploration; visualization; Creative workshops; Integration of complementary strategies.</td>
</tr>
<tr>
<td>Current</td>
<td>Conception of Environment</td>
<td>Aims of Environmental Education</td>
<td>Dominant Approaches</td>
<td>Examples of Strategies</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Bioregionalist</td>
<td>Place of belonging, Community project</td>
<td>Develop competencies in/for local or regional community ecodevelopment.</td>
<td>Cognitive, Affective, Experiential, Pragmatic, Creative</td>
<td>Exploration of our shared milieu; Community project; Project of local or regional ecodevelopment.</td>
</tr>
<tr>
<td>Praxic</td>
<td>Locus of action/reflection</td>
<td>Learn in, by, and for environmental action. Develop reflexive skills.</td>
<td>Praxic</td>
<td>Action-research; Reflexive posture in activities or project.</td>
</tr>
<tr>
<td>Socially Critical</td>
<td>Object of transformation, Place of emancipation</td>
<td>Deconstruct socio-environmental realities in view of transforming them and transforming people in this process.</td>
<td>Praxic, Reflexive, Dialogic</td>
<td>Analysis of discourses; Case study, Debate, Action-research.</td>
</tr>
<tr>
<td>Feminist</td>
<td>Object of soliciude</td>
<td>Integrate feminist values into the human-environment relationship.</td>
<td>Intuitive, Affective, Symbolic, Spiritual, Creative/Aesthetic</td>
<td>Case study, Immersion, Creative workshop, Communication &amp; exchange activity.</td>
</tr>
<tr>
<td>Ethnographic</td>
<td>Territory, Place of identity, Nature/culture</td>
<td>Recognize the close link between nature and culture. Clarify one's own cosmology.Valorize the cultural dimension of one's relationship with the environment.</td>
<td>Experiential, intuitive, Affective, Symbolic, Spiritual, Creative/Aesthetic</td>
<td>Fables, Stories and legends; Case study; Immersion; Modelling; Mentoring.</td>
</tr>
<tr>
<td>Eco-Education</td>
<td>Role of interacion for personal development, Locus of identity construction</td>
<td>Experience the environment to experience oneself and to develop in and through it Construct one's relationship with the &quot;other-than-human world&quot;.</td>
<td>Experiential, Sensorial, Intuitive, Affective, Symbolic, Creative</td>
<td>Life story; Immersion; Exploration; Games; Introspection; Sensitive listening; Subjective/objective alternance.</td>
</tr>
<tr>
<td>Sustainable Development/Sustainability</td>
<td>Resource for economic development, Shared resource for sustainable living</td>
<td>Promote economic development that takes care of social equity and ecological sustainability; Contribute to such development.</td>
<td>Pragmatic, Cognitive</td>
<td>Case study; Social marketing; Sustainable consumption activities; Sustainable living management project.</td>
</tr>
</tbody>
</table>
An examination of Table 1 demonstrates how EE as a field has become quite complex. While some of Sauvé’s currents are clearly an expansion of Robottom and Hart’s earlier categorization (for example, the scientific and naturalist currents), it also represents a cross-fertilization of elements of the earlier categorization along with significant new ideas like the inclusion of eco-education and sustainability to make a wide ranging list of possibilities for the conceptualization and practice of EE. An important inference of Table 1 is that the nature of EE can vary based on one’s understandings of the terms ‘environment’ and ‘education’. (This latter idea will be further expanded in Section 2.5 of this Chapter.)

One of the peculiarities of EE is that while it has grown over time it has not evolved in a traditional sense. Evolution traditionally means the development of an entity through the progressive replacement of older components or ideas with new ones. This has not been the case with EE. Because political and intellectual wrangling within the field is common, with camps being formed and vehemently defended, evolution in EE is synonymous with the mushrooming of ideas rather than the replacement of older ideas with newer. In EE, it seems that once an idea, paradigm or model has been added to the field, it remains extant, so that today all of Sauvé’s currents still exist and it is probable that if another mapping exercise were done, others, like arts based and spiritualist currents could be added to the list. A resulting outcome of this situation, which is apparent in a review of the literature, is that practice in the field has become increasingly problematic. One of the problems with the mushrooming of ideas is the lack of philosophical consistency in resulting formulations or programs in a discipline. With respect to EE this problem has been recognized by Disinger (1985), who noted at that time that existing programs of EE were increasingly being made up of bits and pieces of ideas coming from different ideological roots. He questioned the practical viability of such programs. Today more than ever Disinger’s concern continues to be relevant. While the explanation for the growing
diversity inherent to EE is undoubtedly complex (having much to do with politics and culture as well), an exploration of the historical development of the field and its philosophical underpinnings can help illuminate the situation.

2.2 A Historical Overview of Environmental Education

Often, to understand things in present, we must look to the past. This is particularly true of environmental education. Much of the diversity and problematic features inherent within it today can be understood by looking at the historical development of the field.

2.2.1 The Beginning of EE

While the roots of EE are debatable (Palmer, 1998), it is well-accepted that the modern worldwide environmental education movement began as an initiative of the United Nations (UN) and only took concrete form in the 1975 Belgrade Charter. In addition to naming EE as a priority, the ‘Global Framework for Environmental Education’ presented at the Belgrade meeting outlined a brief but comprehensive set of objectives for the new initiative summarized as follows:

1. To foster clear awareness of and concern about economic, social, political, and ecological inter-dependence in urban and rural areas;

2. To provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment;

3. To create new patterns of behaviour of individuals, groups and society as a whole towards the environment (UNESCO, 1975).
The Belgrade Charter was later ratified as the 1977 Tibilisi Declaration (UNESCO-UNEP, 1978). The impact of these two events on the subsequent evolution of EE cannot be understated. Over the years they have served for many as the foundation for all subsequent work in the area, and the blueprint for development of environmental education in many parts of the world (Palmer, 1998). The groundwork laid down during the Belgrade Charter (UNESCO, 1975) provided a defining structure for EE which, despite variations of interpretation, has remained intact over the years. The three pronged structure of EE was established: it was defined as an endeavor concerned not only with providing knowledge and skills but also aimed towards causing attitude and behaviour change. This structure would also be utilized to distinguish EE from past and contemporary related fields like nature studies, conservation education and outdoor education (Adkins & Simmons, 2002) by linking EE to a sense of urgency about the welfare of the global society, which has embedded social, economic and political dimensions. At the same time the brevity and looseness of the original statement along with the UN’s long hiatuses from providing further substantial explanatory documentation, provided the newly fledged field with conditions fertile for diverse evolution. Indeed, for a decade after Tibilisi no major publication fleshing out a more comprehensive version of EE was forthcoming from the UN.

The next major document proffered was the report entitled ‘Our Common Future’ more commonly known as the ‘Brundtland Report’ (World Commission on Environment and Development (WCED), 1987). This report, rather than focusing on strategies of implementation of EE or the work that had been occurring in various parts of the world during the previous decade based on the Tibilisi Declaration, suggested that the original conception of EE was narrow and somewhat flawed. It shifted focus instead on the UN’s goal of global development, which was simply defined as satisfying the needs and aspirations of all of the world’s people. In order
to achieve this, the idea of sustainable development was introduced. Sustainable development was defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 54). Sustainable development linked three areas: environmental protection, economic development and social equity. Older ideas of EE were subsumed into sustainable development. EE was repositioned as a component of sustainable development rather than a concern in its own right. It became a means to reconcile development and the environment. It was sustainable development that would form the focus of subsequent UN work in the area.

The ideas of the Brundtland report were a major influence in the Earth Summit, staged in Rio de Janeiro, Brazil in 1992. This conference presented sustainable development as a worldwide goal that would replace older initiatives like EE. It resulted in ‘Agenda 21’, a major action program setting out what nations needed to do to achieve sustainable development. Education was named as one of the key components for the process, and later developed in December 2002 at the 57th General Assembly in the form of resolution 57/254. This resolution put in place plans for a United Nations Decade for Sustainable Development (UNDESD) spanning 2005-2014. The basic vision of UNDESD is “a world where everyone has the opportunity to benefit from education and learn the values, behaviour and lifestyles required for a sustainable future and for positive social transformation” (UNESCO, 2005, p. 6). The DESD is now underway, and while its success is still being assessed (for example, Wals, 2009), the early UN work concerning EE, and the shift from EE to education for sustainable development, are major factors that help explain what is occurring in the field of EE today.
2.2.2 Early Developmental Work

In the period between its inception and the launch of education for sustainable development, EE began to develop in different ways as scholars and educators acting from different locations and contexts began taking it up. Some sought to further define EE in ways that would facilitate its enactment. For example, Hungerford, Peyton and Wilke (1980), influential US scholars in the early environmental education movement, chose to take a scientific approach to environmental education. They identified the knowledge component of EE as basic ecological principles and defined appropriate attitudes (called the New Environmental Paradigm) as those that would not further degrade the existing ecological diversity of the Earth. They also emphasized the behaviour change component of EE. This they interpreted as socio-political activism for enacting the New Environmental Paradigm to maintain the welfare of the environment. They proposed the following practical goal for EE:

…to aid citizens in becoming environmentally knowledgeable and, above all, develop skilled and dedicated citizens who are willing to work, individually and collectively, toward achieving and/or maintaining a dynamic equilibrium between quality of life and quality of the environment. (p. 44)

This emphasis on ‘activism’ as an important goal for EE would in time become one of the main issues of debate in field, viewed by most as a fundamental component of EE (Alsop & Bencze, 2010; Jensen & Schnack, 2006; Roth, 2010), but also one of the most difficult to achieve in practice and a source of conflict in mainstream school settings (Stevenson, 2007).

One of the quirks of the early environmental education movement was that in schools it early on became linked with science education. Indeed for many, environmental education is still
considered a component of science education (Fazio & Karrow, 2011; Hart, 2002; Hodson, 2011; Sauvé, 2005). While the coupling of science and environmental education is undoubtedly complex, one reason for this close relationship is probably because awareness of environmental degradation and encouragement for environmental education, have both resulted from the work of scientists. For example, Rachel Carson author of the influential book ‘Silent Spring’ (1962) was a prominent scientist and ecologist. Also much of the early developmental and research work in the field was also carried out by science based researchers using scientific methodologies (for example, Fensham, 1978; Hungerford, Peyton & Wilke, 1980; Hungerford & Volk, 1990; Lucas, 1979). Another reason for the coupling of science education with EE is that while the UN’s original call for environmental education was emotionally appealing, it lacked clear theoretical or disciplinary affiliation, so that when it came to implementing it in schools, educators were unsure where to put it. Early on, science educators were among the first to take up the challenge and began providing science-based environmental education. The outcome of this development is significant in at least two ways. Firstly, in schools, environmental education quickly became overshadowed by the powerful disciplinary ideology of science. Secondly, the knowledge base for EE became equated with scientific knowledge especially ecological and biological knowledge. This trend is still strong today so that science-based environmental education continues to be a dominant discourse in EE especially at the K-12 level. This is evidenced by numerous articles in popular science education journals (see for example, the Canadian Journal of Science and Mathematics Education; Science Education and Journal of Research in Science Teaching) about environmental education and popular science-based textbooks that serve specialized environmental education courses (for example Chiras, 2010; Tyler, Miller & Spoolman, 2009).
2.2.3 Muddying the Waters: Criticism of the Early EE Movement

Despite much positive work during the early years, not everyone was supportive of the Tibilisi Declaration on EE. Two main threads of criticism centred on: the lack of clear philosophical roots for EE, and the soundness of its underpinning ideological foundations. As has already been discussed earlier in this section, the Tibilisi Declaration, though endorsing EE provided it with no explicit theoretical foundations. As a result, EE could not easily be incorporated into existing school curricula. It only became adopted by science education for reasons that had little to do with sound epistemology but more to do with the sociology and politics of the developing field. The same did not occur at a scholarly level. The lack of strong theoretical foundations meant that EE was open to interpretation from a variety of disciplinary perspectives including: science, economics, sociology, art and psychology. The lack of strong theoretical foundations further meant that while science based EE may have been dominant, alternative visions of environmental education (for example Van Matre, 1972), based on alternative theoretical formulations began surfacing early on.

The validity of these alternative perspectives of EE was buttressed by the second thread of criticism mentioned above. From its inception there were those who suggested that the original UN framework contained questionable and contradictory philosophical elements that acted as hindrances to the development of the field (for example Dsinger, 1985). One main source of conflict was the relationship with nature that EE programs should endorse. The wordings of the Belgrade Charter and Tibilisi Declaration clearly endorse an anthropocentric relationship with nature, that is, one where human interests take precedence in determining questions about the environment. This position builds on the mainstream notion that humans are somehow superior to nature. The environment is seen as a resource for humans to use to satisfy
their needs. This was a particularly problematic point, since, for some, this position seemed limited even antithetical to EE. Opponents of anthropocentrism were supported by early environmentalists (Carson, 1962; Lovelock, 1979; Naess, 1988; Orr; 1991; Wilson, 1984), who within their writings suggested that an ecocentric position was a more suitable standpoint from which to view the environment. Ecocentrism recognizes the intrinsic value of nature and suggests that human interests should be of no more precedence than any other life form. The anthropocentric-ecocentric split is important, since the way one views nature seems to directly impact the type of environmental education one endorses. In the case of the anthropocentric UN formulation, the resulting type of EE suggests that ‘acting for the environment’ means mastery or technical management of the environment. On the other hand an ecocentric position challenges the way we think about nature, societal development and the nature of life itself. It implies that ‘acting for the environment’ has deeper physical, emotional and spiritual dimensions (Bonnet, 2007; Drengson, 2000; Russell, 2005).

2.2.4 The Splintering of the Field

Despite the criticisms outlined above, throughout the late 1970s and 1980s UN recommendations, translated into science-based anthropocentric EE, remained the dominant paradigm guiding efforts to develop and implement EE in schools. However, this dominant paradigm would be challenged significantly in the early 1990s after the UN introduced the idea of sustainable development and plans for it to replace older ideas about EE (WCED, 1987). While some environmental educators accepted the new framework and its tenets, others saw it as retrograde step, even an abandonment of true EE and the gains that had been achieved in the field during the previous years. A slew of articles critical of sustainable development and education for sustainable development surfaced in the years that followed (for example, Jickling,
Some of the new criticism built on the earlier criticism of the UN’s anthropocentric position toward the environment and the problems this entails. For example, documents advocating for ESD state that people are required to develop “an awareness of the resources and fragility of the physical environment and the effects on it of human activity and decisions, with a commitment to factoring environmental concerns into social and economic policy development” (UNESCO, 2005, p. 12). Sauvé (1996) pointed out that for the UN, development of the human world is clearly of most importance, with nature (or the non-human world) viewed as merely a factor to be taken into consideration when making decisions concerning the environment. In addition to expanding older criticism, new strands criticism developed. Some of this new criticism was broader suggesting that the UN’s ideas of ESD were inherently flawed. For example, Jickling 1994, called attention to the meanings of the two words which make up the term ‘sustainable development’. In a particularly sharp article, he argued that the term is an oxymoron, nothing more than a “vague slogan susceptible, a bold platitude to manipulation and deception” (p. 232) and ESD “a conceptual muddle that frequently engulfs well-meaning educators” (p. 233). In another substantial article, Sauvé, Berryman and Brunelle (2007) argued that in addition to an unjustifiable anthropocentric position towards the environment, the UN’s conception of sustainable development is based on questionable ideas of development and education. Through analysis of relevant UN documents they concluded that the UN’s formulation of ESD was buttressed by: (i) a resourcist view of the environment— the environment is viewed as a pool of resources to be managed rather than as a living entity of intrinsic value; (ii) an economist view of development— sustained economic development is a precursor to all human development; and (iii) an instrumental view of education— education is generally seen as an instrument for predetermined goals which generally hover around
development rather than as an emancipatory processes or endogenous practice. In addition to criticizing the UN’s ideas these scholars developed formulations of their own that they believed were more representative of the true nature of EE. These alternative visions tended to advocate for various forms of ecocentric based environmental education. For example Jickling (2003) posited biophilic education which asserts that humans have an innate connection or love for other forms of life, the fulfillment of which is requisite in maintaining healthy human populations.

In the years following the UN’s shift from EE to ESD, several important things happened that are still unfolding today. Firstly, the debate on the fundamental nature of EE was re-opened. As criticism of the existing mainstream paradigms grew, increasingly diverse voices speaking from alternative perspectives gained purchase in available scholarly forums to express their ideas about EE. Voices representing interpretivist, critical theory and other post-structural perspectives that were earlier marginalized (for example, Bowers, 2009; Garrard, 2010; Jickling, 2003; Russell, 2005; Sobel, 2004) became a part of the discourse in the field. This trend has grown in tandem with the recent surge of interest in EE, so that diversity of perspective is viewed by some today as an inherent part of the field (Jickling & Wals, 2008).

However while scholarly activity in the area may have flourished, the practice of EE especially in K-12 settings seems to have suffered. The shift from EE to ESD seems to have contributed to a splintering of pedagogical practice in the field. Although interest is greater than ever, work seems to be proceeding in a piecemeal fashion, with various interest groups working in various places within their own contexts and paradigms (Hart & Nolan, 1999; Marcinkowski, 2010). It is here that Sauvé’s many currents, referred to at the beginning of this section, is relevant to the discussion. In practice while some educators have taken up ESD as the new
paradigm for EE, others have not. Sauvé’s 15 currents, to a great extent, represent educators’ efforts to negotiate three threads: EE before ESD; EE as ESD; and alternative versions of EE based on fundamentally different assumptions about the environment, development and education. This research project seeks to illuminate the character of EE of one group of educators in providing EE based on different assumptions.

2.3 Theoretical Models of EE

Over the years many models of EE have been proposed. Three of the more well-known ones are described here. These are: (i) the knowledge-care-action model; (ii) the about-in-for model; and (iii) the integrated model.

2.3.1 The Knowledge-Care-Action Model

In the early years of its development, while some scholars and educators worked in a more philosophical vein, to explain the nature of EE more fully, others sought to develop practical models to guide pedagogy in the field. One of the earliest models which quickly became prominent is summarized in Figure 1 below. It is a simple linear model that links three aspects: knowledge, attitudes and behaviour; alluded to in the UN definition of EE. It suggests that knowledge about the environment will lead to care (positive attitudes) for the environment which in turn will motivate people to act in positive way to protect it. While it is difficult to say who formally developed this model, it is commonly found in much of the early work describing efforts at the enactment of EE (for example, Southern, 1969) and in the writings of prominent early environmental educators (for example, Capra, 1997; Hungerford, Peyton & Wilke, 1983; Lovelock, 1979).
Figure 1

The Knowledge-Care-Action (KCA) Model for EE

Knowledge → Care → Action

It is important to note though that while some supporters of this framework foresaw its over simplicity (Orr, 1991) and suggested that terms such as ‘knowledge’ and ‘care’ were multifaceted and needed to be carefully treated in developing practical programs, others did not. This latter group applied mainstream definitions of knowledge and care to their efforts. They most often assigned a cognitive, science-based definition to knowledge and a justice-based understanding to care (Gilligan, 1977). Over the years a growing body of evidence has accumulated that this approach is flawed, in that the usual definitions of knowledge and care often assumed are incomplete. The model has also been shown to be unsound in another way, in that the relationships between the three components are not simple or linear. In other words knowledge does not always lead to care nor does this lead to action. Kollmuss and Agyeman (2002) provide a good summary of the evidence against this simple linear model for EE. Despite the mounting evidence against it, the knowledge-care-action model continues to be widely utilized in guiding existing programs. This is evidenced by an examination of the guidelines for contemporary EE programs internationally.

2.3.2 The About-In-For Model

In tandem with criticisms of science-based and simplistic linear models, a second model for EE arose. This model suggested that environmental education consists of three different discrete aspects: education about, in and for the environment. Again the origins of this model are
uncertain, but a full description of it can be found in Lucas (1979). Education about the environment prescribes the use of cognitive, content based strategies which emphasize knowledge about natural systems, processes and their management. This component seeks to bring the facts about environmental issues and topics to the surface. Education in the environment suggests the use of direct experiences, where nature acts as a medium for education. It works on the assumption that appreciation for the environment is fostered through direct contact with it. Education for the environment seeks social change through an overt agenda of political and values education aimed at promoting environmentally friendly behaviours most commonly interpreted as low consumption, low impact lifestyles. According to Lucas, environmental education may include any of these aspects or any combination of them, so that one can have EE programs that are solely about the environment, or ones that are about/in the environment or about/for the environment. By way of a critique, Fien (1993) later suggested that this latter distinction was not accurate. According to him, all three components are necessary for a comprehensive program of EE. In other words only by integrating education about, in and for the environment could a sensitive environmental ethic and the necessary skills to participate in environmental protection/improvement be developed. He further suggested that while all three components are necessary the main thrust of the model should be in favor of education for the environment. For Fien, education about and in the environment should serve the greater goal of education for the environment. The about-in-for model of EE, in its various forms, can be found in some EE programs today. For example, in Ontario the latest policy on environmental education (Ontario, Working Group on Environmental Education, 2007) uses the model as a definition of EE and uses it to position EE as a cross-curricular initiative to be taught as part of all subjects by all teachers.
2.3.3 The Integrated Model

In tandem with the growing recognition that EE is a complex endeavor, Palmer (1998) proposed an integrated model for EE which combines both earlier models (Figure 2) and grounds them within a framework of formative life experiences. The goal of Palmer’s model is the development of ecological thinking, which she defines as the development of environmental understanding, awareness, concern and action. According to Palmer all of these components should be addressed in a systematic balanced way, and none should be given more priority than the other. Her suggestions are based in part on her critique that EE has “swung too far in favor of calls to educate for the environment— an education that focuses exclusively on a particular issue as an organizing principle and draws upon knowledge opportunistically rather than systematically” (Palmer, 1998, p. 273). Palmer’s model for EE is illustrated in Figure 2. In it she uses the symbol of a tree to frame EE, which among other things suggests the complex, dynamic nature of environmental education. Ecological thinking is developmental. It begins early in life and grows over a lifetime. The model also takes into account the complex nature of knowledge. In addition to cognitive components, it accords equal importance to the importance of aesthetic and ethical aspects of EE, and advocates the need to expose students to different perspectives and experiences with respect to environmental issues. One criticism of Palmer’s model is that it still privileges a justice-based understanding of ethics in prescribing the requisite ethical element for EE. Another criticism is that the model privileges a narrow interpretation of action as socio-political activism. A third criticism is that she does not challenge the meanings of education but rather seeks to overlay an ecocentric framework onto an anthropocentric foundation.

Figure 2

*Palmer’s Integrated Model for EE* (Based on Palmer 1998, p. 272)
2.4 EE in Practice

Within the chapter so far, it has been asserted that EE is a diverse field. I have also shown how this diversity can be connected to its history. While a variety of perspectives and many possibilities for EE exist, in mainstream practice at the K-12 level continues to be dominated by a few paradigms. In this section science-based EE is discussed in more detail, along with eco-critical EE. The ecological paradigm is offered as an alternative possibility to these two.
2.4.1 Science-Based EE: A Dominant Paradigm

It was previously noted, that early on, in schools, environmental education became associated with science education. Over the years this trend has continued, so that mainstream EE in schools today, still tends to be science-based. Some of the features of this paradigm have already been alluded to. Science-based EE emphasizes the learning of traditional science based knowledge about the environment (Chiras, 2010). The ethical component is derived from a justice base which emphasizes the democratic principles of fairness, equity and responsibility as reasons to care for the environment (Hodson, 2011). The behavioural change emphasized is the doing of actions for the environment (Alsop & Bencze, 2010). The suggested pedagogical strategy for science-based EE is scientific inquiry, most often interpreted as a cognitive-constructivist approach to teaching and learning in which students are expected to learn by asking questions, gathering and analyzing evidence in a scientific way. Teachers act as facilitators supporting students in their inquiries.

The coupling of science education with EE has significantly impacted the nature of EE practiced in school in another way, since school science itself is dominated by a powerful ideology known as scientism (Cobern, 1998; Ziman, 2000). Three ideas inherent to scientism and by association science based EE are: rationalism, positivism and empiricism. A commitment to rationalism means that science privileges knowledge derived through logic, linear and cognitive mental processes over other sources of knowledge like intuition, emotion or kinesthetics. At the same time a commitment to positivism allows science to limit itself to the physical realm (Cobern & Loving, 2001). Put together these characteristics translate into the subversion of metaphysical explanations for phenomena, values and emotions in the realm of science (Gould, 2006). The commitment to empiricism translates into the notion that science
utilizes a particular type of methodology called scientific inquiry. Experimentation, a particular aspect of scientific inquiry, involves treating phenomena as objects and observing the effects of manipulating discrete variables on test materials/subjects. For some, these characteristics have been interpreted as inherently reductionist, manipulative and anthropocentric (Aikenhead, 2001). The implications of these features for science education have been explored by scholars of science education for some time now (for example, Hodson, 1998; McComas, 1998). While this exploration has led to ongoing scholarly debate about changing the nature of science education to reflect more humanistic (and perhaps more realistic) perspectives on science (for example, Aikenhead, 2001; McComas, 2004; Pedretti, 2005; Zeidler & Keefer, 2003), for the majority of practicing educators, the purpose of science education continues to be the inculcation of students into traditional ideas about the knowledge and methods of science (Hodson, 2011). Scientific inquiry, with a focus on objective experiments is the pedagogical strategy most advocated (Flick & Lederman, 2006).

Science-based environmental education is most often overlaid onto the ‘know-care-action’ model of environmental education described earlier on. Since science education traditionally is heavily focused on knowledge acquisition, the main thrust of science based EE tends to be knowledge oriented. This knowledge is equated with ecological knowledge about the relationships that exist in the natural world and biological knowledge of the plants and animals that make it up (Chiras, 2010). In many earlier programs very little explicit attention was paid to care and action components of the model. These were expected to follow naturally from enhanced knowledge. Armed with new knowledge about the environment students were expected to care about the environment and act for it.
Earlier it was noted that fueled by studies into the nature of science many of the tenets of school science have recently been questioned. One of the outcomes of this line of thinking is the increased recognition that science-based environmental educators need to teach components of care and action explicitly (Pedretti, 2005; Zeidler & Keefer, 2003). In response to this call some educators have developed models which include the teaching of values and action explicitly. For example, Jensen and Schnack (2006) have developed the action-competence model for environmental education. The model recommends providing opportunities for students to make decisions and take action by immersing students in real world situations that require them to apply their scientific knowledge about the environment to solve an environmental problem. The model also includes the explicit teaching of decision making and information on options for action. It is important to note that in this model and other similar efforts ‘care’ is often equated with rational decision making, which can be traced to a justice based orientation to values. Similarly ‘action’ is interpreted as variety of socio-political activism derived from a Marxist ideological base. In summary it seems that even the newest form of science-based EE tends to be quite ridged, heavily knowledge-based and based on particular views of knowledge, values and action.

2.4.2 Eco-critical EE: A Growing Alternative Paradigm

In reaction to criticisms to the early notions of EE and the UN’s ESD, an alternative paradigm for EE that has been gaining support since the 1990s is eco-critical EE (Bowers, 2009; Garrard, 2004; Jickling & Spork, 1996; Kahn, 2008). The eco-critical paradigm is based on different conceptions of knowledge, and knowledge acquisition. Knowledge is seen as a socially constructed and students as active generators of knowledge. This means that knowledge is often contextual and place-based, always heavily embroiled in a socio-political milieu, not a fixed,
value neural quantity to be gathered as in the positivist paradigm. Eco-critical EE emphasizes these aspects of knowledge to focus on reframing and solving environmental problems in a collaborative way. Much emphasis is also placed on empowering learners to act for the environment. However as with science-based EE, the ethical component is derived from a justice base and the behavioural change emphasized is the doing of communal socio-political actions for the environment. The suggested pedagogical strategy is inquiry based but rather than focusing on deriving objective or technical solutions to environmental problems, learners are asked to reinterpret results in new socially critical ways that take into account the contextuality and complexity of these situations.

One example of the eco-critical approach that is currently growing in popularity is ‘place based’ education (Green, 2008; Gruenewald, 2004; Smith, 2007; Sobel, 2004). Place-based education is an approach to curriculum that draws upon local cultural, environmental, political and economic concerns to encourage students to question and challenge the norms (knowledge assumptions and power relations) within which they live. Although also encompassing a domain wider than environmental concerns only, some place based educators have highlighted the relevance of place-based approaches to environmental education. Sobel (2004) asserts that place-based nature activities are necessary building blocks to children’s ecological literacy. Green (2008) goes further in suggesting that, place based pedagogy with its emphasis on place-based critical inquiry has the potential to “provide a knowledge base from which to construct a more ecologically sustainable future” (p. 36).

2.4.3 Problems of Enactment

Despite much interest, theoretical rhetoric, and activity in the field, research studies show that the outcomes of EE are dubious. Few quality reports exist, describing unequivocally
successful outcomes. Indeed, the weakness of research is a general problem facing the field. Hart and Nolan (1999) have pointed out that existing research efforts are limited in scope and methodology. Many reports are tempered by an emphasis on the tentative and contextual validity of the findings. Hart and Nolan also underscore the need for future research to take into account deeper epistemological and ontological concerns intrinsic to the research process. According to them:

Future research in environmental education must work to systematically examine the myths that underpin our thought and practice in school systems—on the structures and ethos that must be created to support teachers in their quest to examine their beliefs and to understand how to support new practices that are consistent with new beliefs. (p. 42)

Bearing Hart and Nolan’s (1999) cautionary caveat in mind it is notable that Dillon (2003) and Rickinson (2001) provide valuable research overviews summarizing this literature. Among other things they make the following relevant observations. Firstly, young people have definite views of the environment. These views are generally not ecocentric, but rather anthropocentric or technocratic. Environmental attitudes are deeply entrenched and difficult to change, so that education programs rather than changing may only strengthen pre-existing attitudes. Secondly, in support of eco-critical perspectives, these authors assert that environmental learning is complex, deeply entwined in worldviews and culture. Finally, and perhaps most critically, mainstream EE programs seem particularly inadequate to reaching a significant portion of the student population, especially urban and minority students. Indeed in recent paper Tan and Pedretti (2009) reported that rather than increasing concern for the environment, mainstream EE may be making students apathetic towards the environment.
Undoubtedly the reasons for the limited success in implementing EE are complex. Scholars within the area suggest a number of possibilities that contribute to the situation including: the lack of structural supports for teachers; the lack of compatibility of EE with mainstreams schooling; and the weaknesses in EE theory itself. While the lack of structural supports for teachers is a valid point, for some it may represent a shallow interpretation of a complex situation as suggested by the two other possibilities. For some (see for example, Hart, Jickling & Kool, 1999; Orr, 2004; Stevenson, 2007) the fault lies within the education system, that is, contradictions between the regularities of schooling and the nature of EE. In this regard, Stevenson (2007) has identified four areas of contradiction: (a) *philosophical intent*- schools are primarily agents of social reproduction, whereas environmental education demands a revolutionary approach; (b) *classroom pedagogy*- schools are biased toward individualistic, content based approaches whereas environmental education requires cooperative strategies with an emphasis on creative and critical thinking; (c) *school organization*- schools are biased towards assembly line efficiency which is antithetical to deep thinking, contradictory stances and ambiguity inherent in environmental education and (d) *curriculum ideologies*- schools tend to be biased towards providing knowledge that is high status which is often at odds with aesthetic, spiritual and emotional knowledge that may be intrinsic to environmental literacy.

For others, (see for example Disinger, 1998) while agreeing that the school system is problematic, they contend that the primary fault may lie within EE theory itself. Disinger (1998), while lauding the intent of EE, indicts it as a soft subject— one with a weak knowledge base, which often ignores economic realities and preaches unthinking environmentalism. More specific criticisms concerning weaknesses in the internal structure of mainstream EE have also been made. As has already been mentioned earlier in this chapter, the popular models, especially the know-care-action model, through which mainstream EE is enacted, have been criticized as
faulty. While knowledge, values and action are desirable components of environmental education, Kollmuss and Agyeman (2002) have convincingly shown that the connections between these are non-linear, non-simplistic and often highly context driven.

Another stream of criticism comes from Courtenay-Hall (1999) who argues that the fundamental nature of mainstream EE, its purposes, concerns and methods are based on a male, white, middle class worldview, which insidiously acts to exclude a significant portion of students from mainstream programs of EE. The same type of criticism has been leveled against science education (Aikenhead, 2001) and serves as a springboard for critics of science-based environmental education who worry that the features imposed by scientism especially anthropocentrism, mechanistic reductionism and value neutrality are antithetical to what they consider to be true environmental education. For example, Sauvé (2005) suggests that in science-based environmental education, the environment is viewed mechanistically as an object of knowledge or a problem to be solved. This is particularly problematic to those who hold a different (for example ecocentric) worldview about the environment. Hart (2002) also argues that science is inadequate in providing environmental education since the latter inherently contains ethical aspects that school science cannot address. According to him:

Environmental education is about the construction of ethical awareness that includes critical understanding of one’s deep perhaps contradictory and inconsistent, personal knowledge structures and beliefs, recognition of personal assumptions, predispositions and biases, cultural blinders, and ideological boundaries. (p. 1248)

For supporters of this view, even the best efforts of science education to incorporate values education into its practice are inadequate since the values advocated will always come from a narrow anthropocentric base. More recently Barrett (2007) has reiterated the point that dominant
discourses may be acting to hamper EE in practice in ways not fully understood by educators. What these scholars seem to be suggesting is that the fundamental assumptions underlying EE theory and practice need to be re-examined. Increasingly, the questions that seem to be coming into focus are those dealing with what views of the environment; and the nature of education, knowledge and values, that should underpin EE programs. It is also increasingly being made clear that mainstream EE is based on particular perspectives that may inadvertently be marginalizing a certain portion of students. Another point that these scholars make is that EE needs to take alternative ideas on these questions derived from other worldviews if EE is to be made accessible to all students.

2.5 Understandings of the Terms ‘Environment’ and ‘Education’: Keys to the Nature of EE

Based on what has gone before it is patent that there are a number of philosophical positions underpinning EE. While several of these have been alluded to in the discussion above, in developing her typology of currents Sauvé (2005) identified two issues that seem pivotal in discussions about EE. These are: the character of the human-nature relationship and educators’ understandings of the nature and processes of education. Although some attention has been paid to these issues in previous sections of this chapter, a more detailed discussion is warranted here, since in this research project, these issues were assumed to be keystones determining the nature of EE practiced by outdoor educators at the outdoor centre studied.
2.5.1 The Human-Nature Relationship

With respect to views of the environment, it has already been noted that educators can be divided into two camps. These are: anthropocentric and ecocentric camps. Members of the anthropocentric camp view humans as superior to nature, and the meeting of human needs most important in determining decisions about the environment. The UN’s version of ESD (UNESCO, 2005) (discussed above) is a good example of anthropocentric environmental education. On the other hand, advocates of the ecocentric position recognize the intrinsic value of nature. They further argue that humans are a part of nature, intimately connected to all other forms of life and the Earth itself in such a way that human interests should be of no more importance than any other life form. Deep ecology (Naess, 1988), is one of the important theories that supports ecocentrism. It is based on eight basic principles:

1. The well-being and flourishing of human and non-human life on Earth have value in themselves. These values are independent of the usefulness of the non-human world for human purposes.

2. Richness and diversity of life forms contribute to the realization of these values and are also values in themselves.

3. Humans have no right to reduce this richness and diversity except to satisfy vital needs.

4. The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of non-human life requires such a decrease.

5. Present human interference with the non-human world is excessive and the situation is rapidly worsening.
6. Policies must therefore be changed. These policies affect basic economic, technological and ideological structures. The resulting state of affairs will be deeply different from the present.

7. The ideological change is mainly that of appreciating life quality rather than adhering to an increasingly higher standard of living. There will be profound awareness of the difference between big and great.

8. Those who subscribe to the foregoing points have an obligation directly or indirectly to try to implement the necessary changes. (Devall & Sessions, 1985, p. 70)

While the anthropocentric-ecocentric divide is an important one, a closer look at the principles of deep ecology indicates that it may not fully explain how we view the environment and our responsibility towards it. Our views also seem to be bound up with ideas of society and technology. Some scholars have pointed out that how we view the environment is determined by what we think it is. O’Riordan (1988) has posited that the main duality on this issue is based on whether the environment is viewed as a mechanism or a living thing. In this dichotomy, those who view the environment as a living thing are called ecocentrics, while those who view it as a mechanism are labeled technocentrics. O’Riordan (1988) has used the technocentrism-ecocentrism dichotomy to show that there are four possible views with respect to what our responsibility is to the environment. These are:

1. Intervention-Technocentrism- Faith that science, market forces and managerial ingenuity can be actively applied to solve environmental problems.

2. Accommodation-Technocentrism- Faith in the adaptability of exiting institutions and approaches to accommodate environmental demands. No direct action is required.
3. Communalism-Ecocentrism- Faith in the co-operative abilities of societies to establish self-reliant communities based on the use of appropriate low impact technologies, participatory justice and alternative economic arrangements.

4. Gianism-Ecocentrism- Faith in the rights of nature and the essential need for change in the structures through which society operates, particularly the co-evolution of human and natural ethics.

An important aspect of O’Riordan’s scheme is that it assumes a relational turn to the debate. The assumption here is that we exist in an essential relationship with nature, a distinction not fully captured by the earlier anthropocentric-ecocentric divide. Our response to this relationship is determined by factors such as our ideas about the structures of society and the value we place on nature with respect to these. An interesting category is communalism-ecocentrism, which posits that by working together to change economic and power structures, people are also working for the environment. In this position, very little is said about the intrinsic value of the environment or its right to exist without human interference. As such it essentially bridges the anthropocentric-ecocentric gap by allowing humans to retain their sense of self-importance in relation to the environment by tacitly equating what is best for humans with what is best for the whole environment. A look at some of the recent populist literature in environmentalism shows a rise in support for this type of orientation towards the environment. For example, Murray Bookchin (2007) has coined the term social ecology to capture the idea that in acting for their own good, people are essentially acting for the good of the planet. According to Bookchin (2007, p. 19):

Social ecology is based on the conviction that nearly all of our present ecological problems originate in deep-seated social problems. It follows, from this view, that these
ecological problems cannot be understood, let alone solved, without a careful understanding of our existing society and the irrationalities that dominate it. To make this point more concrete: economic, ethnic, cultural, and gender conflicts, among many others, lie at the core of the most serious ecological dislocations we face today—apart, to be sure, from those that are produced by natural catastrophes.

This orientation towards the environment has lately found expression in EE in the form of the eco-critical paradigm. This brief overview of the complexity of ideas surrounding this human-environment interface supports Bonnet’s (2007) assertion that clarifying our relationship with nature is essential to clarifying the nature of environmental education.

2.5.2 Understandings of Education

The second fundamental philosophical issue inherent to the nature of EE concerns its educational aspect. A look at the literature reveals that while much has been written about the ‘environmental’ aspect of EE, the ‘educational’ aspect has remained largely under-explored. Jickling (1997) neatly summarizes a main concern here. According to him, defining EE:

…means giving more attention to the educational dimension of environmental education. It also entails more than just critiquing definitions of this field, but more fundamentally, critiquing the processes by which we define education, and derivatively environmental education. (p. 86)

Jickling’s concern touches upon the broader purposes of education, how it is achieved and how questions of environment should be oriented within these. It has already been discussed that EE is made up of three educational components: knowledge, ethics, and behaviour change. Within curriculum theory various positions on the nature of these components exist.
2.5.2.1 The Nature of Knowledge

It has already been noted that within the main paradigm for EE, knowledge is most often understood from a positivist perspective. Recently, this has been challenged by critical theorists. Positivism and critical theory represent two opposite perspectives on what knowledge is and how it is acquired. Whereas positivists view knowledge as a pre-ordinate commodity that can be collected systematically from experts or from empirical study, critical theorists view knowledge as emergent social constructions, constantly generated by collaboration, dialectic discussion or inquiry based activities with others. In the first, the learner is viewed as a passive recipient while in the other the learner is viewed an active generator of knowledge working within a social group. A third conception which is not often alluded to in mainstream EE is the interpretivist lens. In this perspective knowledge is conceived of as a subjective, intuitive phenomenon which is acquired through personal experience. Experience here could include inquiry based, social as well as individual experiences. It could include empirical as well as aesthetic experiences. Learners are viewed as active interpreters of knowledge. In this case the personal dimension of learning is emphasized.

2.5.2.2 Ethics in Education

Within the field of curriculum, two main competing views about the purpose of education revolve around whether education should be concerned with the transformation or society or the maintenance of society as it is (Miller & Seller, 1985). The idea that education should seek to transmit the best values that society, so as to maintain gains from the past, has a long history stemming from the work of sociologists like Durkheim and the Greek philosopher Aristotle. However increasingly in the field of curriculum theory, this stance has been criticized as being
limited as a purpose for education in the modern world. Reconceptualists and radical curriculum theorists (for example Apple, 2004; Illich, 1971; Pinar, 1999) have for some time now worked to show that inequity, parochialism and the ills of society are inherent in society as it exists so that an education system that limits itself to the transmission of values of present society is in itself flawed. These scholars advocate for education that is concerned more directly with societal transformation. While varying perspectives on the transformative stance exist, one thing its advocates seem to agree on is that education should involve critical thinking and choice rather than transmission of knowledge and indoctrination into unilateral knowledge systems (Miller & Seller, 1985).

An overview of environmental education literature of a theoretical nature suggests that many environmental education scholars support a transformative stance with respect to education. Nearly every definition of EE (for example Stapp, 1969; Hungerford & Volk, 1990; UNESCO, 1975) seems grounded in the assumption that the nature of society’s existing relationship with the environment is faulty. They go on to prescribe that EE should be aimed at changing peoples’ values and behaviour in a more environmentally friendly direction. However while the transformative stance may be agreeable to most environmental education advocates, the nature of transformation it should endorse has remained problematic. Woodhouse and Knapp (2000) have pointed out that in practice two foundations for understandings of transformative education exist: transformation based on competitiveness and economic growth; and transformation based on justice and values of living. The former is often assumed by the science-based approach and remains a mainstream stance practiced in EE (although, as has been discussed previously, there is a push with movements like STSE (Pedretti & Nazir, 2011) and SSI (Zeidler & Keefer, 2003) to incorporate justice based perspectives into science education). Recently, transformation based on justice and values of living, has increasingly been gaining
support by critics of ESD and mainstream EE. They form the basis of eco-critical EE (Bowers, 2009; Kahn, 2008) which assumes an educational stance that is explicitly politically flavored, acknowledges the existence of a diversity of narratives, and provide learning opportunities for students to examine knowledge claims and challenge societal structures.

Environmental education contains an undeniable values/ethical component. As has already been noted, at its very core EE assumes that current mainstream attitudes are destructive to the environment and require changing. However inherent within most of the existing paradigms and models for EE is a justice based stance to ethics. This means that existing programs define ethics using principles of justice or notions of fairness and equity. Recently post-structural and feminist theorists have striven to elucidate the justice orientation to ethics and suggest that other orientations to ethics may also exist (Gilligan, 1977; Gilligan & Attanucci, 1988; Lyons, 1983; Noddings, 2002). These may also be applicable to EE.

The ethics of care originated in the work of Gilligan (1977). While studying a group of women contemplating abortion, she found justice oriented theories inadequate in understanding the value positions of her participants. In describing their value positions, the women rarely used logical reasoning or principles of fairness, equity or even categories of right and wrong. Rather, they seemed to rely on feelings, theirs and others, and an intuitive sense of what was best for their immediate relational group (friends and family). Maintaining relationships seemed particularly important in judging what was best. Gilligan concluded that the women approached value issues from a different orientation than justice. She characterized this orientation as ‘the voice of care’. Gilligan’s insights were further elaborated by Lyons (1983), who developed a model that clearly distinguished the care orientation from the justice orientation, and effectively launched care as a separate theory of values development worthy of serious scholarly inquiry.
She suggested that the differing value orientations come about because of differing perceptions and experiences of social reality. Girls and boys grow up differently and learn to negotiate the world in different ways.

In its early days, the theory of care was gender based and portrayed as the polar opposite of the justice orientation. The care orientation was posited as the female orientation to value issues while justice was associated with males. Later, in response to conflicting evidence and criticisms about the gender rootedness of the two orientations (Garrod & Beal, 1993; Rest, 1986), Gilligan modified her position (Gilligan, 1993; Gilligan & Attanucci, 1988). She worked to show that the care orientation is gender neutral and may in fact be representative of a certain proportion of every type of community regardless of gender or culture. She also restructured her ideas to place care in a less oppositional position with respect to justice. In its most recent manifestation (for example Noddings, 2002), care and justice are now seen as two equally valid orientations which differ because each focuses on a different type of concern. In making decisions, people tend to focus their attention on one voice. Which voice they choose is highly context dependent. Moreover it has been suggested that true moral maturity may consist of seeing in both ways (Gilligan, 1993). Noddings (2003), in her most recent treatise on the subject, has explained that justice and care need to act in tandem with justice serving as a handmaiden of care in order to achieve happiness and wellbeing for societies and environments.

Although there are several variant versions of ethics of care, they all share certain basic features (Langdale, 1993; Noddings, 1995, 2002). An orientation towards care:

- Emphasizes the themes of attachment interdependence, connection and responsiveness of human beings to one another. Noddings (2002) describes ethics
of care as relational. The concern is with maintaining caring relations rather than caring as a virtue or value.

• Defines the self as connected in relation to others. It is important to see others in their own interests and situations. This idea of the connected self represents a significant departure from the traditional justice orientation which is underpinned by notions of the separate self, which describes society as composed of the self among many, objective others.

• Construes moral problems as issues of relationships or of response. The spirit of care can be summarized as: maintaining relationships, that is, keeping interconnections between interdependent individuals; promoting the welfare of others; and preventing harm by relieving the burdens, hurts, and suffering of others.

• Is not reliant on abstract principles. It asks people to turn to memories of caring and picture themselves as ideal carers, then to always act so as to maintain and enhance caring relationships. In so doing the care orientation places great emphasis on feeling, supporting Hume’s ideology that ‘reason is a slave to passion’ (Noddings, 2002). However care does not discard reason. Theories of care also do not prescribe universal values but accept that there are different ways to care. They conceptualize problems as unique and highly contextualized, and seek to find out what is good for people involved in particular situations, rather than what is right or just. In order to do this careful critical thinking about various value positions and what it means to care in context is necessary.
Within the field of values education, Noddings (2002) has developed a model of care-based moral education. This model proposes that children should be taught to be competent carers and sensitive cared fors. It consists of four components:

1. Modeling: Teachers show what it means to care.

2. Dialogue: Talk that is open-ended, engrossing, shifting and attentive to the feelings of others. Talk here, is not debate. Its purpose is not to win the argument or persuade others that one position is more logical or justifiable. Rather, the point is to create or restore caring relations.

3. Practice: Opportunities to engage in care-giving activities

4. Confirmation: Attributing the best possible motive consonant with reality for others’ actions so as to bring out the best in them.

While several feminist treatises on environmental education exist (for example, Merchant, 1996; Mellor, 1997; Warren, 2001) relatively little has been written on incorporating the ethics of care into environmental education in the way that Noddings suggests. Two exceptions to this are Fien (2003) and Martin (2007) who both present compelling arguments for incorporating Noddings work into EE. While for Fien (2003) an ethic of care has the potential to broaden the theoretical framework for EE to include the humanities, arts, philosophy and ethics and learn to love the Earth in congruence with viewing nature as a broadened sense of self (communalist-ecocentric perspective), for Martin (2007) the true potential of care based environmental education is to increase a sense of solidarity between the self and the environment as separate beings (Gianistic-ecocentric perspective). According to Martin (2007, p. 62):
Caring as environmental education demands that students work at getting to know nature. Caring demands that a sense of proximity be created by having students engaged in experiencing, learning and sharing time with nature in the same sorts of ways we might get to know a new friend. In such caring for nature, students need to understand their relatedness to the environment as a subjective relationship, individual to individual. Caring for nature is also a challenge to any form of education that interprets nature as an external generic object, or set of objects. Rather, environmental caring education must seek to understand both rationally and emotionally the places, entities and nonhuman individuals with who students develop specific personal lived relationships.

2.5.2.3 Behavioural Outcomes and Education

This sub-section raises the question of how EE can be best achieved in practice. Based on the discussion so far it would seem that EE would align well with constructivist learning theory and critical inquiry. However a look at the programs in mainstream practice from the past and today reveals that EE in practice is often underpinned by behaviourist learning theory and indoctrinatory practices. Program guidelines and research papers from the field often allude to behaviour modification, shaping of behaviours, and indoctrinating students with the correct attitudes and knowledge about environmental questions. Teaching strategies often seem to inadvertently include the use of fear, guilt and shame (Sanera & Shaw, 1996) — practices that are increasingly being viewed as unethical in modern educational circles. This problem has not gone wholly un-noticed by environmental educators. In an article Hart, Jickling and Kool (1999), have summarized the lack of strong educational foundations for EE and called upon environmental educators to question their assumptions about teaching and learning. These
authors have also subtly suggested that environmental educators need to update their educational ideas to align more closely to current educational theory and research.

2.6 The Ecological Paradigm

With respect to arguments surrounding the educational and environmental dimensions of EE, a final point needs to be discussed. One of the most recent strands of criticism that has emerged censures all existing popular educational formulations for EE including eco-critical and place based approaches. For some scholars (for example, Bowers, 2008; Garrard, 2010; Gough, 1987; Jickling & Spork; 1996) the epistemological base of EE is faulty. They argue for a new epistemological paradigm for EE— one that comes from a Gianistic-ecocentric perspective and eschews the anthropocentric base of all current formulations for environmental education.

This new paradigm is grounded in the deep ecology worldview which seeks to cultivate a sense of the deepest possible identification with the environment, what is referred to as ‘ecological thinking’ (Palmer, 1998) or an ‘ecological consciousness’ (Devall & Sessions, 1985). This paradigm essentially requires us to change our way of thinking to give equal consideration to the intrinsic value all life and the planet— that is the idea that all life has a right to exist and flourish regardless of the human impact this entails. It is important to note here that this position is slightly different from communalistic-ecocentric position which suggests that humans and the environment are one. Here the environment and non-human life are recognized not only as ‘others’ but essential ‘others’ who need to be respected. It is suggested that applied to education such a paradigm would require that “attention must be shifted away from the objects of environmental education (e.g. desired states of the environment or changed human attitudes) and towards the interactions or inter-relationships that exist among people and environments”
(Palmer, 1998, p. 235, emphasis in original). According to Gough (1987) this type of paradigm calls for a type of education wherein individuals do not learn about, from or for environments but focus instead on educating to live ‘with’ environments. It also requires that we shift our notions of knowledge, learning and the values we live by. According to Gough (1987, p. 64, emphasis in original):

> We can try to trust our personal subjective experiences rather than defer habitually to the entrenched status of accumulated propositional knowledge...Above all, we can try to see such searching-like all learning- as a relationship…we should perhaps put less faith in what is possible to learn *from* lecturers or textbooks *about* children or schools. Rather…we should have more faith in what we can learn *with* our peers, *with* those we now call our learners and *with* environments.

What Gough seems to be inferring here, is that along with a shift in thinking about our relationship with the environment a new paradigm for EE will inherently entail alternative ideas of the nature of knowledge, values and behaviour change (that is essentially alternative ideas about education).

### 2.7 Summary

In this chapter I explored the complex nature of environmental education. The complexity inherent in the field was traced to its history and the lack of strong disciplinary roots for the subject. I also explored some of the main theories and models impacting practice in the field. Science-based environmental education—the dominant paradigm through which EE is enacted in schools was discussed. The main alternative eco-critical EE was also described. This led to a philosophical discussion of the complexity surrounding the meanings of the terms
education and environment that environmental educators need to negotiate in developing programs of EE. Throughout this latter section alternative possibilities and paradigms like the ecological paradigm and ethics of care were presented as possibilities that could be applied to modify the nature of EE in a direction that would expand opportunities for EE to a wider population of students. One alternative possibility for EE that was not discussed in this final section is its enactment through outdoor education (specifically outdoor education centres) and the perspectives and possibilities of this avenue of practice. An exploration of this avenue for environmental education is the subject of the next chapter and the basis of this research study.
3 Perspectives on the Intersection between Outdoor Education and Environmental Education

This chapter represents the second half of the literature review. In it I explore the nature of outdoor education and the existing perspectives, both theoretical and empirically derived, of its relationship with environmental education. The main thrust of the discussion is to show the lack of consensus about the relationship between the two. I start with a brief history of outdoor education. This will be followed by an examination of the major aspects of the nature of outdoor education. Next varying perspectives and research on the intersection between OE and EE are discussed.

3.1 A Brief History of Outdoor Education

Outdoor education is a field with a long, well documented history (Adkins & Simmons, 2002; Brookes, 2003; Loynes, 2002; Passmore, 1972). In mainstream literature, the term is often used interchangeably with adventure education, experiential education, adventure therapy and challenge education. Although it can be argued that each of these terms represents separate disciplines, they may also be interpreted as initiatives or movements within the field that contributed to the overall development of outdoor education as it exists today. Loynes (2002) has traced the roots of outdoor education in North America to the early nineteenth century, and the British militaristic tradition of toughening young men up for war. In this tradition, physical training in the outdoors characterized outdoor education. By the late nineteenth century and early twentieth century the organized camping and scouting movements had begun. In addition to continuing the tradition of physical training, these movements added the elements of practical skills in the outdoors, outdoor fieldtrips and craftsmanship skills to outdoor education. Through
these movements outdoor education came to be characterized as any program with an educational intent that takes place in the outdoors.

The next major development in the field took place in the mid-twentieth century under the influence of Kurt Hahn (Flavin, 1996). Hahn was a German-Jew who was forced to flee Germany for his fierce criticism of the Nazi Regime in the pre-war years. He was an influential educator who developed his own version of outdoor education and founded schools to pursue his vision in Germany and Scotland. Later Hahn’s ideas were to become embodied in worldwide initiatives such as the Outward Bound that remain active today. Hahn’s educational philosophy was rooted in the humanistic precept that children are born with an innate sense of decency and moral aptitude, but are corrupted by society as they age. Outdoor education could help prevent this decline by providing opportunities for physical and personal growth, creative projects, leadership, discipline and service opportunities that could not be easily matched in indoor or traditional educational settings. Hahn went even further in proposing his own theories of teaching and learning. According to him, learning happens best in emotionally charged adventure situations in the outdoors where challenge is adequately supported by caring adults. His learning principles include a learner centred focus which he termed the primacy of self-discovery; respect for nature; and opportunities for exercising empathy and caring, collaboration and competition, success and failure, solitude and reflection and service and compassion.

Hahn’s influence on the outdoor education sphere cannot be overstated. Almost single-handedly he revolutionized the field of outdoor education by adding a solid character education component to it, along with an ideology about the nature and practice of education that permeates the field today. Programs and facilities utilizing his principles continue to exist today. In the fall of 2007, the Kurt Hahn Expeditionary Learning School was opened in New York. One
of the notable weaknesses of Hahn’s work is the lack of scholarly research about it. While those who utilize it often emotionally endorse it, the lack of critical or rigorous research leaves one to question the validity of the Kurt Hahn formulation for outdoor education.

The zenith of outdoor education was in the 1970’s. Around this time two significant incidents took place. Firstly, within the field of psychotherapy, the notion that nature could act as a form of therapy became increasingly popular (for example Ulrich, 1984). Evidence of the therapeutic nature of the outdoors added another dimension to the established goals of outdoor education. In addition to physical fitness and character education, a growing number of programs began including therapeutic nature activities such as meditation and emphasizing goals associated with emotional and spiritual growth (Lappin, 2000). It also supported the nascent assumption that already existed in the outdoor education sphere, that nature and the outdoors possessed a special healing, transcendental, educative quality about it that could not be found in the indoors. This had been the opinion of many nature lovers and outdoor educators for many years (Muir, 1997; Thoreau, 1904).

The second incident that took place at this time that impacted outdoor education was the official birth of the environmental education movement (UNESCO, 1975). This latter in many respects was detrimental to the outdoor education field. The early EE movement, in defining itself, chose to distinguish itself from other contemporary fields such as outdoor education. In order to do this some advocates of the new EE chose to negatively criticize outdoor education in order to show that the new discipline was superior to it (for example, Hungerford, 1975). Over the years (as will be discussed later on) this thread of criticism has continued, with its proponents claiming that outdoor education is based on outmoded theory and research—in effect suing that it has remained stuck in the 1970s. To some extent this criticism is true. In the past three
decades, while EE has grown, outdoor education has faded. Very few high quality scholarly publications exist today that are dedicated to its advancement in its traditional form. However, in opposition to the negative characterization of outdoor education, a growing trend, among some outdoor and environmental educators, has been attempts at reconciling the gap between outdoor education and environmental education (Fien, 1993; Palmer, 1998; Priest, 1986; Van Matre 1990). These scholars in various ways continue to assert that outdoor education is amenable to environmental education.

3.2 The Nature of Outdoor Education

Outdoor education (OE) is a loosely defined term. As has already been indicated, for many, any outdoor activity with an educative intent which takes place in the outdoors is outdoor education. As such outdoor education can include: camping, nature walks, ecological field studies, canoeing, hiking, ropes courses, greening projects, wilderness therapy and recreational activities (for example, Donaldson & Donaldson, 1958; Lappin, 2000; Neill, 2001). The looseness of understanding about the nature of outdoor education is indicated in the Council of Outdoor Educators of Ontario research summary which gives a diverse range of goals for outdoor education (Foster & Linney, 2007) including: environmental education; education for character development; education to support curriculum or in-school learning of traditional subjects; and education for physical, emotional and spiritual well-being.

As far back as 1982, Nicol noted the lack of precise direction and definition within the outdoor education field, and pointed out the problematic consequences of the situation for the field as a whole. In particular he traced the criticism of the lack of credibility leveled at outdoor
programs to the looseness of definition within the field. Nicol went on to try to remedy this situation by suggesting six essential characteristics for delimiting outdoor education. These are:

(i) It must occur outside in the out-of-doors;

(ii) It must be firsthand, that is allow participants direct involvement in activities;

(iii) It requires the use of original objects;

(iv) It must define relationships, rather than reciting individual, apparently isolated facts;

(v) It must engage multiple senses; and

(vi) It must be intrinsically motivating, that is invite participation because the activity is perceived as interesting, challenging or fun. (p. 2)

It is important to note that even within this list of essential characteristics while the pedagogical component of outdoor education is addressed no deep consideration is given to the human/nature relationship during the outdoor education process. Nor does Nicol give any guidance or overarching statements about the goals of outdoor education or its connections to the field of education as a whole. Even today, some thirty years later, one is hard pressed to find any deeper discussion of outdoor education, so that these omissions remain as two of the main sources of controversy in discussions about the relationship between outdoor and environmental education.

3.2.1 Experiential Education

While outdoor educators remain vague and/or undecided about some aspects of outdoor education, one thing they do seem to agree on is the nature of the pedagogy most suitable for
outdoor education: it must be experiential. This commitment is so strong that even though the term experiential education has a broader application, within the field outdoor education, it is often used interchangeably with the term outdoor education to describe programs and activities. Simply put, for many outdoor educators outdoor education is experiential education.

The Association for Experiential Education (AEE, 2012) defines experiential education as both a philosophy and methodology though which educators purposefully engage learners in direct experience and focused reflection to increase knowledge, develop skills and clarify values. While philosophically experiential education as it is defined by this organization is reminiscent of Dewey’s (1938) work on the nature of education, ideologically it is rooted in humanistic psychology, whose fundamental premise is that people act with intentionality and values in living their lives. A humanistic approach to education also rejects determinism as a force in human lives and focuses instead on positive growth through human effort (Lewin, 1951; Maslow, 1943; Rogers, 1969). Learning is viewed as a personal act pursued to fulfill ones potential for human freedom, dignity and full autonomy (Rousseau, 1991). It is also viewed as a process that is made up of not only cognitive but also emotional and psychomotor components. Indeed, a common axiom of supporters of experiential education is that an educational experience must involve the ‘head, heart and hands’ (Higgins & Nicol, 2011).

Pedagogy for experiential education was developed and popularized by David Kolb in the early 1970s (Priest & Gass, 1997). According to Kolb (1984), learning utilizes the experiential learning cycle which consists of four processes: (a) concrete experience; (b) observation and reflection; (c) forming new knowledge; and (d) application and testing of concepts in new situations. Although learning can begin at any stage, providing concrete experience is the recommended starting point. Knapp (1992) adapted Kolb’s learning cycle to outdoor education.
According to him an outdoor education experience consists of four distinct segments: (a) active student involvement in a meaningful and challenging experience; (b) reflection upon the experience individually or in a group; (c) the development of new knowledge about the world; and (d) application of this knowledge to a new situation. Over the years, the rigidity of Kolb’s experiential cycle has been questioned, along with the necessity of all its components. A key question is whether all the parts of the learning cycle have to be accomplished in order for an activity to be classified as experiential. For many, providing one or more quality concrete experiences and opportunities for reflection are the key components of an experiential activity (AEE, 2012). With respect to the nature of concrete experiences, most experiential educators agree that activities should have certain characteristics. They should be active, fun, intrinsically interesting/exciting, multi-sensory and authentic, that is, involving real world objects or situations (Woodhouse & Knapp, 2000)).

Experiential education is not without its critics. The main sources of criticism can be traced to the fundamental assumptions inherent within it. Experiential learning is based on certain assumptions about the learning process and learners. Learning is considered a natural process that occurs continuously. Learners are viewed as intrinsically motivated, willing participants, in possession of higher order thinking skills necessary for the process. Although experiential education has been advanced as pedagogy suitable for all learners, it is important to note that much of the theoretical and developmental work in the field (for example Kolb and Lewin’s work) was mainly carried out within the area of adult education. As such, its suitability for younger learners who may not possess the requisite emotional, cognitive or psychomotor skills is questionable. Another relevant criticism can be traced to the emphasis on positive growth and rejection of pathology inherent within humanistic education theory. In experiential education literature, experience is almost always equated with positive learning outcomes about
the objects or situations that form the experience. As far back as 1938, Dewey noted that
experience may lead to learning but this learning may not always be positive or educative. In
terms of environmental education in the outdoors, it has been shown that experiences in nature
may not lead to positive learning about the environment (Russell, 1999). Advocates of outdoor
and experiential education tend to be silent about these criticisms.

3.2.2 The Outdoor Education Centre

It has been noted earlier that outdoor education is a diverse endeavor which takes place in
many sites and contexts. The site for this study is one outdoor education centre (OEC) in
Ontario, Canada. While it is difficult to say exactly when the outdoor education centre, as a
formal entity, came into being, based on oral tradition and the few scholarly sources that exist
(for example Passmore, 1972), it seems that many of the existing permanent centres for outdoor
education in North America were established in the 1960s and 1970s when the idea of outdoor
education and humanistic theories of education were most popular. Two types of centres were
developed: the day centre and the residential centre. The day centre operated in the daytime only.
It was designed to provide facilities for short visits and programs less than a day’s length.
Residential centres were designed to cater for longer visits. They were equipped with facilities
that allowed visitor groups to stay for several days. (Faraway Dale, the site for this study is a day
centre.)

In general in the North American context, most outdoor centres, while permanent
facilities themselves, were not designed to be permanent schools for fixed groups of students.
Unlike, the European idea of the Nature School (Sandell & Ohman, 2010), most OEC’s were
designed to be places that students visited while they attended mainstream, traditional schools.
While many of these facilities began as private endeavors, a few, like Faraway Dale, were
eventually incorporated into local formal education systems in an attempt to provide more outdoor experience for K-12 students.

Many outdoor centres were established to fulfill the goals of outdoor education popular at the time of their inception; namely, physical fitness, building character and outdoor skills. They also sought to expose students to experiential education pedagogy which was generally thought, at the time, to be a valuable alternative way of getting students to learn. Over time as interest and support for outdoor education waned, the fortunes of outdoor education centres also waned. Across North America there has been a steady decline in the number of outdoor education centres in operation. High operating costs have been often blamed for this. In the United States there also has been a trend towards converting outdoor education centres into environmental education centres as EE has become more popular. In Ontario, the system of outdoor education centres that Faraway Dale belongs to has also been subject to closures and budget cuts over the years. There has also been steady pressure for government run OECs to become more closely aligned with mainstream education ideology. In response OECs in Ontario have expanded their efforts to provide EE and curriculum based knowledge in addition to their traditional goals (Foster & Linney, 2007).

In this thesis the OEC is a conceived of as a bounded place that represents and attends to outdoor education. While elements of fun and adventure may be incorporated into their programs their emphasis is on providing visitors with educative experiences. Another characteristic of the outdoor education centre is that, unlike other outdoor education opportunities they tend to be permanent sites, endowed with a more permanent staff of teachers and outdoor specialists, trained and experienced in providing outdoor educative experiences. This lends a certain amount of continuity to their programs and their educative efforts which may not be true for other
outdoor education contexts. Finally, it is important to note that this study concerns a government run OEC. Many OECs are private endeavors with few links to the formal education system. The ideology that underpins their activities and the quality of their educational efforts are largely unresearched. As such, the assumptions made for this study may not hold true for private outdoor education centres.

3.3 Outdoor Education and Environmental Education: Incompatible Endeavors

While some (for example, Gough, 2007; Loynes, 2002; Lugg & Slattery, 2003) agree that outdoor education is theoretically flexible, they argue that in practice, it is antithetical to environmental education. Historians of outdoor education agree that the theoretical base of mainstream, modern outdoor education mainly stems from humanistic theories of education and populist ideology. Loynes (2002) for example has argued that mainstream outdoor education in North America continues to be dominated by particular theories like Hahn’s character building through outdoor adventure, Maslow’s (1943) hierarchy of needs, Kolb’s experiential learning (Kolb, 1984) and Tuckman’s (1965) and Belbin’s (1981) ideas about group dynamics. These have been bought together by influential outdoor educators like Simon Priest to form a powerful paradigm adopted by many extant outdoor programs. This paradigm tends to assume the therapeutic effect of nature on humans; the centrality of the human ego in relation to others; personal development as the main goal for education; the educative role of stress and challenge; and the overriding importance of concrete experience in learning (Priest & Gass, 1997). The problem inferred by Loynes with this situation is that many of these theories are dated. Having been first formulated in the pre-1980s, they have either been superseded in modern educational
circles or are no longer popular as they once were. For example, Wahba and Bridgewell (1976) have provided evidence undermining Maslow’s ranking of needs, and Kenrick, Griskevicus, Neuberg and Schaller (2010) have suggested that Maslow’s pyramid may be simplistic, since needs even if met do not simply disappear but recur throughout a person’s life. Newer developments like these are largely absent from the popular outdoor education literature. Indeed, Brookes (2004) has indicted mainstream outdoor education theory for its failure to engage in modern theories of curriculum and pedagogy by calling it ‘a long dead horse’.

Building on the criticism of Loynes, Gough (2007) and Lugg and Slattery (2003) have striven to show how narrow perspectives in mainstream outdoor education theory may be working against efforts of outdoor environmental education. According to Lugg and Slattery (2003), outdoor education tends to focus on outdoor activity skills, outdoor survival skills and personal/group development; while environmental education is limited to minimum impact behaviour and aesthetic appreciation of the outdoor settings. According to Loynes (2002) in mainstream outdoor education, “nature is understood as an assault course, gymnasium or puzzle to be resolved and controlled. It is a resource to be commodified instead of a home to which to relate” (p. 3). Going further, Gough (2007) has noted that despite vocally supporting the importance of environmental education, outdoor educators “have tended to see outdoor education as simply education in the environment, and not possessing the distinguishing characteristic of being education for the environment, or even teaching much education about the environment” (p. 19, emphases in original). These criticisms while valid may be a bit harsh, since for many outdoor and environmental educators, learning is a continuous, complex personal process that continues beyond the immediate experience of being in nature. So that for them education in the environment builds a connection with nature and eventually leads to the long-term goals of education about and for the environment (Louv, 2005; Sobel, 2008; Van Matre, 1990).
3.4 Outdoor Education and Environmental Education: Complementary Endeavors

Despite criticism of its main paradigm, a persistent trend in outdoor/environmental education literature has been the assertion that there is an inherent connection between OE and EE. For example, Sauvé (2005), in describing the currents at work in environmental education, endorses the value of outdoor education when she says:

...outdoor education is one of the most effective means of learning about/within the natural world and imparting an understanding of nature’s inherent right to exist by and for itself-humankind’s place in nature being definable only in context of this ethos. (p. 14)

And on behalf of the Council of Outdoor Educators of Ontario (COEO), Foster and Linney (2007):

Early sequenced and repeated experiences in the outdoors develop a kinship with nature that can evolve into an informed, proactive and lifelong stewardship of our natural environment. (p. 53)

Authors like these eschew the position that outdoor education theory is outmoded and seem to believe that the nature of outdoor education is flexible enough to support EE. In their view while the criticism of the main paradigm may be valid, the main paradigm is not the only option for practice in outdoor education and it may not represent the ideology and actions of all outdoor educators. One of their main claims is that outdoor education contains the means for shifting a person’s view of the environment in a more ecocentric direction by providing a more-than
cognitive connection to the natural world which may act as a more authentic platform for environmental education than is provided by programs that do not contain outdoor components. They call upon a wide range of theories and models to support their position.

In the previous chapter I noted that a major model for environmental education includes education in the environment along with education about and for the environment as integral parts of any comprehensive effort at environmental education (Fien, 1993; Palmer, 1998). Place-based education, which includes experiences with real world environmental problems and critical theory approaches to education, was also discussed as an alternative form of environmental education that is currently gaining support among environmental education researchers. In this section I explore three other ideas developed within the field of outdoor education that assert the existence of an overlap between outdoor and environmental education. These are: Earth education, critical outdoor education and friluftsLiv.

### 3.4.1 Earth Education

Earth education is a series of outdoor based environmental education programs that were developed out of the pioneering work of Steve Van Matre in the mid-1970s and through the early 1990s (Van Matre, 1972; 1979; 1990). The programs, which specifically target the K-12 population, emphasize the understanding of basic ecological processes, the development of positive feelings for the environment and the making of personal lifestyle changes to protect the environment. A typical example is the Sunship Earth program (Van Matre, 1979). This program is a five day, four night residential program designed to be enacted at an outdoor education facility or other suitable outdoor location. Students are immersed in a series of outdoor based, experiential activities designed to teach the basic ecological processes like cycles, succession, niches and food chains. The activities are supposed to be fun often incorporating role playing...
(for example pretending to be clouds travelling through the water cycle) and games (like avoiding becoming the prey of hungry coyotes in a game of environmental competition). In this particular program, the learning process and the new knowledge gained are expected to impact students positively and encourage them to make changes to protect the Earth. Today Earth education is a world-wide movement with active branches in much of the developed world. It is administered by The Institute for Earth Education, an organization founded by Van Matre. It bills itself as “the world’s alternative to management-oriented and corporate-sponsored environmental education” (The Institute for Earth Education, 2012).

A reading of Van Matre’s major works (1972; 1979; 1990) reveals certain tacit assumptions in his thinking that permeate Earth Education programs. The basic premises of mainstream outdoor education are upheld: nature is viewed as therapeutic and outdoor experience is equated with an unalloyed good, that is, intrinsically beneficial to all students. Pedagogical strategies are adventure-based, challenge oriented and above all experiential reminiscent of Hahn’s views of teaching and learning. The ultimate goal of education is personal development. In Van Matre’s view all that is needed to convert outdoor education into environmental education is to explicitly frame the former within an ecocentric orientation towards the environment. He suggests that this could be accomplished by teaching the basic ecological concepts in the outdoors, and the modeling of positive attitudes and environmentally responsible behaviour by program facilitators.

One troubling aspect of Earth Education is the lack of deeper analyses of its underlying premises. For example, no consideration seems to have been given to the consistency of combining the anthropocentric base of outdoor education with ecocentric perspectives about the environment, or to research that shows that being in the outdoors is unappealing to some
students. To be fair Van Matre is not alone in these omissions. Other popular writings supportive of the outdoor connection to EE (for example Louv, 2005; Sobel, 2008), also seem to suggest that a great part of environmental education will be achieved by simply immersing students in the natural and outdoor world.

3.4.2 Critical Outdoor Education

In addition to providing thought provoking critiques of mainstream and traditional forms of outdoor education, some scholars have suggested alternative paradigms and possibilities for outdoor education which incorporate newer theories of curriculum and the human-environment relationship which in their view may be more supportive of environmental education. One such camp has re-conceptualized outdoor education from critical theory and ecocentric perspectives. For example, Lugg and Slattery (2003) have argued that adopting approaches of critical transformative education can allow outdoor education to “promote change in social structures and cultural values” (p.79) by paying attention to the long-term consequences of our current patterns of life on the natural world around us. Working separately both Loynes (2002) and Nicol (2002) have advanced formulations for outdoor education that incorporate elements of critical theory, ecocentrism and other post-structural perspectives that they claim are necessary if outdoor education is to work towards meeting the goals of environmental literacy. Stewart (2008) has illustrated the pedagogical possibility of this type of approach by describing how stories and historical accounts can be used to read the landscape during outdoor trips and allow trip participants to explore “the complex cultural-ecological processes that have shaped the places in which we live and work” (p. 79). It is important to note that both place-based education and critical outdoor education have much in common. But where the former is derived from notions of community within a broader framework of social justice and equity, the latter is
concerned with social justice and equity within the natural world; in other words getting people to think critically and creatively about the structure of the natural world, their connection to it and their responsibility towards it.

3.4.3 Friluftsliv

Working in the critical vein, some Canadian scholars of outdoor education have suggested another possibility for combining environmental education with outdoor education which they propose may be most suitable to the Canadian context. Henderson and Vikander (2007) have recommended that Canadian outdoor educators incorporate the Scandinavian concept of friluftsliv into their practice. Friluftsliv is a difficult concept to define. It implies being out in the open air in unconditional encounters with nature. It does not prescribe particular activities but requires a shift in consciousness to where one develops a deep sense of connectedness to nature by being in it, in a deeper way than traditional outdoor education prescribes. According to Gelter (2000) friluftsliv is like a game:

To become absorbed by a game one needs imagination and fantasy, which shift you to another level of consciousness. To see that every rock, tree or leaf has its own form and identity, has its own history to tell and its own right to exist, requires a higher level of consciousness and fantasy. Frilufsliv is not about teaching and lecturing or being on excursions. But it involves a sort of education, learning the ways of yourself and the place in the more than-human world and learning the ways of every creature and phenomenon you meet on your journey through life. (p. 90)

It is important to note that while Earth education and critical outdoor education are formulations directed towards the explicit teaching of EE in the outdoors, friluftsliv is not
primarily an educational intervention. Rather it is a way of life that combines ecocentric perspectives with the long-term practice of positive outdoor living. The inference is that EE occurs implicitly as participants live friluftsliv. Learning is conceived of as a continuous, complex, personal process that involves cognitive, emotional and psychomotor experiences along with elements of wonder and imagination that may not be fully included in traditional conceptions of teaching and learning. Henderson and Vikander (2007) consider it complementary to Canadian outdoor education since, in their opinion, outdoor education in Canada already contains latent elements like native First Nations’ perspectives of nature (Henderson, 2001) which are in sympathy with the spirit of friluftsliv. The application of friluftsliv to environmental education is difficult to assess since research on its application in practice is sorely lacking.

3.5 Research Connecting OE and EE

While there are clear theoretical positions both supporting and challenging the relationship between outdoor education and environmental education, empirical findings about the connection remain inconclusive. At one extreme, there are studies that report a positive connection between outdoor experience and environmental learning (for example, Ballantyne & Packer, 2009; Chawla, 1998; Palmer, 1993). For example, in a study designed to find out the contributions of fieldwork on ecological literacy of Spanish secondary students, Manzanal, Rodriguez Barriero, and Casal Jimenez (1999) compared the learning outcomes of two groups of students based on exposure to fieldwork during a unit on ecology. They concluded that the group exposed to fieldwork (studying the ecosystem in the outdoors), showed greater gains in ecological literacy both in terms of knowledge and more favorable attitudes toward the defense of an ecosystem than those who did not. For authors of these studies direct, hands-on, sensory
experiences in real world settings clearly bring about desirable emotional reactions which lead to behavioural and cognitive gains. For example, after studying participants in a two-week summer nature camp, Dressner and Gill (1994) found that the program increased self-esteem among young participants. They argue that enhanced self-esteem is a major influence on participants desire to take part in future environmental action.

At the other extreme there are some studies that conclude there is little to no connection between outdoor education experience and environmental learning (for example Eagles & Demane, 1999; Jeronen, Jeronen & Raustia, 2009). Haluza-Day (2001) studied the impact of a 12-day adventure trip with eight teenage participants. Interviews with the students revealed that students’ possessed a pre-trip sense of disconnection with nature which was intensified by the wilderness trip. According to the reporters of some of these studies (for example, Malone & Tranter, 2003; Pedretti & Soren, 2006), while outdoor experiences are memorable (Dillon et al, 2006) and outdoor settings places of possible pedagogic intensity (Foran, 2005), the outdoors are generally viewed by educators and students as sites of play, challenge and adventure rather than as sites for serious learning. A review of research on the effects of outdoor experience by Newhouse Berns and Simpson (2009) provide another perspective to explain the lack of connection found by these studies. After reviewing a number of relevant studies, these authors point out that a common assumption inherent within them is that all types of outdoor activity lead to pro-environmental learning. They point out that this may not be so, and have suggested that outdoor experience may be divided into three categories: appreciative, consumptive and abusive; and that the latter two of these categories are negative to environmental education. They imply that more research is needed to determine the nature of outdoor experiences that lead to pro-environmental learning. Yet another perspective is provided by Bixler, Carlilse, Hamitt and Floyd (1994). These researchers challenge the common assumption of outdoor experience being
therapeutic and pleasant for all students by providing evidence that rather than being comfortable in nature, a significant proportion of students on outdoor trips are fearful of nature, worry about personal safety and even express disgust of natural objects. For these types of students, negative precursor emotions may limit positive environmental education outcomes if they are not explicitly and sensitively addressed. In summary, these researchers seem to be challenging the root metaphors or fundamental assumptions of outdoor education: the therapeutic nature of the outdoors; the existence of a natural human-nature connection; and the equation of outdoor experience with positive experience.

In between these extremes, a number of other studies conclude, that while there is a link between experience in outdoor settings and environmental learning, the nature of the link is unclear (for example, Arnold, Cohen, & Warner, 2009; Bell, 2001; Bogeholz, 2006; Davis, Rea & Waite, 2006; Farmer, Knapp & Benton, 2007; Morgan, Hamilton, Bently & Myrie, 2009; Stern, Powell & Adoin, 2008; Smith-Sebasto & Walker, 2005). Some studies are inconclusive in terms of the exact nature of learning that occurs in outdoor settings: if it is limited to outcomes in the affective domain, and whether these lead to lasting behavioural and cognitive gains. Other studies highlight the lack of clarity about the pedagogical strategies most effective in supporting learning. While some of these studies stress the value of experiential learning, others indicate field-based scientific inquiry is most effective. Still others endorse more radical approaches that utilize meditation, mindfulness, literary writing and drama (Nicholls & Gray, 2007). Despite these inconsistent findings, one point that researchers seem to agree on, is that whatever the initial assumptions, deep engagement is more effective in achieving environmental education outcomes than superficial experiences during the outdoor experience. Pre and post trip activities, longer stays and thought provoking activities seem to enhance outcomes (Rickinson, 2001).
There are several problematic aspects concerning the available research about the relationship between outdoor education and EE. The first concerns the sheer range of the research. While a fair amount of relevant research exists, these reports are published in a diverse set of journals, ranging from general education journals to those specifically targeting readers with interests in outdoor education, science education, experiential education and environmental education. The research also takes place in a variety of outdoor sites including school grounds, outdoor education centres, environmental education centres, public parks, nature reserves and wilderness settings. This diverse range makes it difficult to generalize findings and conclusions since often different contexts have different agendas and underpinning meanings for terms like education and environment. In particular it was common to find varying meanings for criteria used in assessing environmental learning/ecological literacy across studies. Also many studies simply skirted these issues not even bothering to explain the criteria they were using to measure the quality of EE as they understood it.

Another problematic aspect concerns the quality of the methodology utilized in carrying out research. Many studies seem limited, even shallow, in terms of research questions and methods. In the majority of studies mentioned above, the main research question sought to confirm the outdoor experience-EE overlap. Students were the research subjects. The research period was short, often limited to a single field trip, day trip or residential program. The semi-structured interview and self-generated survey instrument were the most common data collection instruments. While these studies have been valuable in raising the possibility of the outdoor education-EE connection, they are inadequate in discerning the deeper questions concerning the nature of the relationship or suggesting how this relationship may be developed to improve opportunities for environmental education in general. Also, in too many reports, deeper philosophical meanings and assumptions about environment and education remain unquestioned.
One rare exception is provided by Sandell and Ohman, 2010, who in a historical analysis of Swedish outdoor education, do make the academic leap and raise the intriguing possibility of outdoor education providing opportunities for students to critically discuss habits of consumption and societal development.

Another problematic aspect is the lack of research of outdoor educators. As noted above the focus of many studies is the students. While this is useful, it is important to remember that outdoor facilities tend to be transient structures—places where students and visitors spend relatively short periods of time. After visitors leave, it is the educators who remain behind to prepare for another day, another group of visitors, and another program. As such, educators may represent the true stores of experience and information about outdoor education. Despite an extensive search very few peer reviewed studies of outdoor educators inquiring into their work with environmental education were found. To show the range of findings, three of these studies are highlighted here.

Taylor and Calderelli (2004) studied the teaching beliefs of environmental educators from state and local parks in the United States using semi-structured interviews. Their findings indicate that outdoor educators possess a set of beliefs reflective of mainstream outdoor education theory. In this study, park educators described their role as ‘jack of all trades’ and their approach to teaching as participant centred and hands-on. They see knowledge as external to the learner and expect learners to come to the learning experience with a certain amount of intrinsic motivation and cognitive capacity. In a corroborating study, Parkin (1998) carried out a survey soliciting information from outdoor educators in Australia inquiring into the link between outdoor education and environmental education. While respondents of the survey overwhelmingly agreed that outdoor education and environmental education should be linked
they were equally adamant that outdoor education does not have to teach about the environment. Additionally these outdoor educators saw their role as protective of nature and were abhorrent of the possibility that outdoor education activities could promote negative environmental attitudes. These two studies support a tenuous link between outdoor and environmental education from the perspective of outdoor educators.

A totally different perspective is provided by the research of Brody (1997) who describes what he as an outdoor educator would like participants to experience in a trip to a watershed. In a powerful auto-ethnographic study the author presents a complex picture of an outdoor educator’s ideas about environmental education including ideas of shared meaning, place, cultural meaning, connectedness and interdisciplinarity. In one telling quotation, he says:

Educating people about watersheds is a matter of helping people educate themselves about what is important. There is no exclusive ownership of what’s important. There is no ownership of everything around us. In both cases, importance and environment, it is more a matter of sharing than giving. Educating is also questioning, identifying what you don’t know, what you want to know. Questions are like the markers along a trail which you can follow to your destination of new understanding. (p. 119)

For me, Brody’s (1997) study in particular raises the intriguing possibility of the type of insights that could be obtained from an in-depth qualitative study of outdoor educators.

3.6 Summary

In this chapter, I explored the history and nature of outdoor education. In particular I established the lack of clarity surrounding the outdoor education-EE connection. The ideas and research discussed in this chapter are important to this report in several ways. They demonstrate
the confusion surrounding the outdoor education-EE connection and establish the need for more research into the deeper nature of this relationship. The question of what perspectives outdoor educators subscribe to in carrying out their roles as environmental educators remains largely unanswered. Is environmental education really important to them? What meanings do they ascribe to environmental education in an outdoor setting? What underlying ideas guide their work? How do they cope with the tensions and competing paradigms inherent within their work?

The literature also highlights the need for research that is rigorous and philosophically layered; research that looks beyond surface meanings and takes into consideration underlying philosophical assumptions in analyzing data and interpreting results. In particular, such research will consider the tensions and implications of mixing different philosophical traditions on the overall integrity of environmental education provided at outdoor centres. For me, after reviewing the literature, I thought it would be intriguing to find out where outdoor educators in the province I live in, stand on issues of the environment, outdoors and education in a detailed in situ context. I chose to study outdoor educators because of the lack of research about them with respect to this phenomenon. Also drawing from the broader educational research base, Clandinin and Connelly (2000) and van Manen (1997) have highlighted the importance of research into practitioner perspectives in discerning the nature of education, particularly questions of pedagogy. They have suggested that practicing educators are often in possession of craft knowledge, garnered implicitly through praxis in a discipline, unattainable to others except through shared experience. In concurrence with this perspective, it was my belief that a study of outdoor educators had the potential to clarify questions about the outdoor-environmental education relationship that other types of studies could not. It is to the description of such a research project that I now turn in the next chapter.
4 Methodology and Research Design

This chapter provides details of the research methodology and research design for the study that is the basis of this thesis. The purpose of the study was to explore the nature of environmental education at an outdoor education centre from the perspectives and experiences of the outdoor educators who work there. I attempted to do this by using a phenomenological case study methodology. The use of a phenomenological methodology meant that EE was treated as a phenomenon in context. The study also took on the characteristics of a bounded case study in that it focused on the experiences and perspectives of the outdoor educators working at one site or facility. As such, the specific purpose of the study was to capture the essence, essential structures, logic and interrelationships of environmental education at one outdoor education centre.

I chose to use a phenomenological case study methodology since this seemed to me the best option for studying an essentially human phenomenon (Husserl, 1931). It allowed for the inclusion of emotions, thoughts, opinions and other non-physical data (all parts of experience) that other methods of research do not. I chose to study the problem through the experience of outdoor educators based on the well-established precedent that educators possess valuable experiential wisdom about questions of education (Clandinin & Connelly, 2000; van Manen, 1997).

One major research question guided the study. During the research process this main question was divided into three parts.

What is the essential nature of environmental education at an outdoor education centre?
a. What are the structures that characterize environmental education at the outdoor education centre?

b. What are the main understandings of environment and education that guide outdoor educators work with environmental education?

c. What are the tensions and contradictions of providing environmental education through an outdoor centre?

The study is important in that it contributes to the body of knowledge about the nature of EE, particularly its intersection with outdoor education as it occurs at an outdoor education centre, which is currently a poorly understood phenomenon. These understandings are of significance since they can be directly applied to improve EE theory, pedagogy and research.

4.1 Research Design: Hermeneutic Phenomenological Case Study

Methodology describes the researcher’s overall philosophical stance to the research process or the process of finding out about something. Many authors (for example, Creswell, 2007; Denzin & Lincoln, 2000; Gall, Gall & Borg, 2003; Tashakkori & Teddlie, 1998) suggest that methodology is underpinned by inherent philosophical stances. Two aspects that are particularly salient to determining methodological stance are the understandings of ontology and epistemology that will be applied during the research process (Lincoln & Guba, 2000). Ontology asks about the nature of reality. Epistemology asks about the nature of knowledge. Based on these criteria the research I did is best described as a hermeneutic phenomenological case study.
of outdoor environmental education at a particular outdoor education centre in one Canadian province.

Hermeneutic phenomenology can be considered to be a post-modern research method. According to Moustakas (1994), “Phenomenology is concerned with wholeness, with examining entities from many sides, angles and perspectives until a unified vision of the essences of a phenomenon or experience is achieved” (p. 58). It is hybrid methodology closely associated with several abstract branches of philosophy like phenomenology, existentialism, transcendentalism and hermeneutics. Good introductions to these philosophies as they are related to hermeneutic phenomenology are provided by Stewart and Mickunas (1974) and Spiegelberg (1982). Based on the reading of these authors, there seem to be five salient characteristics of hermeneutic phenomenology, bound up with questions of epistemology and ontology, which distinguish it from other methodologies and delineate its uniqueness. These are (i) the refusal of subject-object dichotomy; (ii) avoidance of scientistic reductionism; (iii) the search for essences; (iv) the importance of bracketing during the research process; and (v) the acceptance of the personal nature of coming to know.

(i) The refusal of subject-object dichotomy- A fundamental question that besets many research methodologies is the nature of reality. There are two standard contrary responses to this question: that there is an objective reality ‘out there’ to be studied; and that reality is subjective entity constructed by participants. The basic objective/subjective choice (commonly called Cartesian duality) sets up a whole range of other either/or choices related to the research process. Husserl (1931), commonly credited to be the father of phenomenology, provided a third reaction to this ontological problem. He made the bold proposition that the objective/subjective nature of reality is not salient in studying them. Phenomena are important to study once we can experience them.
In other words, reality or non-reality is not important in the research process but human experience is. In making this proposition Husserl established the intentionality of consciousness, and twinned lived experience with reality making it the focus of study. At its very simplest phenomenology is the study of human experience.

(ii) Avoidance of scientistic reductionism- In addition to the primary ontological question Husserl (1931) recognized and reacted to scientistic reductionism which is the tendency to provide simplistic, physical explanations for complex phenomena by reducing them to individual parts. Husserl (1931) eschewed this practice. He insisted that phenomena be investigated in all their complexity as they present themselves to consciousness and cautioned against explanations which assume that reality is nothing but the sum of physical entities. Experience is not merely a substance among other substances in the natural world, and cannot be adequately dealt with by the methods of science. This means he allowed for more than physical explanations for phenomena. According to Polkinghorne (1989) phenomenological methodology:

…holds that experience involves the operation of active processes that encompass and constitute the various contents that become present to awareness. These contents include not only the objects of perception but also those of memory, imagination and feeling. (p. 41).

Increasingly this idea has been gaining purchase within the academic community in the form of holistic theory (Miller, 2007) and systems thinking (Capra, 1997).

(iii) The search for essences- Bearing in mind the two distinctions described above, Husserl was certain that consciousness has a structure which can be discerned by the careful observer. This structure represents the true nature or essence of the phenomenon. Phenomenological research is
reasoned inquiry that seeks to discover the inherent essences of phenomena. The essence of an experience reveals the structure of a phenomenon in such a way that the reader is able to grasp its nature and significance in a hitherto unseen way. It is this emphasis on the search for essences that distinguishes phenomenological research from narrative inquiry—another methodology that also focuses on the study of human experience (Clandinin & Connelly, 2000). Whereas the latter seeks to illuminate the possible lessons learnt by analyzing people’s experiences, phenomenology seeks to discern the underlying structure (essence) of the thing (phenomenon) under investigation (Creswell, 2007).

(iv) *Bracketing during the research process*- In order to discern the true nature of a phenomenon Husserl reasoned that the researcher must approach the phenomenon without pre-suppositions or at least the very least with a clear knowledge of them. He developed the idea of bracketing. Bracketing involves declaring and suspending pre-conceived notions, also referred to as making a concerted effort to suspend the natural attitude, so as to see clearly the content of consciousness and the essences of the phenomena being investigated. Bracketing is a self-reflective process that the researcher must engage in throughout the research process to ensure that what is being reported is what is really there and not what she wants to see.

(iv) *The personal nature of coming to know*- The methodology Husserl (1931) advocated is called transcendental phenomenology. While rejecting Cartesian duality, Husserl (1931) assumed that if bracketing was properly carried out a researcher could become totally objective in investigating phenomena. Post world war two, constructivist ideas of knowledge became popular and an increasing number of philosophers began questioning the possibility of the objective researcher. Interpretivists in particular raised the intriguing notion that the building blocks of knowledge are always subject to researcher interpretation. Hermeneutic interpretivists
emphasized the personal nature of coming to know by claiming that interpretation of data and therefore knowledge creation is personal, inseparable from ones context, knowledge and life experience. Martin Heidegger is credited with founding hermeneutic phenomenology. He suggested that since researcher consciousness cannot be separated from research the process, bracketing should be modified to take this into consideration. In engaging in hermeneutic phenomenological research the researcher accepts that he/she cannot be totally objective. He/she therefore tries as best as possible to declare his/her biases about the phenomenon under study, engage in reflection of how these biases affect the research process and incorporate these ruminations in writing the final report (Polkinghorne, 1989).

Phenomenological research is relatively common in the fields of psychology and nursing (Collaizzi, 1978; Giorgi, 1985; Natanson, 1973; Oiler, 1986). It is less common in educational research. Creswell (2007) describes it as one of five choices available to educational researchers. Perhaps the most extensive work on adapting hermeneutic phenomenology to educational research has been done by van Manen (1997). According, to him hermeneutic phenomenology may be most suitable in carrying out educational research. In his view, education is a series of human, caring, experience-filled phenomena often driven by unexamined assumptions and structures. Hermeneutic phenomenology offers a method to study these phenomena in an authentic manner by asking us firstly to dislodge and confront our unexamined assumptions during the process of bracketing. He also notes that in dealing with educational phenomena it may not be useful to strive for an objective stance as other research methods require. Rather, he suggests that the educational researcher make the educator identity an active part of the research process. Hermeneutic phenomenology applied to educational research, then, explores phenomena in the life world in such a way as to apply the findings pedagogically. Throughout the research
process, van Manen also cautions the researcher to balance the research context by considering the parts and the whole.

The phenomenon studied in this research project was the conceptualization and enactment of environmental education at an outdoor education centre. In this instance the phenomenon was site specific: limited to one outdoor education centre. In addition to being a hermeneutic phenomenological study, the study also took on the characteristics of a bounded case study (Merriam, 1998; Stake, 1995). The advantage of a bounded case study is that it makes the research manageable. It also allows for the discovery of fine grained detail that a more open study may miss. In studying educational phenomena this is important, since increasingly researchers are finding that educational phenomena are highly context specific and can vary significantly by site, participants, history and socio-cultural factors. Site specificity is required if findings are to be applied pedagogically in an authentic manner.

An overall reading of the literature indicates a six element methodological structure for carrying out such a study:

(i) Specifying the research context- in which a phenomenon is chosen and the study site or subjects specified;

(ii) Bracketing- in which the researcher explicitly explores their theoretical and experiential biases about the phenomenon and assumes the educator identity that will be used throughout the research process;

(iii) Re-presenting a variety of lived experiences about the phenomenon;

(iv) Analyzing experiences to find essential themes that characterize the phenomenon;
(v) Describing the phenomenon through rewriting; and

(vi) Reflecting on these themes in terms of their pedagogical significance.

This structure was used to carry out the study. Additionally, as suggested by van Manen (1997), I tried to make my educator identity an active part of the research process by approaching the research process first and foremost as an environmental and science teacher seeking to understand environmental education as it is conceptualized and practiced in an alternative context.

Whereas methodology describes the researcher’s overall philosophic and theoretical understanding of the research process, methods are the specific tools and instruments a researcher used in gathering and analyzing data. In order for a research design to form a coherent whole, methodology should intersect with methods in a logical and consistent manner (Denzin & Lincoln, 2000). The following few sections describe the research context and detailed methods used at each stage of the research.

4.2 Research Context

Because the research project is a case study of a particular centre, if the reader is to fully understand the findings and their implications, a good understanding of the research context is required. In this sub-section I have attempted to provide the reader with such background context of Faraway Dale: its history, physical structure and organization, its connection to the formal education system; something of the nature of the educators who work there; and how I became involved with them.
Education in Canada is a provincial responsibility. This means that each of the country’s 13 jurisdictions has its own education system which is controlled by separate departments of education. While there are similarities among the 13 educational systems there are also significant differences, largely due to attempts of individual provinces to cater to the needs of their local populations. Each provincial department of education is further sub-divided into local school boards that administer education through several schools in a particular area. While school boards work within the guidelines and curricula set by provincial departments of education they also possess a certain amount of autonomy in the way they interpret these and run their local educational facilities. Some school boards may operate specialty schools or form partnerships with local non-governmental organizations in order to serve their context. Working within this flexibility several school boards across the country own and operate outdoor education centres.

Faraway Dale, the site for this study, is one such case. It is one of several outdoor centres owned and operated by a large local school board in one province of Canada. Faraway Dale consists of 55 hectares of a natural ravine system, set aside as a protected flood plain area. It has been formally used for outdoor educational purposes since the 1960s. It is made up of forest, meadow, wetland and river habitats, and is surrounded by a suburban residential neighborhood on the outskirts of a major Canadian city. Because it is a naturalized protected area, the site also acts as a natural sanctuary to local wildlife. It is the home of a surprising variety of wild animals including foxes, raccoons, hawks, geese, ducks, other birds, groundhogs, deer, coyotes, opossums, field mice, a wide variety of insects, and fishes. Wild life encounters are relatively common occurrences on visits to the centre.
Faraway Dale serves the urban and sub-urban student population who attend schools within its vicinity. It is connected to the formal school system through the sharing of a common school board. In other words the centre is owned and operated by the same school board that administers education in the schools from which it draws its visiting students. Based on this arrangement one would expect that visiting schools and the centre would possess a high level of congruence with each other, that is, they would share common understandings about the goals and nature of education. However one peculiarity of the arrangement within this particular school board is that other than providing broad curriculum guidelines, its outdoor centres are left to develop and run programs as they see fit. This means that, to a certain extent, individual centres work autonomously to develop and pursue their own ideologies as they strive to form connections to the provincial curriculum. To date, Faraway Dale offers over 50 popular self-generated programs. The programs are diverse, ranging from traditional outdoor programs like ‘Maple Syrup Making’ and ‘Snowshoeing’, to others like ‘Habitats and Communities’, ‘Ecosystems Hike’, ‘Sketching in Nature’ and ‘Rubbings’. For each of these programs, there is an outline document. Program outlines generally contain a statement of objectives, a listing of curriculum connections (the curriculum used is the official provincial curriculum), and descriptions of possible experiences students will be immersed in during the program. Program outlines may also contain supplementary information. For example, the ‘Animal Detectives Hike’ outline provides pictures and descriptions of common animals students may encounter to help with identification. It is important to note here that program outlines do not specifically mention environmental education as an objective. Rather programs are structured to reflect the traditional subjects of the school curriculum. During the research process I came to understand that despite its omission on written program outlines environmental education is embedded or infused within programs as they are enacted.
Faraway Dale is a very busy outdoor facility. On any typical day during the school year it hosts at least 5 classes. Typically these classes are K-8, but at certain times during the year, the centre also offers a few specialty leadership programs for older students (Grade 11-12). In addition to hosting classes the centre also acts as a community hub. It loans outdoor equipment, books and other resources to members across the school board. It also hosts events like its ‘Annual Maple Syrup Open House’ to which the general public is invited to attend. It is important to note that Faraway Dale is a day centre rather than a residential facility. This means that visitors come on daytrips. There are no facilities for visitors to stay for any greater period.

To bring students to Faraway Dale, individual teachers need to make reservations and pre-plan trips with the teaching staff at the outdoor centre. Bookings sometimes occur weeks in advance, usually through a combination of e-mails and phone calls between the relevant parties. Before the trip, centre staff work closely with teachers to plan activities and provide experiences to ensure trips are educational and meaningful to the students. On the day of the trip students are bused into the facility from their school. Typically groups arrive around 10 am. Each group is assigned one or two outdoor educators who remain with them for the duration of the visit. After a brief welcome in the parking lot, groups are guided to an area which acts as their home space for the day. If the weather is warm this can be an outdoor location. After a brief welcome and reminders about safety, a brief teaching session occurs (the ‘Group Introduction’). With different educators this can take different formats. Sometimes in support of the day’s theme, major concepts are introduced or reviewed. At other times the schedule for the day is detailed, along with descriptions of the day’s activities. The Group Introduction is followed by a planned educational outdoor session. The outdoor portion of the morning usually runs between one to one and a half hours. It typically consists of a guided hike interspersed with a variety of experiential outdoor activities. The morning program is followed by lunch. Again the form of this part of the
day is pre-planned. Groups are given the option of having ‘a waste free lunch’ or a ‘cookout’. For the waste free lunch groups would have been pre-advised to pack a lunch that would produce the least amount of garbage possible. At the centre they are provided with containers to sort their lunch waste into garbage, recyclables and compostables. After lunch the activity is debriefed. In the cookout option students are provided with the opportunity to cook their own meal (usually hotdogs) over a campfire in the outdoors. Fire safety and other skills in the outdoors are emphasized along with the aesthetics of sharing a meal in the outdoors. After lunch a shorter afternoon program is conducted. In winter time students may participate in outdoor ‘Winter Games’ such as downhill tubing. In the spring, they may assist in an ‘Earth Repair Project’ such as wood chipping pathways. Whatever the activity, usually afternoon programs are lighter with a recreational tone to them. The end of the day is usually marked by a consolidation/debrief meeting in the group’s home space. Groups leave around 2pm.

To facilitate day visits Faraway Dale employs fulltime educators, maintenance and support staff. To assist, there is also a steady stream of volunteers, work-study trainees and part-time educators. Educators fall into two groups: outdoor teachers and outdoor education specialists. Outdoor teachers possess formal teacher education qualifications (usually a B.Ed in education) recognized by the provincial ministry of education. Outdoor educational specialists do not possess teacher education qualifications but usually possess a combination of outdoor experience and education that would have been deemed as appropriate at the time of their employment. Even though an official division of duties based on this distinction of academic qualification exists, at Faraway Dale, it seemed to me that all the educators are actively involved in the life of the centre. They work together to deliver programs, assist in the development of new programs, modify programs and assist in the upkeep and maintenance of the facility. During
my stay, it seemed that all the educators were passionate about their jobs and expressed strong positive commitments to the work they were doing.

At the beginning of the research project it was my intention to re-present the experiences of at least three outdoor educators with respect to environmental education. As such it seemed to me that any one of the several outdoor centres run by the chosen school board could be a suitable study site. Upon further investigation, I found out that Faraway Dale is one of the largest, busiest outdoor education centres not only in its jurisdiction but across Canada. In addition, it has a good reputation with visitors and a strong commitment to providing meaningful educational experiences for its patrons. Based on these criteria I decided it would be the best study site for me since it would likely host experienced, enthusiastic potential participants who could best assist me in understanding the phenomenon under investigation. After receiving the requisite research and ethics approvals I sent a letter of invitation to the centre’s site supervisor, outlining the research and inviting the staff’s participation in it. I was subsequently invited by the site supervisor to a staff-meeting to speak to the staff and directly seek their participation in the project. At the end of this meeting, nine fulltime educators agreed to participate in the research process. All the participants are well experienced in outdoor education, each having been actively involved in the field for at least 10 years. Each of them was required to sign a standard Research Information/Consent form (Appendix 1) before data collection began.

4.3 Bracketing

It was noted earlier that bracketing is an essential element of any phenomenological research process. Bracketing is a self-reflective process that involves dislodging and confronting one’s pre-conceived notions about the phenomenon under investigation. I thought this was a
particularly important element in this case to ensure the validity of the research since I had for some time been heavily immersed in environmental education through study and experience, particularly in one context (science-based, indoors), and probably had many assumptions and pre-conceptions that would color my interpretations of the new outdoor context and data I would collect there. I therefore began the research process by engaging in a period of intense reflective writing focusing on my own experiences and beliefs of environmental education, outdoor education, outdoor educators and the work of outdoor education centres. I continued bracketing throughout the research process by keeping a personal reflective journal in which I recorded my thoughts and feelings about the phenomenon under investigation and the research process as it unfolded. The style of writing for this component could be described as ‘confessional’ (Van Maanen, 1998). Accounts were first person prose, reflecting the notion that the research process is not separate from the life and personality of the researcher. At the same time, I made a conscious effort to keep my educator personality at the forefront of the process so that my reflections did not degenerate into self-absorbed introspection. The narratives produced during bracketing were consulted during data analysis to counter the effects of unsupported personal bias.

4.4 Re-presenting a Variety of Experiences

Since experiences cannot be ‘collected’ (like leaves from fallen trees) the data for the project were my re-presentations of experiences of outdoor environmental education of nine outdoor educators working at Faraway Dale Outdoor Education Centre. The primary data sources were the outdoor educators. Over a period of five months, I immersed myself in the life world of the research setting. To do so, I made full day visits to the centre twice a week for five months. On some visits, especially during the first three weeks, I spent time at the centre
informally interacting with the staff. I mostly shared meals with them, attended their staff briefings and helped with their setup and cleanup before and after classes. Though these types of visits I sought to become a familiar, unobtrusive presence to the participants. Other visits were used for formal data gathering. Four data gathering strategies were used: semi-structured interviews; non-participant observation of educators at work; participant journals; and the collection of relevant documents/artifacts. From the outset, it is important to note that the first two strategies were designed to act as primary data while the latter two were intended to be secondary data. In other words the secondary strategies were intended to triangulate or corroborate the results gleaned from primary strategies.

4.4.1 Semi-Structured Interviews

Each participant was interviewed twice using two different semi-structured, open-ended interviews (Appendices B, C). Interviews ran approximately one to two hours and were audio-recorded. These interviews were designed to provide participants with opportunities to share past lived experiences and ideas about environmental education and how the latter are manifested in their work. The first interview took place soon after I received participant consent for the research process. An interview protocol was sent to each participant about a week prior to the interview so he/she could reflect on the items beforehand. This first interview solicited general biographical information, musings on the nature of their work as outdoor educators, and examples of their past experiences with environmental education within their work. With respect to the latter, participants were specifically asked to relate three stories of their experience as a provider of outdoor environmental education at the outdoor centre: a good experience, a bad experience and one other. They were prompted to provide as much detail as possible and use any memorabilia to help tell their stories.
The second interview marked the end of the data gathering process. It was more directed and structured. In it I asked specifically about the theoretical underpinnings of participants’ work as outdoor environmental educators. Educators’ ideologies about the environment and education and the interplay between both and the outdoors were explored. The advice of Fontana and Frey (2000) and Seidman (1997) was taken into account in preparing for and carrying out these interviews. Particular attention was paid in developing and structuring the interview protocols to achieve an appropriate balance between the specificity and open-endedness of guiding questions. During interviews special attention was paid to making each participant comfortable and alleviating fears and concerns that often hamper interview processes. Participants were given the choice of either an outdoors or indoors setting as the location that suited them best for their interview. Also throughout the interviews I tried to use established interview techniques like allowing adequate wait time after questions, active listening and asking gentle probing questions to encourage detailed responses. In reporting the results of the study (Chapter 5) the first semi-structured interview is referred to as ‘Interview 1’ while the second is referred to as ‘Final Interview’.

4.4.2 Non-Participant Observation

In between the two major interviews I shadowed each participant three times during their educational sessions with visiting groups of students. Shadowing was done in a bid to capture the continuing living experiences of educators as they negotiated the intersection between outdoor and environmental education. Also, in agreement with Moustakas (1994), I found this method of data collection important since it allowed me to observe activities and infer meanings that may not have been expressed during participant interviews since they may not have been within participants’ overt awareness. Arrangements for field visits were always settled beforehand, so
that participants were never surprised by my presence. During field sessions I took on the role of a non-participant observer (Adler & Adler, 1994). I was most often introduced to the visiting group as a visiting university student who had been given special permission to accompany the class for the day. As such I naturally fell into the role as a visiting adult, walking along with the group as the educator facilitated them.

Field notes were used to record descriptions of each educational session observed. Two types of field notes were used: running field notes and margin notes. Running field notes were used to record the major events of each session as they occurred. As soon as possible after each session (usually the same evening or following day) these notes were supplemented by margin notes: additional descriptions, explanations and impressions that could not be recorded in the running notes. In addition to field notes, brief (10-15 minutes) post-session interviews were conducted with participants asking them to describe the experiences of outdoor environmental education the session provided. This was done so as to create supplementary data and to reduce researcher effects (Lincoln & Guba, 1985), that is, to counter my reading into or ascribing motives onto observations that I made during field sessions that were not intended by participants. These interviews were audio-taped. In reporting the results of the study (Chapter 5) excerpts of data from field notes are referred to as ‘Fieldnotes’ and interview data is referred to as ‘Field Visit 1, 2 or 3’.

4.4.3 Participant Journals

At the end of their first semi-structured interview each participant was provided with a personal journal. In it I invited them to document their thoughts, memories and insights about their experiences as educators with outdoor environmental education. As an incentive I also explained the well-established personal and professional benefits of journaling among educators
(Stevens & Cooper, 2009). No strict format was imposed on participants with respect to keeping the journals. They were invited to write at their convenience and discretion. However, to encourage them to start their journaling, I began their journals for them by writing in a question based on a point of interest that came up during their first interview. To encourage the continued use of the journal I asked each participant periodically (every two weeks) about the status of their journal (Hatch, 2002). If they indicated that they had written into it, I collected the journal, read the entry and made comments in response. These comments were carefully constructed to encourage deeper thinking and more journal writing. In this way the journal took on the format of a dialogue between the researcher and participant. Final collection of the journals took place at the end of the official data collection, that is, at the end of the second major interview. These journals were served as a secondary source of experience and a means of triangulation for data collected from primary strategies described above. It must be noted however, that this method of data collection proved least successful. Only three of the of the participants made entries into their journals and only one faithfully kept it up, making entries every two weeks for the length of the data collection period.

4.4.4 Collection of Relevant Documents/Artifacts

Both Polkinghorne (1989) and van Manen (1997) suggest that experiences of phenomena can be embedded in indirect sources, for example literary accounts, artistic representations, journals and logs, outside the immediate research context. Within an educational context, educators often produce and collect a range of documents as a regular part of their work including unit plans, lesson plans, samples of students’ work, and information handouts for students. These documents most often reflect their personal practical knowledge and experience. Faraway Dale is no exception here. During the data collection period, I was able to collect a wide
range of relevant documents and artifacts from the participants. These included: a general information brochure about the centre; an information package for schools outlining preparations for a daytrip to the centre; program outlines for many of the programs offered by the centre; samples of student work from day trips and post trip activities; and post trip letters of gratitude sent in by teachers and students. The centre also had a large data-base of pictures taken by the centre staff documenting daily centre activities that I was allowed access to. These documents and artifacts were analyzed along with the other data. However, it is important to note that they acted as a secondary data, intended to triangulate the results gleaned from the primary data (semi-structured interviews and observation of field sessions).

4.5 Analysis of Experiences

Established phenomenological data analysis procedures (Collaizzi, 1978; Polkinghorne, 1989; van Manen, 1997) were applied to the data collected to discern the essential structures that characterize environmental education at an outdoor centre. These essential structures were further used to produce a summary description of the essence of the phenomenon. While Polkinghorne (1989) provides several alternative variations for the data analysis process I chose to use the specific procedure outlined by Collaizzi (1978) supplemented by the advice garnered from relevant others. During the analyses I tried not only to suspend the natural attitude and keep an educator personality to the fore as suggested by van Manen (1997) but also to ‘be phenomenologic’ which according to Munhall (2007) is necessary in this type of research.

‘Being’ phenomenologic is not only hearing the language and believing something is being revealed that might be valid, but it is hearing and contemplating what might be concealed in responses. (p. 149)
Also in deference to Munhall (2007) I was wary during analysis of falling into the practice of using codes and themes in a reductionistic or mechanistic way. I tried to remain flexible, following the phenomenon wherever and whenever it appeared, while being attentive, conscious and alert to its appearance or concealment. The processes I engaged in during data analysis are given below followed by a detailed description of how they were enacted:

- Overall reading of the data
- Organization of the data into sets
- Selecting and ‘coding’ of data sets
- Reduction and transformation of data to reveal ‘essential structures’
- Thematization
- Creating of the first summary description of the ‘essence’ of the phenomenon
- Refining of the description
- Validation of the summary description of the essence of the phenomenon

To determine the essential structures I began by reading through/examining all the data (interview protocols, field notes, participant journals, and collected documents/artifacts) in order to gain familiarity with them and get an overall sense of the data. Next I organized the data into sets according to participant, so that all the data concerning a particular participant: interview protocols, field notes, journal entries, and collected documents/artifacts formed one set. At the end of this step I had nine sets of data (one for each of the nine participants). Having organized the data in this way I moved on to making selections from each data set and coding these. I went
through each data set carefully and selected though highlighting the portions/items that most strongly associated with the phenomenon under investigation (environmental education). Each item selected was coded, that is, a short descriptive note was added that summarized what it seemed to mean and why it was chosen. The initial coding process was open, in that no pre-determined set of codes were used to delimit them. I simply tried to follow the phenomenon through the data in whatever form it appeared. I went through this process systematically with each of nine data sets. At the end of this step I had a selection of data and initial codes.

Next, came the process of reduction and transformation. All the selections and their codes were re-examined. Selections with similar codes were grouped together into unnamed structures. The largest structures, that is, those that occurred most abundantly were deemed essential structures. At this point non-essential structures were eliminated. Code statements in each essential structure were then used to rewrite a single precise descriptive statement to label the structure. Once essential structures were identified, further reduction of data selections took place. Selections of data were kept that best embodied the full nature of the structure. Non-essential or redundant selections were eliminated. At this point I was left with a list of essential structures and selections of data that illustrated them.

Once the essential structures were determined they were reorganized into four themes: the goals of EE; participants’ main understandings about the term ‘environment’; participants’ main understandings about the term ‘education’; and tensions and contradictions in providing outdoor environmental education at an outdoor education centre. This substantive organizational structure was used to produce a summary description of the essence of environmental education at the outdoor centre studied. For this, I went through several rounds of writing and re-writing in an attempt to capture the essence of environmental education (its goals, underpinning ideology
and problematic aspects) in this context. This process proved to be highly reflexive requiring a kind of back and forth between raw data, products of bracketing, and the nascent derivatives of analysis (structures and themes) that Strauss and Corbin (1990) call constant comparative analysis. It was also holistic in the sense that it required the application of varying perspectives, deep engagement and my full attention, a process that Munhall (2007) calls ‘dwelling with the data’ and Elliot Eisner (2002) refers to as ‘educational connoisseurship’. To enhance the validity of the research a draft version of the results of the study was made available to participants for member checking. Their comments were used to revise the chapter and rewrite the summary description so as to capture the true essence of the phenomenon. A final validation of the summary description was done by randomly applying it to randomly chosen sets of raw data to see if it adequately reflected what had occurred in the field.

4.6 Quality Standards

There are different standards by which the quality of educational research is judged (Guba & Lincoln, 1989). Based on the nature of the methodology and methods used during the research project (they were qualitative in nature), I thought Mulholland and Wallace’s (2003) criteria of strength, sharing and service would be most relevant in judging the quality of the final report. Many of the measures taken to enhance these were built into the research design and have been indicated in the sections above. Additional details are provided in this section.

The strength of a study is a measure of how close to the truth it comes. Since this is difficult to determine directly, indirect measures of strength such as evidence of internal consistency and methodological rigorousity are suggested for use. In this research project the process of bracketing; prolonged researcher engagement in the field; triangulation of data
through the use of multiple data sources; and allowing of member checking were built into the methodology as strengthening aids. The process of bracketing in particular, both at the beginning and throughout the study is a significant component that to phenomenological studies which may not be present in other types of qualitative methodologies. To strengthen this final report I have also provided sample artifacts from the research process: a copy of the Research Information/Consent Form and copies of the interview protocols for the two major semi-structured interviews (see Appendixes A, B and C). As an additional strengthening method I also attempted to write the final report using language and a literary style that possesses a high degree of coherence, verisimilitude and interest (Richardson, 1994). Verisimilitude requires that the text ‘ring true’ to the reader. I used a narrative style of writing (Clandinin & Connelly, 2000; Van Maanen, 1988) and detailed descriptions in creating the report in order to enhance verisimilitude. Coherence requires that the study possess an internal consistency or that it all hangs together. Interest requires that it compel readers, causes them to reflect and ideally transform them in some way. Participant feedback during member checking and advice during the project helped with the latter.

The criterion of sharing explains how the research report will be made accessible to possible users (Mulholland & Wallace, 2003). I strove to facilitate sharing by writing the report in a manner and language that would be accessible to the reader. In reporting the results I chose to produce a summary of the essence of the phenomenon so as to weave the findings into a coherent whole that the reader could connect to (Chapter 6, Section 6.1). The criterion of service requires that the researcher explain how the research is useful. The discussion of the findings focuses on the implications and significance of the findings of the study.
4.7 Ethical Considerations

The research carried out represented minimal risk to the participants. Minimal risk means that the probability and magnitude of possible harms implied by participation in the research would be no greater than those encountered by the participant in those aspects of his or her everyday life that relate to the research, or during the performance of routine physical or psychological examinations or tests. The study met this criterion because data collected from participants was in the context of their professional experience which is normal for them. Participant vulnerability was very low since the participants were adults who did not possess any pre-existing physiological, emotional, socio-economic vulnerability that was exacerbated by the research process.

Standard ethical procedures were used throughout the project. Participants were required to sign a basic research information/consent form (Appendix A) before any data was collected from them. In addition to a standard consent script, this document contained salient information about the research project and a clause acknowledging participant right to withdraw without penalty at any time during the research process. Data gathering was almost natural taking the form of informal semi-structured interviews, observation, and journal writing that were minimally invasive, stressful or related to sensitive information. Questions and observations were limited as far as possible to participants’ professional backgrounds, ideas and experiences. Although interviews were audio-taped; no video-taping was conducted. All collected data was stored securely and treated with the utmost confidentiality. Raw data will be destroyed five years after thesis has been submitted. In the thesis, identifying information about participants has been removed and pseudonyms have been used when quoting or referring to them. Deception and intentional non-disclosure were not used in this study so that formal debriefing was not
necessary. Throughout the research process I tried to be upfront, open and honest about the research. As part of the data analysis participants were provided with a draft version of findings to comment upon/critique. These were incorporated in the production of the final report. Upon completion, the complete thesis will be made available to participants, and I will make myself available for discussions arising from the thesis which participants may initiate.

4.8 Limitations

Every study has its strengths and limitations. In this particular case the major strength of the study is also the source of its major limitation. The study is a case study of educators who work at one specific outdoor centre. This means that while the findings are rich and detailed, they are also context specific and not generalizable to all outdoor settings or even all outdoor education centres. Rather the findings represent a fine grained view of the situation at one outdoor centre and as such one possibility for the conceptualization and enactment of environmental education in an outdoor setting.

4.9 Summary

In this chapter I explored the methodology and methods used to carry out a hermeneutic phenomenological cased study of environmental education at one outdoor education centre. Since phenomenology is still a relatively uncommon research method in education, a summary of its main theoretical antecedents was included to help the reader understand the nature and process of the research. This was followed by detailed descriptions of the research context, methods of data gathering and methods of data analysis. Quality standards, ethical considerations and limitations inherent to the project were also described. In the next chapter (Chapter 5) I present the findings of the study derived from the completion of the analysis described above. In
Chapter 6 I discuss the findings in the light of the literature review provided in Chapters 2 and 3 and explore the implications of these for the field.
5  Findings

This chapter describes the findings of the study. As discussed in the previous chapter, two important purposes of the phenomenological research process are to (i) determine the essential structures that characterize a phenomenon and (ii) use these to produce a summary description that captures the essence of the phenomenon. Keeping in line with these guidelines, this chapter will focus on the first of these purposes. The essential structures, organized into clustering themes are named and described in detail. Excerpts from the data have been included to give the reader a clear idea of the defining characteristics of each structure, exactly what it means and how the structure was derived from the data. Where data is presented, pseudonyms have been used to replace the names of participants and the study site so as to protect the participants’ privacy. The next chapter will begin with the summary description that captures the essence of the phenomenon.

5.1  Essential Structures of EE at an Outdoor Centre

The essential structures that characterize the nature of EE at an outdoor centre have been organized into four themes which, to a great extent, mirror the research questions for the research project. These themes are: (1) the goals of EE; (2) educators’ main understandings of the term environment; (3) educators’ main understandings of the term education and (4) tensions and contradictions of providing EE at an outdoor centre. Each theme consists of two or more essential structures as summarized in Table 2.

Table 2

Summary of Findings: Themes and Structures
<table>
<thead>
<tr>
<th>Theme</th>
<th>Structures</th>
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<tbody>
<tr>
<td>The goals of EE</td>
<td>1. Fostering healthy people and healthy environments</td>
</tr>
<tr>
<td></td>
<td>a. ‘Connecting’ people to the environment</td>
</tr>
<tr>
<td></td>
<td>b. Encouraging a care-based relational orientation to the environment</td>
</tr>
<tr>
<td></td>
<td>c. Building agency for living low consumption, low impact lifestyles</td>
</tr>
<tr>
<td>Educators’ main understandings of the term ‘the environment’</td>
<td>1. Nature as a living Other</td>
</tr>
<tr>
<td></td>
<td>2. Nature as a natural teacher</td>
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<td></td>
<td>3. Ecocentric understandings about the environment</td>
</tr>
<tr>
<td>Educators main understandings of the term ‘education’</td>
<td>1. A care-based endeavor</td>
</tr>
<tr>
<td></td>
<td>2. A partiality for experiential education</td>
</tr>
<tr>
<td></td>
<td>3. Education for agency</td>
</tr>
<tr>
<td>Tensions and contradictions of providing EE at the outdoor education centre</td>
<td>1. EE: One of the multiple roles of outdoor education</td>
</tr>
<tr>
<td></td>
<td>2. Idealized expectations vs. practical realities</td>
</tr>
<tr>
<td></td>
<td>3. Incompatibilities with the structural regularities of mainstream schooling</td>
</tr>
</tbody>
</table>
5.1.1 Theme 1- The Goals of EE

*Structure 1: Fostering healthy people and healthy environments* - Based on analyses of all the data collected (interviews, my observations, and collected artifacts) the overall goal for environmental education, and indeed all the work that educators do at the outdoor centre, is towards encouraging and supporting a culture that leads to healthy people and healthy environments. According to one of the educators, “It’s about engaging and inspiring and empowering people to build healthy people and a healthy environment. I think everything flows toward that common goal” (Arlene, Interview 1, p. 10). This educator went on to further clarify the meaning of ‘healthy’ with respect to people and the environment as interpreted by the centre staff.

A healthy person is respectful, grounded and authentic. And they are guided for a common good and purpose. It’s when your actions support what you say as well…that you walk your talk. It means that I am bringing in my mug, not a cup that I am going to throw away every day. (Arlene, Interview1, p. 10)

And:

A healthy environment is one where you have short term and long term planning. It’s an environment that’s sustainable…it’s vibrant and it offers a home to both for plants and animals. (Arlene, Interview1, p. 11)

Based on these comments and others gleaned from my preliminary conversations with the other participants, I began to recognize, early on during data collection, that the overall nature of environmental education at the outdoor centre studied is heavily relational, that is, interpreted by educators in this context, as an effort to encourage a more equitable interplay among people and
Moreover for them, EE is concerned with inspiring deep, intrinsic changes in individuals’
behaviours and characters rather than simply passing along knowledge about the living world or
bringing about superficial, extrinsically motivated actions. According to Bruce, “Environmental
education is much more than trying to ram information down somebody’s throat” (Bruce, Final
Interview, p. 3). And, as noted by Carol, “We try to teach students how to respect not only
themselves, but others and the Earth” (Carol, Interview1, p. 9). The nature of EE at the outdoor
centre is also differentiated from other types of EE by its emphasis on acting out of a positive
locus of love and respect, rather than out of a locus of fear or guilt. According to Danny, “It’s
about stirring up that sense inside of us that says I want to go outside. I want to be around trees, I
want to listen to birds. I want to be by a stream. It’s about stirring that up” (Danny, Interview1,
p. 8). This notion of EE being concerned with bringing about intrinsic positive change within
people is vividly emphasized by Arlene when she says:

If you have a little kid in front of you and they have a bug. Oftentimes, the first
inclination is to stomp on the bug. But you know what….If you can get to student to
watch and observe… [and interact], “How does it move? How does it move compared to
you? And did you know all the systems you have in your body, that’s in that ant that
size?” I have done that with hundreds of students. They are less inclined to stomp on the
bug. So to me it’s about internal [changes]. It’s not about don’t pick or pull the branches
[or stomp on the bug] because we are watching you. It’s about because you feel a
connection for the tree. And then it doesn’t matter where they are. They’re not going to
do it because they care and see the harm they might cause. (Arlene, Interview1, p. 8)

As time went by, these early inklings about the overall nature of EE at the outdoor centre
were confirmed. I also came to realize that the fostering of healthy people and environments,
more than being the overall goal for EE, was indeed the overarching structure embodying the nature of EE in this context. Additionally, this main structure could be divided into three sub-structures observable in the educators’ daily pedagogical practice. These are: ‘connecting’ people to the environment, encouraging a care-based relational orientation towards the environment, and building agency. These sub-structures act in tandem with other ideas to produce a model for EE at the centre summarized in Figure 3 below.

Figure 3

*Simple Model of EE at Faraway Dale*

While there was some indication in the data that complex relationships may exist between the components of the model in practice, when asked directly, many of the study participants voiced the belief that the components act in a simple linear way. In other words, they believe that if people are provided with opportunities to connect to and practice agency for the environment, this will lead to deep care for the environment, which in turn will motivate them to act in more environmentally friendly ways. Also, over time the entire process will result in healthier people and environments. For example:

I think the more you’re connected to the planet and the more conscious and aware you are that what you do has an impact on everything else, then hopefully, you’re more conscious
and aware of your actions… You’re going to think of how can I [sic] create this product in a more sustainable way. (Trevor, Interview 1, p. 10)

If you know something well enough you’re less likely to hurt it. (Bruce, Final Interview, p. 4)

I don’t know about everybody, but certainly there is a better chance. If they enjoy it [the environment] and they have learned something about it…then yeah, I think there is a better chance they will take care of it. (Ellen, Interview 1, p. 5)

Hopefully through their experiences at outdoor centres or outdoor times, they connect and they feel something different. They feel that the environment is important so that the take better care of it. (Kelly, Interview 1, p. 7)

Early on during the data collection, I also realized that the sub-structures themselves were complex constructs. In particular, the words ‘connecting’, ‘care’ and ‘agency’ seemed to hold contextually relevant meanings to the participants and would need to be explained in great detail if a precise understanding of the nature of EE at the outdoor centre was to be achieved. The rest of this theme details the three sub-structures.

Structure 1a: ‘Connecting’ people to the environment- At one time or another during data collection all the participants identified connecting to the environment as a major aspect of environmental education. For example:

I think our role is to connect people to the Earth. I think it’s important that we do that at as early a stage as possible because the more times they are exposed, then the more
concrete the connection they make…If students already have a connection, I think our role is to ask them to expand it. (Neesha, Interview1, p. 8)

I think our role really is to connect students to the natural environment, and keep them connected in a positive way. (Kelly, Interview1, p. 3)

Nature exists and allows us to exist. So we should be connected to it. That’s what I am about and that’s why I am here—giving the opportunity for people to be connected to the thing that allows them to be here. (Trevor, Final Interview, p. 4)

Additionally, this concept of connecting to the environment was generally underpinned by the assumptions that humans have an in-built, fundamental need to do so and that the negative environmental situation we find ourselves in now is greatly a result of the pathological disconnection of people from nature bought about by flawed modern lifestyles. Consider the opinions of Keith and Danny when asked if everyone could connect to the Earth:

I think everyone can [connect to nature] because we come from the Earth. I think you might not be open to it necessarily because you haven’t had those experiences that will allow your being, your soul to open up to what’s there. But I think in every kid here I see a little bit of it. (Keith, Interview1, p. 8)

I think we are born with it if we are living on this planet. But it’s that nature-nurture thing. It’s whether that’s nurtured within us. I think it could be stopped because of our nurture. So if we don’t connect with nature we are not going to care. And unfortunately the majority of us don’t care. We have lost that ability. (Danny, Interview1, p. 8)
The study participants’ meaning of the phrase ‘connecting to the environment’ is difficult to convey. When asked directly about what it means to connect their answers varied. They alluded to “understanding how amazing nature is” (Carol, Interview1, p. 9), “catching a feeling about being outdoors” (Kelly, Interview1, p. 3), “bringing awareness of their [the students] place on the planet” (Trevor, Interview1, p. 8), “making a powerful physical connection” (Ellen, Interview1, p. 9) and reaching a sense that the environment “is teaching me as much about myself as I am learning about it” (Bruce, Interview1, p. 13). However no-one was able to fully express what the term means or what they are trying to achieve in practice. As time passed during the research process, the meaning of connecting to the environment slowly came into focus for me. It became clear that connecting contains a cognitive aspect, but at the same time is more than simply understanding facts or ideas about the environment. It implies the formation of a personal bond with nature—one that includes physical, emotional and spiritual components in addition to a cognitive aspect. The bond is also a tangible and positive one that is not a burden or threat to either party but rather symbiotic in nature. It can be compared to the bond that ties a mother to an unborn child. This meaning was conveyed through my interviews with participants especially when they were trying to explain the nature of their work and in my shared experiences of their activities during educational field sessions with visiting students.

During his first interview, Keith indicated the strong personal aspect of connecting to nature.

I want them to have a personal relationship with the environment. I want them to break down that insecurity and be able to make a connection. Sometimes here at Faraway Dale there is a fox on the hill. I want them to see the fox, enjoy it and not tell anybody. Not as an act of selfish, but as an act of connection. That fox is showing itself to you. Or you are
seeing that fox because you have an awareness and you’ve move away from the fold and you’ve found your place. (Keith, Interview1, p. 11)

I saw this emphasis on building a personal connection enacted on several occasions during educational field sessions with students. For example during the program ‘Growth and Changes in Plants’ (Bruce, Field Visit 3), students were introduced to the basics of identifying different types of forest plants in a planned hike through the forest. Bruce prefaced the activity by comparing knowing the name of a tree/plant to knowing the name of a person. He explained that knowing someone’s name is usually one of the first stages in getting to know them and building a personal relationship (becoming friends) with them. By allegory, he noted that it is important that we learn the name of trees/pants around us as part of the process of getting to know plants. This explanation seemed to satisfy many of the students in this group, so much so, that none of them, then, or later on, queried the purpose or value of the activity. Another example of encouraging students to build a personal connection to nature took place during my first field visit with Arlene. During a hike through the Sugar Bush (Maple Forest) early in spring, the group came upon a robin that was heartily marking out its territory with an exuberant burst of birdsong. Some of the students noticed him, and Arlene seized upon the opportunity to encourage students to make a personal connection to another species. She asked the group if they would like to talk to the bird. Then she proceeded to imitate the bird’s call and get him to respond to her. This activity seemed particularly effective in piquing the students’ interest to connect to birds. Throughout the rest of the hike I noticed several students trying to talk to the birds they came across by imitating them. After lunch the class requested that Arlene provide them with more opportunities to interact with birds. She responded by taking them to a bird feeding station where, with care, it was possible to get close to a variety of birds.
During her first interview, Neesha conveyed the intimate physicality of connecting to nature. First, in describing how she tries to bring about connections to plants through physical sensory experience she said:

What I do is to find plants that connect to them. So [if you were an early settler] you would have made tea of cedar every day because of its Vitamin C content…I make cedar tea for them and ask them to taste it. I don’t force them, but ask them to at least taste it. If they don’t like it after they taste it, they are allowed to pour it off. (Neesha, Interview 1, p. 4)

Later in explaining why direct outdoor experience is essential to making connections as compared to interacting with phenomena on television or books she noted:

It [television and books] doesn’t connect you in the same way. As a visual [sic] learner I need to touch it. I need to stand there looking at that rotting compost. I need to have a worm in my hand… And I’ll do that with the student. I want them to touch it, to feel that it’s slimy and cold, because that is going to come away with a memory that sticks. What you see on a t.v screen, there is nothing there to touch, to connect with. (Neesha, Interview 1, p. 12)

The physicality of connecting with nature was also demonstrated through various educational activities. One such representative activity is ‘Hug a Tree’. I was fortunate to witness it on several occasions on field visits with different educators (for example Arlene, Field Visit 1; Trevor, Field Visit 1; Ellen, Field Visit 2) as a part of the ‘Maple Syrup Program’. The Maple Syrup program is a specialized program that takes place in March-April. It is designed to take students through the process of how maple syrup is made, from tree to final product. Hug a Tree
usually occurs somewhere on the morning hike through the forest, between students being taught how to identify a maple tree, how a tree makes sap and tapping a tree for sap. Students are simply invited to identify a maple tree and give it a hug as part of the process of getting to know it or thanking it for providing us with food. The activity is quite powerful with far-reaching consequences. As Trevor put it, “In some ways it’s [tree hugging] a bit silly. But at the same time you’re hugging a tree. It’s intimate and you’re connected to it. You open yourself up to something when you do that” (Trevor, Field Visit 1, p. 3). Another activity that demonstrated the physicality of connecting is ‘Touch a Bug’. This activity is part of the ‘Critter Search’ program. In it, students are invited to physically interact with an invertebrate animal by picking it up and allowing it to walk on the palm of their hands. The animal is always collected from its natural environment such as the compost heap or under a log. Much care is taken to only choose safe animals such as slugs, snails or earthworms. After interacting with the animal, and observing it carefully, students are always required to return the animal to its natural habitat. On the occasions I witnessed this activity, not all students were keen to touch a bug. But for those that did, the effect was powerful, particularly if they had not done so before. They usually named it in the debriefing session later in the day on as one of their most memorable experiences of the day.

In elucidating what it means to connect with nature it became clear that connecting has different dimensions based on the level of disconnect of students. For students who are highly disconnected the primary objective is to get them to be comfortable in nature. For those who are comfortable, the objective is to foster a positive interest in nature and the environment. Consider following comments:

Probably my primary objective with any class is that they are comfortable outdoors and that they have enjoyed being out there. ‘Cause at a simple level each class is coming from
a different place. You don’t know what their backgrounds are, how much time they have spent outdoors or what their comfort level is. So if they leave here knowing that they have enjoyed and been comfortable outdoors, that’s a good start ‘cause it means they will want to do it again…Besides comfort level, if I have peaked their interest about some outdoor things and how the outdoor is related to them, like if they are interested in animals, that would be the next thing. (Ellen, Interview1, p. 5)

And

We get students here that don’t play outside because of where they live. It’s not safe to play outside. So I have students that are afraid of dirt. They think it’s a bad thing. I have students that are terribly afraid of insects because in their house insects are a bad thing. And they don’t play outside so they don’t know what’s normal. So for me part of my role is making young people more comfortable being out of doors, knowing that it is safe in an area that is safe. (Neesha, Interview1, p. 2)

These statements further imply that connecting contains a large emotional component and that outdoor educators make great efforts to provide children with experiences that will build positive emotions with respect to the environment. Indeed the idea of making activities/learning fun and engaging for the students is a fundamental principle that educators work with. According to Arlene every program at Faraway Dale must be “active, engaging, and outdoors” (Arlene, Interview1, p. 4). If any one of these aspects is missing then the program is not suitable for Faraway Dale.

I saw this emotional component of connecting enacted in every field session I observed. At the beginning of every visit, students were instructed on how to interact with the environment
in a safe and enjoyable ways. In winter time they were advised about wearing appropriate clothing to keep warm in the cold, shown how to walk safely on icy ground and appraised of the dangers of waterways. In springtime the same items were covered for rainy weather and melting ice. At all times they were shown how to interact safely with nature especially wild animals: to be alert but quiet and provide adequate space for animals to go about their business. During outdoor sessions the joy, wonder and beauty of nature were emphasized rather than the strangeness, scariness or dirtiness of it. Even falling down in the snow was transformed into a game for the students to make snow angels or have a good roll about. At the end of cold winter days hot chocolate was offered to students to help them to warm up before they left.

While all the outdoor centre’s programs and activities have engagement as an inbuilt component, some programs seemed particularly designed to target this emotional element. A typical daytrip to Faraway Dale consists of two programs: a morning session and an afternoon session. The morning session is more academic. The afternoon session, especially in winter, is designed for students to have fun in the winter environment. For example, students may engage in Winter Carnival—a series of games that incorporate snowy, cold conditions. A safe Tubing Hill is also set up for kids to slide down. While I was there, this latter seemed one of the highlights of the visiting students’ day in the winter time, something many looked forward to from the beginning of the day. One example of a morning program that seemed to target the emotional component of making kids comfortable with the natural environment is ‘Mapping’. At Faraway Dale, a series of these programs exist catering to students of different ages and skills. A Mapping program allows students to acquire and hone the skills of map reading and navigation by sending them out in small groups to do orienteering activities in the forest. I observed three of these programs (Ellen, Field Visit 3, Arlene, Field Visit 2 and Neesha, Field Visit 3). On each occasion the students were initially apprehensive about going out by themselves. They were
especially afraid of getting lost. But every time, by the end of the activity, most of the students were excited, and enthusiastic to share stories of their adventures and observations. On one occasion (Arlene, Field Visit 2), groups of students came back with stories of encounters with a deer and observations of a hawk’s nest with eggs in it; experiences they had never had before and made more special for them because they had done them on their own without adults.

In addition to strong cognitive, physical and emotional components, several participants alluded to a deeper meaning for connecting to the environment; one with metaphysical qualities to it. When asked to elaborate on the meaning of connection, Danny responded:

Connecting with nature is leaving your regular world behind in the city, even in a rural community, and going into a forest or a meadow or a river or a lake and just kind of being still in that place. And by being still, it does not mean you are motionless. But it just means you’re quieting yourself…What I mean by connecting is recognizing that there is a wind blowing but it is a very small wind. Or recognizing that a leaf shimmers in a certain way… Being sensitive to things around you, hearing things differently, feeling it on your skin. That’s connecting for me. (Danny, Interview 1, p. 7)

Danny’s comment implies that connecting is a more than a physical bonding or something that can simply or rationally be explained. It involves touching a person’s consciousness and inner heart. For me this is the true distinction between ‘knowing about’ and ‘connecting to’ and a true advantage of EE in this context. Knowing about the environment is limited to the physical realm, to the mind and body. Connecting to the environment includes these but also has the potential to reach a person at a deeper soul level. This deeper meaning of connecting was reiterated by Keith in his attempt to answer the same question:
It [connection] means finding your place. I think it means seeing where you belong. And that’s not about looking down and going here I am and there is everything. But standing where you are and going, “This is my world. This is the air I breathe. This is the water I drink.” And knowing there is a whole world out there that you can live in, and be, and prosper. And it doesn’t involve money and status. It involves touching, and smelling, and looking, and feeling in your heart, “This is where I belong”. (Keith, Interview 1, p. 11)

During my time at Faraway Dale I saw attempts at fostering this metaphysical connection to nature, but was never fortunate to witness its successful enactment. However, its successful enactment came through in educators’ stories of past experiences with environmental education. One particularly outstanding story of this kind was related by Trevor during my first interview with him. I had asked them to share a memorable successful experience of his work with outdoor environmental education. This is the story he shared:

It happened last year, where I had a class of Grade 2 or 3. There was a kid who was just wired: always talking out of turn, never putting up his hand; just shouting things out, blurtling things out. And so I am doing the introduction to our hike, and constantly sort of managing the behaviour of this one student… We went for our hike, and we got to the river, and I challenged them [the group] to not say anything for ten seconds. So we just stopped and we were listening and we could hear the river rolling in front of us. They had their eyes closed. And of course this wiry hyper kid was the first one to break the silence. But he broke the silence by saying something like, “This is the sound of calm.” And it was just like one of those Zen moments. This class had been crazy and wild, especially this kid. And everybody was quiet for ten seconds, and all you heard was the river flowing. It was a moment of Zen and he felt it. He was the first one to identify it.
Trevor ended his story with the insight, that you can teach about the natural world and how it works but connecting is more than that, “It’s that peace and being within yourself that nature provides in a unique way” (Trevor, Interview1, p. 12).

Connecting to nature then, in the context of the outdoor centre, is a multi-faceted process with cognitive, physical, emotional and metaphysical aspects. At the outdoor centre many activities are designed to foster it. As Bruce neatly summarized:

Part of what we do here is to connect with the kid at whatever level it is. So we do a quick walk, we do a bit of a run, we do a snow angel. We talk to a tree, we follow the river, we talk about ducks. We catch snowflakes on our tongue. We hug a tree. We pick up a piece of garbage. All those things will hopefully connect with one student somewhere along the line. (Bruce, Interview1, p. 13)

It is important to note, however, that for these educators it is essential that these activities bring students into direct contact with nature— “real life stuff” rather than “book stuff” (Arlene, Field Visit 1, p. 6). These educators also insist that connecting to the natural world is essential to environmental education because it is more impactful in bringing about intrinsic genuine motivation to act for the environment (as discussed in the previous section). They (outdoor educators) also suggest that connecting may be especially important for many urban and immigrant children who in their opinions seem to have a greater sense of disconnect with the natural world around them.

Structure 1b: Encouraging a care-based relational orientation to the environment- In Theme 1, Structure 1a I discussed what connecting to nature means to educators at the outdoor centre. It was noted that this process includes a significant emotional component and that a large part of
educators’ work is providing students with experiences to build strong positive emotions towards the natural environment. Indeed, working with non-cognitive components is a main feature of education at the outdoor centre, so that to some extent the structure discussed in this sub-section is an elaboration of the emotional component of connecting to nature. It details the nature of the positive emotional outlook, designated here as a ‘care-based relational orientation’, that educators at the centre seek to nurture in students as part of their environmental education efforts.

Early on in the research process, all the participants identified a care-based relational orientation to the environment as the one they most closely identify with in their personal lives. This came across in the way they spoke about nature and their own association with it.

I see nature as being a necessary place for humans to spend time, to be still, and to be quiet. To kind of reconnect and to recognize that humans are part of the natural world…So for me when I am in nature, I feel I am very much a part of it. (Danny, Interview 1, p. 7)

Outdoors to me is much more…It’s fluid and there’s [sic] no boundaries. And you can take the direction that most interests you but you’re still in line with what you’re trying to do. So whether I follow the fox trail or follow the river, something has caught my attention. And I am enjoying it and I am learning from it and the environment is talking to me. (Bruce, Interview 1, p. 13)

Nature always calms me. It gives order to the chaotic world. It’s a place I can just go and be calm and not have to prove to anything. (Keith, Interview 1, p. 8)
Furthermore they indicated that this is the orientation they encourage toward the environment in their work with students. According to Danny, “I hope to instill that [a care-based relational orientation] a little bit in the students when they’re here” (Danny, Interview 1, p. 7). And in Carol’s opinion, “I think it’s important for them [students] to understand how to care for nature and the Earth” (Carol, Interview 1, p. 10). Arlene goes further by identifying Faraway Dale as the context for students to do so when she says that Faraway Dale is a place for students to encounter nature, “face to face, brain to brain, heart to heart” (Fieldnotes, p. 43).

Care, with respect to for the environment, seems to hold a definite meaning to these outdoor educators. Their orientation most reminded me of Nel Nodding’s (2002) explication of an ethic of compassionate care which assumes that people are naturally relational, and seeks to encourage a system of compassionate carers and sensitive cared fors. Applied to environmental education at Faraway Dale students are encouraged to recognize the Earth as a living Other that sustains human life and in turn respond sensitively and positively to form a caring relationship with her. Further this type of care is not primarily derived through a system of rational justice based reasoning but should arise out of an ethic of compassion which comes from a place of emotion and spirit. In other words, one should care for the Earth as one would for a loved Other, out of a natural compulsion, born out of a relational bond rather than valuate her in terms of her material economic or political assets. Reflecting this type of thinking some of the educators identified building a caring relationship with the Earth as the true essence of the ‘environmental ethic’ (for example, Bruce, Final Interview, p. 3) that underpins their work with EE. It is important to note that the whole idea of having a care-based relationship with the environment is based on the assumptions that nature is a living, conscious Other, who cares for us and with whom we are compelled to have a relationship. (This idea is discussed in more detail in Theme 2 below).
Educators in this setting foster a care-based relational orientation to the environment in several ways in their practice; through explicit activities that emphasize the consciousness of other life forms and how they should be treated, and implicitly, by modeling it for students in their own treatment of the environment. It seemed to me that an ethic of compassionate care pervaded all the field visits I observed. It began from the time students arrived at the facility and was reinforced throughout the day. At the beginning of each daytrip, the first student activity is the ‘Group Introduction’. This usually takes the form of an informal group chat. In it educators try to familiarize themselves with the students, introduce the students to safety and etiquette of the facility and outline the schedule for the day. Within this portion of the trip students are also given opportunities to share their expectations for the day and express any apprehensions they may have. The ethic of care is strongly introduced during the safety/etiquette portion of the introduction. I saw it enacted in two forms. The first is the ‘No pick, No pull, No pocket’ version. In Ellen’s words, during her introductory talk to one group of students, “We have a few rules we live by here at Faraway Dale. And one of the most important ones is ‘no pick, no pull, no pocket’. The forest needs everything it has, so let’s leave it as we find it” (Fieldnotes, p. 39). Keith used a slight variation of this same basic instruction with his class. “Remember”, he said, “No pick, no pull, no harming. The forest is a living thing and we need to respect and cooperate with it (Fieldnotes, p. 65). Arlene and Bruce took a more direct approach to introducing students to their idea of care. They began by telling students that care is an important part of how Faraway Dale operates. They then wrote the letters C, A, R, E vertically on a whiteboard and invited students to suggest words that demonstrate care. Appropriate words were written on the board to complete an acronym for C.A.R.E reflective of an ethic of compassionate care. Students were asked to demonstrate care, as they themselves had defined it, throughout the rest of day.

Another way that a care based orientation to nature is encouraged during this portion of the day
is in educator responses to student apprehensions about Faraway Dale. For example, many students expressed fears about being hurt by wild animals they may encounter on outdoor activities. One response to this fear, that seemed particularly effective with students, was provided by Trevor who invited students to adopt an attitude of care, “Instead of being scared or disgusted by the animal be curious and interested. Instead of screaming, “Ahhhh”…Stroke your chin and say, “Hmm…How interesting…” (Fieldnotes, p. 25).

Throughout the rest of the day, the practice of an ethic of compassionate care is reinforced. Again this is done in several ways. In discussing the natural world with students, educators used positive metaphors and relational language to encourage students to think of other aspects of the Earth as conscious Others worthy of our love and respect, rather than as resources for us to exploit, or monsters to be scared or disgusted by. For example Keith put a positive spin on rain by referring to rain as “liquid sunshine” (Fieldnotes, p. 32) necessary to keep the Earth thriving. On one occasion of spotting a deer on a hike, Trevor spontaneously used the phrase, “The deer showed itself to us” (Trevor, Field Visit 3 p. 1), in recalling the incident later in the day, implying that the deer was a willing, active agent in the event. This method of using relational language shone through in the Maple Syrup program. All the educators used it extensively to convey the idea that trees are conscious beings. They made comparisons to tree sap as blood, roots as feet, scars on the trunks as wounds that heal, and leaves as lungs of the forest.

Another way that educators infuse the notion of care across programs is by modeling it themselves. In students’ presence, they are very careful to treat nature and the natural environment gently and respectfully. They take care not to step on baby trees and tree roots; stick to pathways so as to disrupt the environment as little as possible; remove bits of garbage they
find in the forest; and handle animals carefully and respectfully if they need to. They also overtly recognize and praise and instances when students demonstrate care. On my third field visit with Arlene, one student was particularly careful in handling a snail to the extent that the creature made no attempt to escape but chose to stay with the child, for quite some time crawling from hand to hand. Arlene used this as a teachable moment with the group to point out a stellar example of care in action. Later when I asked her about the significance of the incident, she explained that it was one of those rare and serendipitous moments that sometimes occur in an outdoor setting; an almost perfect practical demonstration of the type of relational care for the natural world that she seeks to foster in students.

Another important point to note here is that the ethic of compassionate care was not only encouraged with respect to the environment. It was also encouraged among students and provided to students by the educators. In fact, I came to realize that the notion of compassionate care is one of the fundamental ideas about education that the educators in this context hold. So that, it meshed well in this setting to form a comprehensive whole. (Educators’ understandings of the term education are discussed further in Theme 3).

*Structure 1c: Building agency for living low consumption, low impact lifestyles* - In addition to fostering connections to the natural environment and care-based relationships with nature, a visit to the centre is designed to inspire students to enact this new relationship. Educators do so by providing opportunities for building agency among students to act in more environmentally friendly ways. Students are encouraged to think critically about their actions, and introduced to alternatives for living low impact, low consumption life styles that will not damage the Earth further. They are also sometimes provided with options that allow them to actively participate in projects that assist in ameliorating human caused damage on the facilities’ grounds. (Educators
understandings of ‘agency’ are discussed in more detail in Theme 3). In the words of the participants:

Part of environmental education is learning to respect how we treat it [the Earth]. Respecting is using what we need to live and not overusing…or choosing when I [sic] buy a new product I am choosing something that’s not going to have a negative impact on me, my environment or my community. (Neesha, Interview 1, p. 10)

And:

Other than not hurting the Earth further, part of what we do is show students how they can actually help. In the Waste Free Lunch program they get the chance to see the garbage they produce and what they can do to reduce that…Depending on the time of year, they may also get to participate in an activity to help repair some damage that people have caused on the grounds. (Arlene, Field Visit 2, p. 3)

As with the substructures already discussed, efforts at building agency are enacted at the centre in a variety of ways. It is demonstrated to students both implicitly by the centre’s staff, and overtly within educational programs. Acting positively for the environment is actively modelled by the centre staff. Most of the staff genuinely model low consumption, low impact lifestyles by bringing waste free lunches, reducing paper use in their professional activities; reusing utensils and wearing recycled clothing. Danny explicitly pointed out his recycled clothing and explained how clothing can be recycled to the group of students on my second field visit with him. During educational sessions educators automatically pick up garbage they find on the facilities grounds, and use established pathways only, to prevent further damage to the forest. Additionally, the centre itself is a model facility that has been modified over the years to include energy efficient and low consumption technologies. Light switches are often labelled to remind
users to take them off when not in use. Compost and recycling bins are readily available throughout the facility. Low flow taps, high efficiency hand dryers and, motion sensing light systems have been installed in various parts of the facility to cut energy consumption. Students are further immersed in ideas for alternative, environmentally friendly lifestyles and technologies through a number of displays spread throughout indoor portions of the facility. These displays highlight recycling, reducing and re-using; and provide information on alternative energy technologies. While I was there plans were afoot at the centre for installing a rain barrel to act as a source of garden water, and replacing water dispensers that use bottled water.

In addition to modelling environmental action, some of the programs at Faraway Dale specifically feature information about alternative values, choices and actions with respect to the environment. Three of these are highlighted here: First Nations Peoples’ lifestyles, Waste Free Lunch Program and Earth Repair Programs (ERPs).

Many programs which make up a day trip at Faraway Dale highlight information of First Nations Peoples’ practices, choices and actions as alternatives of the type of relationship possible towards the natural world/environment. Educators emphasize that, in contrast to many of us today, First Nations people were able to meet their basic needs (food, clothes, shelter, transport and medicine) from the natural world but they did so in low impact, low consumption ways. According to Neesha:

First Nations people consumed for need only. They didn’t go out and say, “Oh, I feel like a new pair of moccasins. Let’s go kill a deer.” Or, “I want a new pair of moccasins because these ones don’t look so good anymore.” They would have gone and killed a deer because their moccasins had a hole in them and they needed to repair them. Or they had grown out of them so they needed to make a new size. (Neesha, Interview1, p. 8)
Educators often extend this line of reasoning to point out to students that the First Nations’ people understanding of nature as sacred—an Other to be treated with compassionate care and respect—is woven into traditional First Nations’ worldviews and culture. For Trevor, “First Nations and other cultures have a more cyclical way of thinking. That they are part of the world and [know] what you do to the world you are doing to yourself” (Trevor, Interview 1, p. 4). He went on to explain that learning about this type of worldview can help students to question mainstream western modern relationships to nature and the environment. Presenting First Nations’ ideology as a contrast to mainstream modern worldviews seems especially appropriate at Faraway Dale since it was once the site of a First Nations’ settlement and some of the flora and fauna is as it would have been then. This means that during almost any program, natural opportunities present themselves for this type of information to be woven in. For example, during the program ‘Early Settlers Sensory Hike’ (Ellen, Field Visit 1), Ellen was able to point out the willow and cedar as common medicinal plants, birch bark as boating material, and other plants and animals that would have acted as sources of food and clothing for people long ago. And in the program ‘Air and Water Everywhere’ (Bruce, Field Visit 2), Bruce was able to point out that water is a significant part of the trout lily, a plant First Nations people would have eaten as a salad substitute. He was also able to invite students to taste it.

Another program, whose focus is on getting students to critically think of the impact of their actions on the environment, is the ‘Waste Free Lunch Program’. Every group that comes to Faraway Dale on a daytrip has a choice of the type of lunch program they want to participate in. They have two options: the Cookout lunch or the Waste Free Lunch. In the latter, students are challenged to pack and bring a waste free lunch to Faraway Dale, that is, one that will result in as least trash possible. At lunch time students are reminded of the challenge and provided with three small containers: a trash can, a recycling bin and a compost bin. (The trash can is the smallest
about 1000 cm³ in size.) They are asked to sort their lunch waste into the three containers. After lunch the activity is debriefed. The educator dumps the contents of each container on the ground and together the group goes through items to check if they were correctly sorted. After sorting, the total volume of each type of waste is compared and students are congratulated if their trash is able to fit into the trash can. To conclude the activity, the trash items are examined in more detail and a discussion of alternatives that students can use to further reduce their trash is discussed. For example, instead of using pre-packaged snacks, the alternative of bulk snacks packed into reusable containers is suggested. During my time at Faraway Dale, I saw this program enacted many times. What struck me was that even though students were able to parrot definitions of the terms recycle and compost before doing the activity, they seemed unable to connect the theoretical constructs of waste production to themselves or their own actions. After the activity, many seemed surprised at the volume of trash that they had created and even more surprised that they could do something about it. On at least one occasion (Fieldnotes p. 62) students declared that they would redo the activity with their teacher on another day and promised to do better in reducing their waste production.

The third type of program that is designed to foster agency in students to act for the environment is the ‘Earth Repair Project’ (ERP). In addition to allowing students to think critically about their impacts on the world around them, the ERP goes a little further by providing students with a positive experience of participating in a project to ameliorate human caused damage in a controlled setting. Opportunities for ERPs are usually identified by centre staff on a continuous basis. They can take many forms, for example, restoring pathways, planting butterfly gardens or medicinal gardens, controlling invasive species and afforestation. Two ERP programs that I observed during data collection were ‘Woodchipping’ (Bruce Field Visit 2; Danny Field Visit 2, Ellen Field Visit 3 and Neesha, Field Visit 3) and ‘Buckthorn Control’
(Arlene, Field Visit 2). In Woodchipping, students were first introduced to the idea of helping the Earth to heal from human caused damage. They were then shown a forest pathway that was well worn from human use. The method of resurfacing the path with a layer of woodchips was demonstrated by the outdoor educator. Students were then provided with buckets, shovels and a pile of woodchips and given a section of the damaged pathway to resurface. The exercise was debriefed on the spot. Students were congratulated for their hard work, and a little more explanation of how woodchips ameliorate human caused pathway damage was provided. While Woodchipping was a common ERP, I was fortunate to see Buckthorn Control, a different type of ERP altogether. At the time of my data collection, one of the meadows at Faraway Dale was being rapidly being overtaken by buckthorn, an invasive species that is non-native to that ecosystem. In this program students were again introduced to the idea of helping the Earth to recover from human caused damage. In this case, Arlene prefaced the activity with some information on invasive species and the human role in introducing them to an ecosystem. She emphasised the difference between killing plants and removing invasive species by defining the latter as not belonging naturally to the ecosystem. Students were then taken to the damaged meadow, provided with tools (clippers, saws, shoves, wheel barrows) and assigned small areas to work on to remove the invasive plants without damaging other plants. At the end of the allotted time, the group was shown the amount of buckthorn they had collectively removed. It seemed to me that participating in an ERP gave students a chance to deepen their relationship with the Earth; to move from using to actually helping. It was also important in giving students a sense of self-efficacy and empowerment that they could do something positive to help the Earth. They often exhibited surprise at what they were able to accomplish with very little adult help in a short space of time. According to Danny:
They can see they can make a difference even if it’s a small difference toward bettering our planet…Having them do Woodchipping on a path helps them to feel that they are part of something greater, something beyond themselves. And it teaches them to look for instances where they can help to take care of the Earth around them. (Danny, Field Visit 2, p. 2)

The importance of building agency to live in more environmentally friendly ways has already been hinted in what has gone before. More than connecting to the natural world and fostering a feeling of care for it, it shows students how they can act on their new understandings. In other words, it provides a bridge between theory and practice, scaffolding students’ in their movement from wanting and thinking about helping the environment, to feeling empowered to do so. Additionally, both Ellen and Carol indicated that there may also be more profound and long term reasons for these types of agency building activities. In discussing the different types of children who visit the centre, Ellen noted that some children are embedded in family lifestyles that are consumptive with respect to the natural environment. For them, the environment is seen as an unlimited resource or a pleasure ground for people to use. She suggested that providing them with alternative perspectives may encourage them to question their behaviours and change in the future:

If you’ve got kids who are water skiing and snow-mobiling at their cottage, and that’s their family lifestyle, you’re not going to change that probably. But maybe, as they get older, they develop a different consciousness and maybe they won’t go snow-mobiling as much. Or maybe they will get a more gas friendly motor boat. Or they might get into some other sport as well. (Ellen, Interview 1, p. 13)
A totally different perspective about the benefit of this component of EE was provided by Carol. When I asked her how programs, such as the ERP were important, she responded:

We almost make it (environmental education) naked of the fact of how to act for [italics added] the Earth. Don’t do this and don’t do that rather than turning it around to show what we should be doing. ‘Cause so many signs say, “Don’t idle your car! Don’t do this!” You feel bad for the students today, especially the younger ones because that’s the message they are getting all the time. (Carol, Interview 1, p. 12)

For me, Carol’s point is an important one. It highlights an important aspect of the nature of EE in the study context. It underscores much of the ideology underpinning practice at the centre. Educators at this outdoor education centre strive to engage positive emotions rather than negative ones in the teaching/learning process. Their emphasis is on forming positive connections; and building care, hope and agency within students with respect to the natural environment. This represents an important difference from mainstream environmental education practice, which has been sharply criticised for fostering negative emotions of guilt and fear and leaving children hopeless and disempowered (Sanera & Shaw, 1996) about environmental problems.

5.1.2 Theme 2- Main Understandings of ‘the Environment’

One of the fundamental assumptions made during the development of this research project, is that the work of educators at the outdoor education centre with EE would be greatly influenced by educators’ fundamental understandings of the terms ‘the environment’ and ‘education’. Early on in the data analysis it became clear that this assumption would be borne out by the collected data. A deeper reading of the structures in Theme 1 indicates that educators’ conception and practice of EE are underpinned by certain root metaphors or fundamental truths
that they hold. Two of these are indeed their understandings of the environment and education. Theme 2 focuses on structures that represent their understandings of the environment especially questions about what it is and how it works, while Theme 3 focuses on relevant structures concerning outdoor educators’ understandings of education.

*Structure 1: Nature as a living Other*- Theme 1 above detailed the participants’ goals for environmental education. Inherent in this discussion, were their understandings of the term environmental education and how it should be enacted. For the outdoor educators studied, EE is a complex process, the overall goal of which is to foster healthy people and environments. It involves immersing students in experiences to: connect them to nature, nurture compassionate care towards her, and build agency for the acting in more environmentally friendly ways. An underlying premise, necessary to make any of these possible, is the notion of nature as a living Other with whom humans can form a relationship.

Throughout the research process all the participants conveyed the notion that nature is a living, conscious Other of intrinsic worth rather than a commodity or thing that humans have a right to selfishly exploit. This root metaphor was readily evidenced through the language they used when talking about nature and the natural environment. The linguistic devices (metaphors, similes, pronouns and adjectives) they most often used were those one would use when talking about a living, conscious being. For example Bruce referred to nature as ‘mother’ (Bruce, Interview 1, p.13) in describing his own relationship to her and Trevor in recalling a field session where we had seen several wild animals said, “Nature decided to show us lots today” (Trevor, Field Visit 3, p. 3). At the same time, it was clear that they strive not to convey the idea of nature or the natural environment in a disneyfied way; that is, as a human dressed up in animal skins or leaves. They are clear that nature is a non-human Other with a will and power of its own. Nature
can therefore be “fun but dangerous” (Danny, Final Interview, p. 6), “uncontrollable” (Fieldnotes, p. 16) and “unpredictable” (Keith, Field Visit 1, p. 2).

While all the educators conveyed their belief of nature as a living Other, subtle distinctions could be discerned about their meaning of ‘otherness’ and the ideal type of relationship that they endorse between humans and nature. These distinctions seemed to be greatly influenced by individuals’ judgments of the importance of humans and human interests in comparison to that of the Others. I was able to recognize three distinct orientations to the human-nature relationship among the participants of this study. The first was neatly summarized by Arlene (Final Interview, p. 5). According to her “We are one”. Despite the possible literal reading that these educators view humans and nature as the same in all respects, this was not the impression I got from my interactions with them. Rather in saying, “We are one”, they conceive of nature and humans as separate but interdependent, equal aspects of the Earth. We are one in that both humans and nature are necessary parts of a larger whole. But at the same time we are separate, discernible components of that whole. This is reflected in these participants view of the human-nature relationship. While neither human nor the non-human world is of greater intrinsic worth, they suggest that humans have a special responsibility towards maintaining the whole—especially taking care of nature and the environment. As Trevor further explains, “We [humans] have a consciousness, and an awareness; a capacity to create and manifest in a way that’s unique among all other beings on this planet” (Final Interview, p. 5). For those who hold this view, then, the relationship between human and nature should be one of mutual respect, with humans taking special responsibility for nature, since in sustaining nature, we are really sustaining the whole.

The second orientation is slightly different. Here humans and nature are conceived of as co-creations of a higher being. Nature is viewed as a gift to humans, but no ordinary gift.
According to Kelly, “I look at it [nature] and I think God created this. I know it’s an amazing thing and an amazing Creator that put it all together” (Kelly, Interview 1, p. 7). Danny extends this sentiment when he says, “Nature points me to God. It points me to the Creator. When I am walking in the forest, I am in His presence—what God kind of intended for us (Danny, Interview 1, p. 7). The relationship implied between humans and nature here is one of sacred stewardship. Humans are clearly superior to nature but have a special mandate to cherish the non-human world as gifts from God.

The final orientation towards nature indicated by several study participants is based on the notion that humans as totally dependent on nature without the opposite being true. In Neesha’s (Interview 1, p. 15) opinion, “The planet was here long before humans were. It’s going to be here after humans are gone. It does not need us to survive, but we need the planet to survive”. In this view, nature is almost conceived of as superior to humans. The human-nature relationship espoused is based on the idea that humans should be humbled by nature. According to Bruce:

The environment is way more important than we are. We can’t survive without it, but without us it would probably be fine. I don’t think we should be taking care of the environment. I think we should be minimizing and repairing the damage we have done.

(Bruce, Final Interview, p. 5)

Structure 2: Nature as a natural teacher- In addition to being a living Other, that is worthy of careful treatment and with whom we can have a personal relationship, several participants ascribed transcendent or more than ordinary qualities to nature. They described the natural world as amazing, mysterious, magical, therapeutic, exciting, and ingenious. For example:
It [nature] is just so different every day. You can step outdoors and it’s so different every day. I mean driving down the hill in spring every day the Sugar Bush looks different. Just with the different growth that comes up. And I think it’s just absolutely amazing. (Carol, Interview 1, p. 8)

And:

Nature is joy! I know there is one plant that I love to introduce people to. It’s called the ‘touch me not’ or jewel plant’. And when you touch the seed pods, they explode in your hand! For a child or an adult, if they have never touched it before, they squeal— kind of a fear and excitement! And I have done it with many people and the excitement is the same. They want to do it again and again to get the same feeling. That’s that excitement, that little explosion, that wonder of something happening that nature can provide. (Kelly, Interview 1, p. 7)

And:

To me nature is ingenious! How did a tree figure out how to bend itself to get to the light? How did something like a burr, which is a seed, figure out how to stick itself onto a body so it can be taken to another place and develop and grow in a new location?

(Trevor, Interview 1, p. 9)

In addition to further establishing the intrinsic value of nature, educators draw upon these transcendent qualities to justify their characterization of nature as a natural teacher. Several expressed the view that nature has often acted as their personal teacher and it can act as a teacher of others as well. The notion of nature as a teacher was introduced to me by Trevor, through an experience he recalled during his my first interview with him, about how he first came to the
realization about the teaching potential of nature. The incident occurred in his teenage years, during a summer camp. During a hike, the hike leader bought out a bottle of colored liquid and a sponge. After telling the group that the liquid was magic potion she allowed them to smell a piece of dry bark. Next she rubbed the sponge soaked with the magic potion on the bark and asked them to smell it again. She allowed them to collect, moisten and smell other objects they could find. The experience ended with her telling them that the magic potion was simply colored water. The heightened scents were the natural scents of nature. (The basic science behind this is that the water makes the scent of any object more available to the senses because it releases more particles from the object). This simple incident acted as an epiphany for Trevor and something he has never forgotten. He enthusiastically expressed how he had never fully realized the unique scents of nature and how he went about for some time after moistening and smelling every object he found. It expanded his appreciation and wonder for nature and the layers of knowledge she possesses. He ended the recollection of this experience with the following statement:

I think when you put yourself at the mercy of the environment and nature it takes care of you to a certain extent, and teaches you lessons. Sometimes nature can be really tough with you and it doesn’t seem to care whether you’re ready or not. You just have to learn this lesson right here, right now. It can be frightening like a lightning storm. And sometimes it can be gentle and kind, like when you have a beautiful, flat water and the wind at your back and you just go along. (Trevor, Interview 1, p. 15)

And again:

If we just let kids muck around, nature will show them…teach them many things, far beyond what books or adults can. (Trevor, Field Visit 3, p. 3)
Based on the root metaphor of nature as a natural teacher, it is not surprising that in their educational work at the outdoor centre most of the educators treat nature as a partner or fellow teacher. In fact, there were those who indicated that in the teaching relationship nature is the superior partner. This was made clear on my second field visit with Danny. During the morning hike a large blue heron appeared. It flew overhead for several minutes and circled the group several times. The group was excited by the incident and Danny allowed nature to take over the class and be the teacher. He encouraged the students to follow and observe the heron while it stayed with us. Later in recalling the incident he commented, “I love it when those moments happen. I would much rather nature teach [sic] than I do” (Danny, Field Visit 2, p. 1).

The use of nature as a teaching partner occurred to varying extents in the work of all the participants. However, during my time at Faraway Dale, I saw it most strongly manifested in the work of Trevor, Arlene and Danny. During my field sessions with each of these educators I noticed that they provided a significant amount of time, in which they spoke little, allowing instead space and time for nature for speak for herself and teach the children. This most often took place during field sessions, in between educator planned activities. The educator would stop talking and the group would simply hike through observing nature or talking among themselves. Sometimes the educator would stop the group at a significant location such as a lookout point or the river’s edge and ask the students to be quiet for a few minutes in that space. When I asked about the significance of type of quiet time in nature, Arlene, responded, “We’re not just walking from here to the tree to just walk by. It’s the whole going through the Sugar Bush and finding their [the students] own wonder and magic” (Arlene, Field Visit 1, p. 9).

I was fortunate to experience the successful partnering with nature as a teacher on at least two occasions. The first took place during the enactment of the Maple Syrup Program with
Danny (Field Visit 1). We had completed the formal part of the program: identifying a maple tree, choosing and tapping a tree. Suddenly, Danny stopped talking and the hike turned into what I assumed was a casual walk out of the Sugar Bush. I eventually realized this was one of Danny’s quiet activities—when he was deferring to nature as a teacher. He deliberately took the group on a circuitous route out of the Sugar Bush. At first, the students, thinking they were on a break, walked along chatting in small groups. But as the route became longer, and more slippery, they became quieter and seemed more aware of the surroundings around them. Suddenly we came upon, fresh fox tracks and fresh fox scat. Danny stopped the group to point these out and noted that we had just missed seeing a fox in the area. A palpable sense of wonder overtook the group in that moment as the students took in the missed opportunity. For the rest of our hike the students actively looked for the fox. We didn’t see it, but because they were being quiet and alert, the group was able to get quite close to a large group of birds at a feeding station and observe them. Later, when I asked Danny if he had planned the activity, he said he had not. He was hoping for something to happen and this time it had paid off. In his interpretation, nature had decided to show that group some things.

The second occasion when I saw the successful use of nature as a teacher occurred on my second field visit with Trevor during the program was ‘Liquids and Solids’. Trevor planned the program around several outdoor activities. In the first, he took the class outside and set up an experiment in the outdoors with ice and water. He put a piece of ice in the shade, one in the sun and another covered with a leaf in the shade. The group returned later to observe what happened to the ice cubes. His was trying to introduce the idea of melting. Next he took the students out into the forest. At various points he poured water onto various solid surfaces, we came across, and asked the students to note what happened. Finally, in a small forest glade he stopped the group, gave them a cup and some water and asked them to try adding different natural objects
they could find to the water, stir it up and see what happened. It was obvious he was trying to teach them about solubility. At this point I finally realized what he was trying to do. He was trying to introduce students to the characteristics of solids and liquids, but he was including nature as a teaching partner, by allowing nature to provide the raw materials and conditions for students to work with. The students went about the tasks enthusiastically, and seemed quite at ease with doing experiments in an indoor setting. Later when I asked Trevor about the advantages of using natural found materials as teaching aids and doing activities in nature he noted:

You can’t have everything that’s outdoors inside. ‘Cause when they scoop up the bit of mud to put in their cup, they might see a cricket or spider or something on the ground and amazed by that. And there’s an intimacy that they experience with nature when you are outdoors that you can’t get indoors. (Trevor, Field Visit 2, p. 2)

On reflection, I now think what he was trying to convey is that allowing nature to be a teaching partner enhances the teaching learning experience, since she can make inquiry activities more realistic or less contrived. She can also act serendipitously and spontaneously to provide unexpected opportunities to engage all students.

Structure 3: Complex ecocentric understandings of the environment- In Chapter 2, I outlined O’Riordan’s (1988) scheme of classifying people’s environmental stance based on their beliefs about the essential nature of the environment. In summary, O’Riordan suggests that people can view the world mechanistically or as a living thing. If they view the world mechanistically they see it as a machine to be technically manipulated and managed as one would any other non-living system. Such people O’Riordan calls technocentrics. They support the use of existing technologies or those yet to be developed as the key to managing the environment and solving
environmental problems. Inherent to the technocentric stance is an extreme type of anthropocentrism, that is, the valuing of human needs and wants above everything else and idea that humans are separate from nature. On the other hand, people can view the world as living, made up of complex, interconnected systems of which humans are a part. O’Riordan calls these people ecocentrics and further classifies them as Gianistic or communal based on power dynamics they assign to the partners in the human nature relationship. If they view nature as an equal with rights of her own, who should be included in environmental decisions they are Gianistic-ecocentrics. If they view the environment as a passive partner for whom humans can make decisions, then they are classified as communal-ecocentrics. To a certain extent communal ecocentrics circumvent the critique of being anthropocentric by equating what is good for humans as what is good for all. Further he does imply that Gianistic-ecocentrics are less anthropocentric, more biocentric in their stance. It is important to note that O’Riordan’s scheme seems to imply that, for ecocentrics, technological intervention in the environment is anathema. Technology is not the major solution to environmental problems. At best technological innovation should be limited to finding low impact, low consumption alternatives to replace existing harmful technologies.

Based on O’Riordan’s (1988) categories, the outdoor educators in this study definitely possess an ecocentric stance with respect to the environment. As noted in Theme 2, Structures 2a and b above, they recognize nature is a living entity, a non-human Other. They further agree that nature is an extremely complex living entity that works in systemic, interconnected ways. They also recognize that humans are a part of nature subject to ecological laws and acknowledge the essentialness of fostering the human-nature relationship. According to Arlene (Interview 1, p. 7), “We [humans] don’t operate in isolation. I think we are deeply connected to the Earth and each other”. And Kelly (Interview 1, p. 7), “We know our environment provides us with everything we
need. And what we do to the environment we do to ourselves.” These ideas were also made evident in their use of the ‘circle of life’ metaphor in their talk about the environment. According to Neesha (Interview1, p. 4), “I think it’s important for all people to know about the circle of life and how everything interacts”.

However beyond this point of classifying them as ecocentrics, it is difficult to further classify them as Gianistic or communal. While the participants were clear that a caring, compassionate relationship should exist between humans and nature, the power dynamics within this relationship are unclear, especially as to the rights of nature. Some suggested that humans are the power brokers in the relationship since humans can clearly have the power to disrupt and hurt nature. According to Trevor, humans can now do whatever they want to the planet. “We can bulldoze the whole planet if we wanted to with the technology we have now” (Trevor, Interview1, p. 6). For him and others, the possession of this type of awesome power, brings with it the responsibility for people to act as compassionate partners and care for nature and the environment. In Ellen’s view:

I like the idea of people as one [equal] component of the environment but I think we are beyond that at this point. I don’t think we can do that anymore. So at this point I would have to go with people as caretakers of the environment. (Ellen, Final Interview, p. 3)

This type of reasoning would suggest that these educators are communal-ecocentrics. But other pieces of evidence undermine this quick categorization. It is clear from other comments and actions that in their view nature is no fragile dependent. Some of the transcendent qualities they ascribe to nature described in Theme 2, Structure 2 above, imply that nature also has a certain amount of resiliency and agency of her own. Caring for the Earth is not the same as doing things for her as one would for a helpless dependent. Rather it is taking action to ameliorate instances of
human caused damage that may be too aggressive for the Earth to manage on her own. This was made clear by Arlene during the discussion following her engagement of students in an ERP to clear an invasive species that was destroying one of Faraway Dale’s meadows. She explained that invasive species are a human caused problem, so while removing them involves killing individuals of another species it is justifiable since these latter do not naturally belong there. She ardently concludes:

> We’re not digging up random trees and everything, because [we know] there is a natural order of succession and meadows change. But in terms of invasive species it makes sense…But it’s never, “Let’s go out and help the Earth”. And we’re going to cut things down. (Arlene, Field Visit 2, p. 1)

Also, educators’ ideas of the role of technology in caring for the environment were unclear. Unlike, O’Riordan’s implication that ecocentrics are likely to be opposed to technological solutions, it seems to me that for these educators this assumption did not hold. This is evidenced by their extensive use of modern technology. Much of their modeling of environmentally friendly practices highlights the use of low impact, low energy alternative technology rather than a reduction of the use of technology. Also, at the time I was at the centre one initiative being considered was the increased use of computer tablets in educational sessions.

One additional point is necessary to include here. Although educators hold an ecocentric stance with respect to the environment, it was not a blatant component of their teaching. It seemed to me that the concept of all life forms being interconnected, or even the complex connections extant within the ecosystems, were not explicitly explored in any of the field sessions I observed. Neither were they described to me as a main educational objective in my conversations with participants. This was initially puzzling to me, but became more
understandable in the light of the following comment that Trevor made in response to the question as to why outdoor experience as provided by Faraway Dale is essential to environmental education. For him, the concepts that underpin ecocentrism are automatic and self-evident once one is present in the natural outdoor environment. It is “not something that you necessarily have to explain out loud, but just kind of see” (Trevor, Interview 1, p. 8). As I reflected on Trevor’s comment I realized that the reason I did not witness ecocentrism being explicitly taught was because the educators expected students to discover it on their own. For example, in the programs ‘Critter Search’ and ‘Habitats and Communities’, one of the activities is ‘Roll a Log’. Students are guided into moving a log or other object that has been on the forest floor for a while. Usually this reveals a mini-ecosystem where a group of inter-dependent life forms live. It is an excellent opportunity to introduce the idea of interconnected living systems. However, on the three occasions I saw this activity, none of the educators chose to do this. Rather they focused on pointing out the variety of animals, allowed students to interact with them and ensured that the log was replaced. I realize now that by simply revealing the ecosystem, the educators believed the students would come to realize the principles of ecocentrism.

In summary then, participants in this study possess complex ecocentric understandings of the environment. In this context, ecocentrism is co-mingled with ideas about the appropriate use of technology, the anthropocentric-biocentric duality, and education. All of these act in various ways to influence educators’ conception and practice of EE.

5.1.3 Theme 3- Main Understandings about Education

It has been noted previously that one of the assumptions of this research project, was that the work of educators at the outdoor education centre with EE would be greatly influenced by
educators’ fundamental understandings of the terms ‘the environment’ and ‘education’. Theme 2 detailed the structures that represent participants’ understandings of the environment. Theme 3 discusses salient structures concerning outdoor educators’ understandings of the term education. It is important to remember that while education is a complex construct with philosophical, psychological, sociological, ethical and political dimensions; I have chosen to focus on the structural constructs that I believe most impact educators’ conceptualization and practice of EE.

**Structure 1: A care based endeavor-** In Theme 1, Structure 1b, compassionate care was identified as the overall orientation towards the environment that educators at Faraway Dale, seek to foster in students. In that section, compassionate care was presented as an orientation toward ethics based on non-cognitive, relational principles that a person can utilize in making decisions, especially those that involve responding to situations comprising others. Applied to education, it seeks to build a system of compassionate carers and sensitive cared fors. Applied to the environment, it involves encouraging students to: recognize the Earth as a living Other; and form a caring relationship with her—one that will allow them to respond sensitively and with loving-kindness to her needs and hurts.

On further analysis of the data, it became clear that the participants support for compassionate care as an orientation towards environmental education stemmed from a deeper orientation of all education being a care-based endeavor. This was indicated in their general talk about education, what it means and how it should operate:

The education we do here is about getting kids outdoors learning and having fun, transforming people through the heart and emotions. (Arlene, Interview1, p. 8)
Education for me is about teaching people not teaching programs. (Kelly, Field Visit 1, p. 2)

It doesn’t matter where they are, I’ll meet people where they are. I mean that’s teaching. You meet people where they are then you extend them. (Arlene, Final Interview, p. 4)

An activity like ‘Tree Factory’ works really well because there are lots of parts and pieces. You can engage anybody in the class. If you have someone who does not want to participate, you can have them off to the side being the root. They don’t have to be the heartwood or centre of attention role. (Trevor, Field Visit 2, p. 1)

[Education is about] just allowing kids to learn through different ways and opportunities of having quiet time and having group answers and sharing emotion and being active. Just incorporating many different learning styles. (Keith, Final Interview, p. 4)

These are just a few of the many quotations that illustrate the care-based root metaphors that guide these educators’ understanding and practice of education. Arlene’s comment demonstrates that the educators’ orientation is primarily non-cognitive targeting the emotions and spirit rather than cognitive faculties. Kelly’s comment demonstrates the relational turn to their practice, in that the focus is on teaching people rather than completing programs. The other comments demonstrate how they endeavor to support the growth of compassionate carers and sensitive cared fors, by providing positive caring educational experiences that are context dependent, inclusive and cater to the diversity of learning styles students may exhibit.

During data collection I saw the care-based orientation toward education manifested in several ways. Nel Noddings (1998; 2002) suggests that care is not something that can be taught as one would teach other topics. Rather, an ethic of care should be embedded into programs and
constantly modeled for students by educators. I observed both of these aspects at work during my field visits at Faraway Dale. Ethics of care in the form of the attitudes of cooperation, respect, open-mindedness, gentleness, equity, inclusivity, care for self and care for others were embedded into all of the centre’s educational programs. From the time they arrive students are introduced to an ethic of care. During the Group Introduction (see p. 123) care is presented as the way things are done at the facility and the attitude students are expected to practice for the day. Within these introductory activities attitudes of care are initially presented as appropriate for determining how to treat the self. Care is then extended as a system appropriate for how we should treat other people and finally proposed as a guide of how we should treat non-human Others (the world).

This initial introduction to care is reinforced throughout the day. While specific examples of fostering care towards the environment were described in Theme 1, Structure 1, it is important to note an orientation of care was pervasive in all educational activities at the centre. For example, inclusivity is an important aspect of all activities assigned to student groups. Special attention is paid to ensuring all visitors (students and parents) have a role in activities so that no one feels excluded. The activity ‘Tree Factory’ is a good example of inclusivity in action. I saw it on my first field visit with Trevor as part of the Maple Syrup Program. Tree Factory is a cooperative learning activity designed to teach students about the structure and function of a tree. Trevor enacted it in the following way. During the morning hike, he introduced students to the main parts of a tree: roots, heartwood, xylem, phloem, sap, leaves. He allowed them to experience (see, touch, taste) these parts. As the morning progressed they were asked to choose a part of the tree they would like to be. Groups of tree-parts were then put together to practice a dramatic action for the part they are representing. After rehearsing for some time, the groups were called together on a field. Here Trevor directed them to arrange themselves to form a tree. They then put the parts in motion to represent how a tree works to make food. The students
seemed to find the activity quite enjoyable. It was also inclusive of everyone since the different roles required different abilities with some roles more visible and active while others were less so. In discussing this activity later on, Trevor identified it as an ideal exemplar of the type of activity educators try to use at Faraway Dale. He specifically named the potential for inclusivity as one of its great strengths. Another example, of how care is embedded within programs is during game or team activities. Many of the activities students engage in during a day visit to the centre often have a cooperative team aspect to them. However, in setting these up, educators tend to take special care to emphasize the fun and friendliness aspects rather than the competitive aspects associated with the activities.

As indicated earlier in this sub-section, the teaching of care requires educators to actively model it for students. At Faraway Dale, care is modeled for students throughout field visits. Educators demonstrate it in the way they treat students and the way they interact with each other in students’ presence. Students are viewed as valuable others to be treated with gentleness, respect, equity and individualized, personal attention. Long before they come to Faraway Dale information is elicited from their school and accompanying teachers so that special accommodations can be made for them. To meet special needs educators often use special equipment as required. My first two field visits with Neesha were with identified special needs groups. One group consisted of a set of students with mixed learning disabilities. Neesha accommodated this group by reducing the pace and complexity of the program activities. The other group consisted of hearing impaired students. In this case she used special audio equipment and sign language to facilitate communication with students. In her interview after this session, Neesha indicated that catering for special needs was nothing remarkable but rather “just another part of the job at Faraway Dale” (Neesha, Field Visit 2, p. 3). While I was there, the centre was
expanding its efforts to accommodate all types of students. They were in the process of acquiring specialized outdoor wheelchairs to accommodate students who have mobility problems.

The centre’s staff members also demonstrate care for all students in several other ways. Three of the most striking examples of these other ways of demonstrating care for students are described in detail here. Firstly, as part of the preparation for a visit students are advised on proper clothing. Despite this, many students arrive inadequately dressed for a day outdoors. To cater for this contingency the centre stocks a large supply of coats, gloves, boots, hats and rain coats to supplement students’ own gear, so they will be comfortable during the visit. I later found out that this stocking of extra clothing was not common to all outdoor centres but something that the Faraway Dale staff decided to initiate on their own. It seems to fit in well with their overall orientation of care. As Bruce put it:

You can’t care about somebody else until you care about yourself. If you’re cold and your feet are wet and you’re having a miserable day you’re not going to care about the person beside you [much less the environment]…Ensure your basic needs are met. So that when you are comfortable you can see if your friend is uncomfortable. (Bruce, Interview1, p. 14)

Other than meeting the physical needs of students, care is modeled to the students throughout the day. On more than one occasion I saw instances where programs or activities were stopped to answer individual questions and provide individual attention to students in distress. On my first field visit with Ellen, twenty minutes into the morning hike, one student complained of feeling ill. After a quick assessment of the situation, Ellen made the decision that the student would be unable to continue the hike. The hike was stopped and the entire group waited until arrangements could be made for that student to be conveyed back to the indoor
shelter where he could recover. Later when I asked her about the incident, Ellen explained that she had considered letting the main group go on, and leaving the child with a parent volunteer to wait for help from the office. But since it was mid-winter and very cold, she did not want to leave anyone behind. She further commented that kids often worry about their peers and she wanted the group to see that the ill child was being well taken care off before we moved on.

Yet another way these educators model care through their treatment of students is in their emphasis on creating a safe learning environment for students. Several educators, in talking about their pedagogy, specifically explained that this is important to them. As Danny volunteered:

One of the things I try to do when I am setting up is I try to create a safe space for students where they are going to feel comfortable and welcome. I mean physical safety is important but I am really big on emotional safety as well. (Danny, Interview 1, p. 2)

These educators seek to create a safe learning environment by setting up intimate, informal learning spaces. Group sizes are kept small (usually set at a maximum of twenty students), circles are used instead of rows to arrange students, and students are asked to sit on mats in indoor spaces. Outside groups often are asked to huddle close together or sit on the ground during discussions, and s-shaped formations are used for walking. Bruce’s setups were unusually informal and intimate. During all three field sessions I attended with him, his home-space setup consisted of a circle of mats around a mock camp fire. He decorated the setting with a taxidermically prepared animal, with animal pelts or other natural items. In speaking to the students in this setting during the Group Introduction and End of Day Debriefing he sat close to them on the ground. According to Keith creating this feeling of safety is important since, in
learning, “We all need to feel like we’re something and that we are validated. And that we have the opportunity to have a voice” (Keith, Interview 1, p. 10).

Care is also modeled to the students in the way the staff work with each other. Sometimes programs are delivered collaboratively by two or more outdoor educators. In these types of sessions staff members are careful to work equitably; demonstrating cooperation, courtesy and mutual respect for each other especially when in the students’ presence. Careful planning between participating educators usually occurs in preparation for these types of sessions. However this time spent planning pays off since cooperatively run sessions usually come off positively with the educators bouncing and building off each other’s ideas and energies during the day. It seemed to me that a great advantage of these types of sessions is the palpable sense of positive camaraderie among staff members that is most often demonstrated. For me, as a researcher, they confirmed the genuineness of the orientation of care which guides these educators’ work. I found myself believing that, for them, care is not pretense or simply a professional attitude but a reflection of their inner beliefs and who they are.

Structure 2: A partiality for experiential education- At the beginning of this section, it was noted that the term education is a complex construct, about which many different ideas, from widely varying fields, exist. Constructs of education can be derived from philosophy, sociology, ethics, psychology, politics and populist notions. What complicates matters further is that even within one derivative field different schools of thought may exist about the nature and practice of education. These different schools often conflict with each other, so that while mainstream education may be dominated by certain ideas, a myriad of alternative orientations to education are also possible. Indeed in carrying out their daily pedagogical practice, practicing teachers often unconsciously make complicated decisions about where they stand on fundamental ideas of
education. Three of these that I found directly impacting the study participants’ work with environmental education are their ideas of: the nature of knowledge, the nature of learning and the nature of the learner. At Faraway Dale, educators seem to have collectively and largely unconsciously made decisions about these matters, so that when asked about theories of education that guide their work the majority immediately named ‘experience’ or ‘experiential education’ as the main descriptor of the educational theory they subscribe to.

Like connecting, participants’ understanding of the term experiential education is difficult to convey. What makes it more difficult to do so is that while formal theories of experiential education exist in scholarly literature (for example Knapp, 1992; Kolb, 1984), I came to realize that participants’ meaning for the term may not always concur with these formal theories. Rather, their understanding is partly theoretical, but also personally derived and combined with everyday meanings of the words experience and education. Initially I found it very difficult to grasp what experiential education in this setting meant. But some weeks into the data collection process, and ironically, as my own experience with them grew I came to understand their theory of experiential education.

Experiential education is underpinned by specific notions of knowledge, the learner and the learning process. With respect to knowledge these educators hold four interconnected alternative ideas. Firstly they believe that knowledge is out there. However it is not something that can simply be transferred from one person to another like pouring water from one vessel to another. Instead knowledge must be actively generated by individual learners. According to Danny (Interview 1, p. 6), “Knowledge is out there, but needs individual effort to realize it”. Danny’s comment indicates that knowledge is not something that can be easily picked up but is something more elusive— knowledge needs to be realized. This comment also illustrates the
second idea of knowledge that educators in this setting hold, that knowing has a strong personal or individual component to it. Thirdly, educators in this context strongly adhere to the notion that knowledge and experience are inextricably connected. Simply put, to do is to know. Concomitantly they show an anathema for book knowledge or propositional knowledge especially doubting the latter’s efficacy. Consider the following comments:

I think unless we experience something then we don’t really know. (Arlene, Interview 1, p. 12)

You can teach stuff from a book. You can do experiments in a lab. You can see the effects on the news or whatever. But I think until you really experience, you don’t really know. (Kelly, Interview 1, p. 12)

This insistence that true knowledge is best achieved through direct personal experience is explained by the fourth fundamental feature of knowledge they strongly hold. For them knowledge is not only a cognitive phenomenon but also has somatic, emotional and spiritual dimensions. Also these non-cognitive components of knowledge, which can only be derived through direct experience, are of more value than the cognitive components. Arlene infers this point when she says:

We can know something cognitively, but knowing something cognitively is very different from experiencing it. In languages other than English they have two words for knowing. Like in French they have ‘Je se’ and ‘Je connais’. And what they are getting at there is that there is knowing from your mind and there’s knowing from experience. So when I talk about ‘knowing’, it’s that knowing from experience…That’s a whole different way
of knowing that isn’t limited to our brain. There’s a whole emotional piece and the aspect of experience that imprints on our body. (Arlene, Interview 1, p. 12)

With respect to the learner, the participants also hold atypical assumptions. Because knowledge has a personal dimension to it, these educators treat the individual learner as the unit of education. Indeed education is primarily about individual personal growth. According to Bruce:

We focus on the individual to strengthen to society. We look at the individual growth of each person in their path, but supporting the society as a whole. (Bruce, Interview 1, p. 4)

And Danny:

Individual growth is what we do here. It’s funny. We try to influence kids to influence the world around them. So that’s more societal growth. But we send the message that it starts with the individual. (Danny, Final Interview, p. 2)

Of note, in comments of this type, is the participants’ qualification that the intense focus on the individual is not selfish. Rather, for them, the individual should be the natural focus if one is to achieve long term societal transformation. Their commitment to the individual is demonstrated in their practice. As described earlier (Theme 3, Structure 1), long before students arrive, plans are made to cater for individuals with special needs. Indeed, in preparing for educational sessions educators seem to focus on providing individuals with the best possible experience based on their capacities and needs on a visit to the centre. Several programs have also been developed target individual personal growth. Mapping is one of these. The centre, offers a graduated series of mapping programs to visiting groups. Basic programs teach mapping skills: common symbols, drawing a map and using a map to get around. Higher level programs engage students in an
increasingly difficult series of orienteering exercises where they use a map to get around in the outdoors to find specific locations or markers. The quest and puzzle components make these types of activities fun for students. A particular program is assigned to a group based on their level of comfort with the outdoors and their mapping skills. The personal growth possible in a mapping exercise is indicated by Kelly in her explanation about the value of these types of programs:

I really like mapping because there are so many things when you do a Mapping program… It’s sending those kids out in their small groups on their own. They’re having [sic] to do their own problem solving… Oftentimes this is the first time they have an opportunity to go out on their own without having an adult attached to their little group. And they have to do quite a bit… whether it’s making sure they’re just getting along or figuring things out for themselves… It’s a wonderful feeling to see the lights turn on in some of the students. (Interview 1, p. 2)

I saw different mapping programs enacted on three occasions (Arlene Field Visit 2, Neesha Field Visit 3, and Ellen Field Visit 3). I experienced the personal growth in students that Kelly mentioned in the form of the positive shift in personal confidence and comfort with the outdoors that students exuded on each occasion after they had completed their assigned orienteering activities.

With respect to the characteristics of learners, the outdoor educators’ studied also suggest that learners have a great capacity for discovery and self-directed learning, that they can learn many things on their own without direct teaching or the intervention of adult teachers. Although many of the educators demonstrated this belief in their educational sessions it was most notable in Trevor’s pedagogical practice. In my field visits with him I observed that in between planned
experiences, he always allowed ample time for students to explore their own interests with as little intervention from him as possible. Also many of his experiential activities were designed to allow a space for self-directed learning. For example during the program ‘Rubbings’ students are given paper and crayons and asked to make rubbings of different natural surfaces in a bid to teach them about patterns in nature. Educators can structure the activity more tightly by limiting the type of surface students do rubbings off. When Trevor did this activity during my second field visit with him, he did not direct the students about which surfaces to focus on. He simply asked them to make rubbings of whatever surfaces they wanted to. In doing this he felt he had struck a balance between providing structure while preserving student autonomy. Later in conversation I had with him regarding his pedagogical choices during the session he said:

If I was that age and you just let me in the forest with a few resources, I would play all day long and you wouldn’t need to teach me anything. I would be figuring it out on my own. And there’s [sic] probably a number of kids in that class who could have fallen into that category, who just need some unstructured time to explore. (Trevor, Field Visit 2, p. 4)

Based on their particular views of knowledge and learners, for these educators, learning or knowledge realization is, by extension, an idiosyncratic process. Because knowledge must be individually realized, they strongly believe that knowing can best be fostered through direct personal experience with a phenomenon. Their job then becomes a process of providing students with effective educational experiences so that knowledge realization can be stimulated. It is here that things become further complicated. These educators insist that an educational experience is different from a mere activity. According to them an educational experience is always active, engaging (fun), immersive, sensory and involves real objects or situations. This latter is most
important since models or simulations do not hold the same appeal or efficacy. Consider the following musings in response to my question of what an educational experience entails:

They’re being physical. They’re using their senses. They’re using their brains. So it’s kind of like a whole body experience being out there. (Kelly, Field Visit 1, p. 1)

Learning should be fun. Experiential learning makes it fun. (Ellen, Interview 1, p. 15)

I believe it’s immersing them in nature. It [immersion] is very tactile. It’s very present. It’s very still. Then we talk about the depth of knowledge within them that they have pulled from their learning experience. (Danny, Interview 1, p. 7)

Experiential education is having all your senses involved in learning. So they’re not just looking and listening to a film. They’re getting in touch with things. They’re getting to smell things. In some cases we even get them to taste things. (Ellen, Interview 1, p. 7)

If you want to teach about a tree, then take a piece of tree and bring it into the classroom (Bruce, Interview 1, p.17).

In addition to the essential characteristics listed above, some educators also alluded to more transcendent aspects of experience:

It [experience] is about consciousness as well as experience. ‘Cause you can go through the motions and not really learn anything. It is not just doing something, but being present while you’re doing something. So you can be sent around the field to blow off steam. And maybe you wipe out and you land on the ground and you see a dandelion or a bug on the dandelion and you’re like, “Wow”! And you’re really present and you see
something in that moment because you’re in the moment. And that’s your own experience. (Trevor, Field Visit 1, p. 2)

Trevor’s comment also suggests that an experience cannot always be fully planned or anticipated. There is a certain amount of serendipity to it. The educators’ belief that experience has an unplanned aspect was indicated in recollections of their most memorable examples of educational experiences they had provided for students. For example, Keith (Interview 1) recalled a spring morning in the meadow. He was hiking with a class when they found themselves unexpectedly surrounded by butterflies. He pointed out the number of butterflies to the group and they stopped to take in the experience. But, according to him, one boy could not recognize a butterfly and kept asking, “Where are the butterflies?” Keith put out his finger to point to a butterfly and the insect landed on his finger. It continued to stay there for some minutes and allowed the group to observe it carefully, much to the amazement of everyone in the group. For him the ‘Butterfly Experience’ remains one of his best teaching experiences. He knows that it impacted the students as well because many identified it at the end of the day as one of their most memorable moments of the visit. Also, some weeks later he received an appreciation card from the class teacher. Included was a drawing by the boy who couldn’t recognize a butterfly. The drawing depicted the incident and carried the caption, ‘My favorite moment at Faraway Dale was when a butterfly landed on Keith’s finger...’

While there are slight variations in individual educators’ interpretation of the nature of an educational experience, all the educators were clear on what they were hoping to achieve. Good experiences should accumulate inside students and act as wellsprings that stimulate growth (knowledge realization) in the years ahead. In addition to this long term effect, an ideal experience should also have an immediate effect. It should lead to an epiphany, that is, a sudden
expansion of the self or a sudden realization which one did not have before the experience. As Danny put it, “I am really hoping that their eyes will open up and they’ll pop! And they’ll be like this is a great experience… I want it to take their breath away” (Danny, Interview1, p. 9)! Additionally they all agree that direct experience with the outdoors is the most impactful form of education that exists. According to Trevor:

You can get an experience from the outside which you can’t get inside. You can learn a lot of details watching tv, but you’re not outside and you’re not experiencing it. And you can watch something on tv and be, “Wow, that’s really cool!” But if you were to watch that in real life outdoors your brain would explode!” (Trevor, Interview1, p. 6)

And Carol:

There was a class that came I remember years ago. And when they came the teacher said they had already done the test for the topic. By the end of the day after they had done out program, the students asked, “Can we do the test again? Now we understand what you were trying to teach us in the classroom”. (Carol, Interview1, p. 10)

In summary then, outdoor educators in this study have stitched together certain ideas about the nature of knowledge, learners and the learning process to create a pedagogical practice that they prefer. They refer to this practice as experiential education.

*Structure 3: Education for agency*- Theme 1, Structure 1c identified agency for living low consumption, low impact lifestyles as one of the goals of environmental education at Faraway Dale. In that section agency was characterized in three ways: as encouraging students to think critically about their actions; introducing them to alternative environmentally friendly choices and providing them with the experience of actively participating in an Earth Repair Project
(ERP). Examples of how each of how educators attempt to achieve agency were also described. This section focuses on the educators’ meanings of the term agency; especially how it is derived from their understanding that agency is a fundamental aspect of education as a whole.

In my final semi-structured interview with participants I tried to further interrogate their fundamental ideas about the overall nature of education. One of the questions I asked was whether they believed education should be geared towards transmitting information or transforming people. I had hoped, through this question, to get into their socio-political understandings of education, as interpreted by Miller and Seller (1985). In response to this query, all the educators agreed that ideally education should be more than transmissive. It should empower people to make changes. In Danny’s words, “I think we focus a bit more on transforming people than transmitting knowledge” (Danny, Final Interview, p. 2). However some also supplemented their response with the caveat that while ideally education should be transformative, in practice this is not always easy to achieve. For example, in his final interview Keith pointed out that while his personal goal is to transform people he is well aware that it is unrealistic to “change the world in a day” or “a person in four hours” (Keith, Final Interview, p. 2), which is about the time a daytrip at Faraway Dale, lasts. Additionally, they were clear that they themselves are not activists and they are not in the business of directly fostering socio-political activism among students or indoctrinating students into any specific behaviours. More specifically, they are adamant that creating student activists for the environment is not a part of their job.

I am not here to make someone an environmentalist. I am not an environmentalist. I care about the environment and have some passion for it, but I am not an environmentalist. I don’t live in a greenhouse. I don’t bike to work each day. But what I do is I try to take
that environmental ethic and try to tweak somebody’s behaviour. (Bruce, Final Interview, p. 3)

I am not going out to be a tree hugger and chain myself to a tree. I am not an activist kind of thing. But hopefully in my own quiet way, and how I behave in the forest will have an impact on the kids. (Ellen, Interview 1, p. 14)

From the comments above it is clear that educators at Faraway Dale ideas of transforming people through education are not equated with creating socio-political activists in the way some educators mean (for example, Alsop & Bencze, 2010; Hodson, 2011). Their overall purpose seems gentler and less direct. For these educators their job is to foster a sense of agency which means showing students how they can help the environment if they choose to. It has to do with the empowerment of students, letting them know that “they’re not here for other people to tell them what to do. They have a voice and they are responsible for themselves [and the environment]” (Arlene, Field Visit 1, p. 1). An important characteristic of agency is its Deweyan (Dewey, 1938) emphasis on respecting student autonomy and choice. For these educators, students should never be indoctrinated into fixed environmental practices or forced becoming activists for the environment. They see education and themselves as educators as having “a responsibility to open all doors” (Trevor, Field Visit 1, p. 1), after which it is up to students to choose their own courses of action from the possibilities provided. As Keith quietly put it, “For me it’s just about creating positive experience and hopefully opening a door for them to get outside and continue to discover in their own ways” (Keith, Final Interview, p. 2). Comments like these strongly reminded me of Dewey’s (1938) definition of education as being for the sake of positive growth; with growth having no greater purpose than creating the conditions for further growth.
Another distinction with respect to agency that Arlene made concerned the idea of helping the environment. After the Buckthorn Removal ERP (see Theme 1, Structure 1c), she emphasized that the goal of environmental education as understood by the staff at Faraway Dale is not to help the Earth impulsive or punctuated way. Any action involving the environment must be carefully thought out. It must take into consideration the natural resilience of nature, the needs and wants of people and the long term well-being of all living things within that system.

It [environmentally friendly behaviour] has to do with sustainability. If we really want to have a meadow long-term as a teaching space, then we need to be quite conscious about invasive species. We’re not digging up random trees and everything. Because there is a natural order of succession and meadows change. But in terms of invasive species, then it makes sense from a long term perspective to remove them…But it’s never just let’s go out and help the Earth! And we’re going to cut things down! (Arlene, Field Visit 2, p. 1)

The implication here is that a sense of agency is more than just inciting students to take action rashly. It is about introducing students to the complexity involved in making environmental choices, providing them with alternative courses of action and fostering the sense that they can think through the issues, make decisions and act on their decisions if they choose to.

In addition to directly expressing it, educators’ goal of fostering a sense agency was demonstrated in their pedagogical practice. It is noteworthy that in the enactment of activities primarily targeting the fostering of agency which I witnessed, students were never asked to make an on the spot commitment to any specific action nor were they bombarded with a slew of guilt ridden, fear inducing information. Rather educators seemed to be making a deliberate effort to provide concrete examples of possible alternative choices and behaviours (see for example the Waste Free lunch activity described in Theme 1, Structure 1c). Additionally, ERPs provided
direct involvement in ameliorating human caused damage to the Earth, rather than simply pointing out the damage that had been done.

For me, the major distinction between educators’ ideas about education for agency and education for activism can be inferred from this latter. Education for agency focuses on creating the conditions for positive behavioural change while still respecting student choice to act in whatever ways they ultimately choose. Education for activism (as it is commonly enacted in mainstream environmental education) is more manipulative, prescribing certain behaviours and persuading students to enact them regardless of their own thoughts and feelings. For educators in this context education for fostering agency is a better fit with their overall orientation to the educative enterprise.

5.1.4 Theme 4- Tensions and Contradictions

Read in isolation, the themes as presented above may suggest that outdoor educators possess clear comprehensive alternative ideas for the theory and practice of environmental education. However in actuality this is not the case. Throughout the research process, I was acutely aware of tensions and contradictions at play in outdoor educators’ ideologies that seemed to be at heart complicating their practice of EE. However, it is important to note though while many of these aspects were disturbing to me, they did not seem to be of points of great concern to the participants who seemed to be caught up in the day to day milieu of practice and were perhaps unable to see inconsistencies within their situation and ideologies. The most salient tensions and contradictions that I saw at work and thought may be of significance to the participants’ practice of EE are presented in this section.
Structure 1: EE: One of the multiple roles of outdoor education- Early on in the data collection process, it became clear that EE is only one aspect of outdoor education as it is practiced at Faraway Dale. In addition to EE, other goals for education at the outdoor centre are: teaching the provincial curriculum, fostering physical fitness through outdoor recreation and character/leadership education. As discussed earlier (Theme 2, Structure 2), these outdoor educators see nature or the outdoors as a natural teacher. So that along with EE, these are other aspects she can naturally teach about. Educators were clearly aware of the multiple goals inherent in their jobs and seem to have reconciled these by compiling them into one overall definition of outdoor education. Here are some of comments about the nature of outdoor education that they made when talking about what their job entails:

Basically it’s [outdoor education is] to enhance kids learning through different experiences; to enhance the curriculum and give teachers another way to present and get learning across to the kids. (Ellen, Interview1, p. 5)

Outdoor education has some standard programming areas and ideas that have lived for eons. Like our survival program, building fire, shelter, knowing how to survive…awareness of plants and animals. Those things are staples. (Trevor, Interview1, p. 2)

Basically my responsibility is to teach students primarily about the outdoors, about nature. How we do that is through the Ontario curriculum. So science and technology, arts, social studies…history as well. All of this happens in an outdoor setting, within the forests and trees along the river. (Danny, Interview1, p. 1)
These statements imply that outdoor education is not just about environmental education but represents a different approach to education from that found in most mainstream indoor settings. Also couched within these statements, is the idea that the multiple roles inherent to outdoor education act together synergistically or at the very least without contradiction to each other. Both Trevor and Danny on different occasions expressed the opinion that environmental learning, character development, physical fitness and emotional development are natural outcomes of being immersed in the outdoor setting. According to Trevor:

The environment is the dominant thing for me. But on an excursion with students we’re outside, we’re walking, we’re moving... So yes, I think that’s [physical fitness is] an important message and a huge benefit that outdoor centres provide. Emotional development- we’re a good setting for that kind of exploration. Group dynamics and personal awareness of how you fit into the group, outdoors is a great setting for that.

(Interview 1, p. 8)

Yet despite the participants’ conviction that the multiple roles they are trying to accomplish are complimentary parts of one entity, on several occasions during my field visits with them I found myself wondering if they were not trying to do too much. A typical day trip is only about four hours long, and because of the large population that Faraway Dale services, most groups only visit once a year. Into that allotted timespan educators pack two different programs, a lunch break and sometimes a Waste Free Lunch activity. On almost every field visit, one of the things I frequently recorded in my field notes was the frenzied pace of the day and the shortage of time for students to deeply reflect on the experiences they were participating in. Sometimes, it seemed we were just moving from experience to experience. Also, though infrequently, the day’s experiences did not flow naturally from one to the next, but seemed disjointed as if educators
were simply trying to get as much done as possible. This was most obvious when educators were trying to incorporate a character education aspect into the day. The parent school board that Faraway Dale belongs to has developed a character education program, in which all member schools are required to participate. Each month, a character word is assigned. Educators are asked to incorporate it into their educational programs for that month. On several occasions I could see it was a stretch for the outdoor educators to incorporate the particular word for the month into their programs. For example, exploring the character trait ‘integrity’ in the Maple Syrup program during April; while at the same time teaching the skill of tapping a maple tree, the workings of forest ecosystem and photosynthesis, and allowing kids to participate in the process of making maple syrup; proved particularly challenging to both educators and visitors.

Another consequence of having multiple goals to any enterprise is that frequently one or more goals get marginalized. In my experiences and from educators’ accounts of their work at the outdoor centre, I thought I saw this happening to EE on certain occasions and during certain outdoor programs. In programs that were packed with physical activities and psychomotor skills like the ‘Survival Program’, environmental education objectives were not explicitly addressed or not taken up by educators to the full extent they could have been. On these occasions I was left wondering if opportunities for environmental learning were being wasted. When I asked educators about these occurrences they pointed to the lack of time, and the many other goals they were also trying to accomplish. I also came to realize that what I attributed as the marginalization of EE was not always recognized by the participants as such, especially since they hold the tacit conviction that EE is an embedded, inseparable aspect of outdoor experience. In other words, EE is not a separate body of knowledge or consideration on its own but a natural consequence of being in the outdoors. It also does not always have to be explicitly taught since it is an extension of basic character and emotional growth that students acquire from
being in nature. Consider the following comments made about the relationship between outdoor and environmental education:

To me this [EE] is about being a good and responsible person in our society. And it’s about being connected to other people and the environment. To me it’s like the air I breathe. I don’t know how not to do it, because I don’t know when it wasn’t there. I don’t know how you can be in the environment and not connect to the outdoors. I don’t know how you can connect with the outdoors and not connect with the environment. (Arlene, Interview 1, p. 7)

How can you go outdoors and teach outdoors and not be environmentally focused? The stuff [we do] is not explicitly environmental education, but personally I think that is the basis of what we do. We pile stuff on it. We don’t ever talk about it, sort of like the elephant in the corner of the room. It’s what we do. It runs through everything we do. It’s what we are trying to accomplish. (Bruce, Field Visit 1, p. 3)

I came here as a student and it was called an outdoor education centre. Did I do some environmental learning? Yes! Was it called environmental education? No! I don’t see one as more important than the other. I see them together. (Keith, Interview 1, p. 12)

This idea that EE is not something that needs to be explicitly taught was disturbing to me because it varied significantly from my own ideas derived from mainstream thought that EE is a discipline on its own that needs to be explicitly addressed by educational systems (Hungerford, Peyton Wilke, 1983; UNESCO-UNEP, 1978).

It also led me to identify another tension in this context: the philosophical incongruence of the diverse goals of outdoor education. In my time at the centre, it seemed to me that two
philosophical bases were at work in many programs: ecocentric and humanistic. An ecocentric stance emphasizes the equity and interconnectedness of all aspects of the environment, whereas a humanistic stance focuses on humans, without explicit consideration of any others. I often saw these acting in conflict on a typical daytrip and even within the same program. While at the centre, it seemed clear to me that a humanistic base underpins many classic outdoor experiences especially those that focus on physical fitness, emotional growth and building leadership skills; whereas an ecocentric base was adopted in newer activities that are environmentally focused.

The shift from one philosophical base to another was sometimes stark from morning to evening, if very different programs were chosen by the visiting group. For example, during my third field visit with Bruce, the morning program was ‘Growth and Changes in Plants’. It consisted of a morning hike that took students around Faraway Dale to experience different types of plants in different stages of development. Bruce was careful to emphasize ecocentric principles like treating all living things gently and observing the interconnectedness of the forest ecosystem.

After lunch the evening program was ‘Early Settler Games’. Students were taken to a field, placed in teams and engaged in traditional pioneer games. The outdoor environment was used as a site for the games and place of fun and challenge. While students learned some history, social studies, had fun in the outdoors and got some physical exercise, the evening program clearly emphasized different values from the morning program. In the afternoon, the environment was simply used as a location for human focused growth. The ecocentrism of the morning had been left behind. In this case, no attempt was made to bridge both programs. I was left wondering what message the visiting students left with, with respect to the type of relationship humans should have with the environment. It is important to note that not all daytrips are like those described above. Sometimes both programs have an ecocentric focus. For example, the daytrip for my second field visit with Bruce consisted of a morning program of ‘Air and Water
Everywhere’, where students explored the existence of air and water in its various forms in the forest ecosystem; the evening program was an Earth Repair Project which engaged students in repairing a pathway. The ecocentric foci of both programs were combined with humanistic goals of teamwork and building leadership skills through an ethic of care to make a coherent whole.

One disturbing aspect of this tension is that the educators generally showed little cognizance of it and little willingness to explore it more deeply (at least with me). Indeed when I tried to probe their thoughts about why some programs work better together than others they often suggested that the answer lay in the nature of the group or in the serendipity of the day. In answer to any in-depth questioning about possible theoretical inconsistencies within their practice I was often treated to the frustrating dismissal that focusing on theoretical inconsistencies was being a bit hypercritical. They were particularly defensive of any criticism that some of the traditional (and strongly humanistic) components of outdoor programs may be antithetical to environmental learning. For example when I asked directly if the fun or recreational goals of some outdoor activities are at odds with ecocentric thinking Danny responded in the following way:

I firmly believe in those types of things [recreation in the outdoors]. But they have to be set up in an environmentally friendly way. I think if you do them carefully, if you do a study of where you’re going to put things and how you’re going to put them in place…I think if you do that you’re absolutely fine (Danny, Interview1, p. 11).

While I agree with Danny that the humanistic goals of some outdoor activities do not have to undermine the environment, in my opinion the deep thinking he suggests that is necessary to bridge the gap between traditional humanistic activities and ecocentric goals was not always evident within the work of educators at Faraway Dale (at least while I was there). In summary
then, it seems that at Faraway Dale outdoor educators understanding and practice of EE remains to some extent bound up with traditional ideas of outdoor education. And while they see EE as an intrinsic, embedded part of outdoor education, they may not have fully explored the theoretical implications of such a stance. This (in my opinion) leads to contradictions in their pedagogical practice.

*Structure 2: Idealized expectations vs. practical realities* - I often wonder if it is possible to be any type of educator without being an idealist. All teachers to some extent have idealized expectations of the nature of education, learners and the teaching/learning process which do not always translate smoothly into practice. While this theory-practice or rhetoric-reality gap is a well-documented phenomenon in educational literature (for example, Korthagen & Kessels, 1999), it is also established that successful teachers to varying extents find ways to bridge that gap as they become more experienced (for example, Nuthall, 2004). To some extent the latter half of this statement did not seem to hold true for the outdoor educators at Faraway Dale. Although all of the educators who participated in the study were relatively experienced (with at least 10 years outdoor teaching experience), one of the most acute sources of tension that they face on a daily basis has to do with the gap between their idealized expectations of what should occur during a typical daytrip versus what usually occurs.

In particular they seem to hold certain expectations of the learners and the learning process that rarely occurs in practice. With respect to learners, Keith explained, “When I am outside, I want kids to be engaged. I want them to be enthralled and enthusiastic about what’s happening in the natural world” (Keith, Interview 1, p. 3). In addition to being self-motivated and interested in nature, other educators expressed their expectations that visiting groups should be respectful, sensitive and cooperative. They should also be open-minded, flexible, curious and
adventurous. These expectations are not surprising. They are directly derived from the educators’ underpinning understandings of education (described in detail in Theme 3), especially their notions of the educative capacity of direct experience; learning as a natural process that occurs through individual effort; and the beliefs that children relish adventure and experience and have a capacity to discover knowledge on their own. To a certain extent the educational programs that these educators create have these expectations built within them, so that one is left to wonder to what extent kids have to come to Faraway Dale with certain attitudes, skills and capacities in order for the educational experiences provided by the centre to be of value. In particular, to what extent do they already have to be compassionate carers, appreciative of people and nature; and ready to learn experientially?

During my time at the centre I never saw a group that fully demonstrated these expected qualities. Indeed on at least one field visit, the visiting group consisted of students who were rude, aggressive, cruel and unmotivated. It was my second field visit with Neesha. The program was Maple Syrup. From the beginning of their morning hike the group was unenthusiastic and unmotivated. Some began grumbling about the cold and wanted to go back indoors. Three boys started a scuffle along the path. They were loud and aggressive, and would not attend to anything Neesha asked of them. As the day progressed the situation did not improve. During a tree sap collecting exercise, some students decided to ride on the branches of the trees. They did not understand the inappropriateness of their behaviour even when Neesha pointed out to them that they were hurting the trees. Another student started screaming because a spider crawled onto his clothes. He killed it before anyone could help him. In the afternoon another scuffle broke out and one student had an emotional meltdown which prompted him to kick trees and break branches. During all of this Neesha remained calm and almost resigned. She bore through the day the best
she could and expressed relief when the day ended. I recorded my thoughts of that day in my field notes. This is an excerpt of what I wrote:

The kids today were so far off the mark that the environmental aspects of the activities were beyond their grasp. They seemed to have no awareness of living things beyond themselves and no interest in them. They were afraid and disgusted of nature. They did not even seem to possess the basic attitudes of equity and cooperation for each other. How can Faraway Dale help students like these? (Fieldnotes, p. 50)

To be fair, the incident with Neesha was exceptional. With the majority of the field visits I observed, the groups tended to be mixed: a few extremely well-behaved students (fulfilling the educators’ expectations), a few badly behaved (opposite to educators’ expectations) and a median group who just seemed to be going along with the day. One of the persistent challenges that nearly all groups seemed to present was that rather than acting in accordance with educators’ beliefs that connecting is natural for all children, a certain proportion of students often expressed and demonstrated fears or disgust of nature. For example, my first field visit with Kelly was ‘Exploring Forest Valley’. It consisted of a long winding hike through the forest to see all the different ecosystems Faraway Dale offers and hopefully see some animals. From the very beginning of the day several students said they were afraid of animals and expressed fear of encountering them. Kelly responded by making light of the situation, and explaining the safety procedure for encountering animals: to be aware, be quiet and give animals a wide space if you encounter them. Fortunately, we didn’t encounter any large wild animals that day. The students expressed relief that they had not at the end of the day. On my second field visit with Bruce, a similar group of students encountered a snake. They began screaming and running. Bruce’s response was to catch the snake and encourage them to touch it. While some students took up
Bruce’s challenge a significant number refused. In both cases it seemed to me that the educators did not give credit to students’ negative reactions to nature having origins in deeper places and how ingrained those can be. Simply put, the educators seemed unable to see beyond their embedded belief that connecting to nature is natural despite some very concrete instances to the contrary.

A disturbing trend, as with the other tensions described in this theme, was that educators were reluctant to explore this problem. Indeed they were very guarded whenever I bought up examples of its occurrence. Moreover, they seemed extremely unwilling to consider the possibility that their idealized expectations could be unrealistic, preferring instead to explain away the incidents as anomalies or things that should not happen but unfortunately do. Consider Bruce’s frustrated comment when I asked him about the notion that some kids seem to find nature scary, dirty, germ-filled and disgusting rather than beautiful and mysterious:

That I don’t understand! Like today, the doorknob that you touch is probably ten times as dirty as a piece of wood in the forest. Yet they are disgusted by something outdoors than indoors! (Bruce, Field Visit 3, p. 3)

Trevor was more judicious in his response to a similar question. He explained that such a response is not natural to human beings and maybe due to some other problem:

I have worked with thousands of students over the years and 99% of them are mystified and blown away and moved when they see things in nature. Anything from an animal to a tunnel a mouse made under the snow. They want to get there. They all want to see that… But at the same time, you know, we get students that come here that have other things on their mind. So it’s hard for them to connect. If they hadn’t had breakfast, or if they are
coming from a broken home…There are lots of reasons why somebody does not connect that has nothing to do with nature. They might not connect whether they were indoors or outdoors. (Trevor, Interview 1, p. 6)

Additionally, both Bruce and Trevor remained certain poor attitudes towards nature are best approached by providing more experience with nature. For example when I asked Bruce what he thought was the way to deal with students with negative attitudes towards nature, he was adamant that only immersion in nature could help:

Nature experience like what we provide here is what they need. I mean like a snake. I am scared of it. Most students are scared. But have you ever touched one? No? Well here is the head. Try! Even if they don’t touch it at least they got that close to it, so maybe next time they will be willing to take the risk and touch it. (Bruce, Field Visit 2, p. 3)

The existence of a wide rhetoric-reality gap in this context is somewhat ironic, because one of the things that many of the participants insisted on at some time or the other during the research process is that they are practical people rather than theoretical. In saying this they mean that their actions are shaped by personal practical knowledge and direct experience rather than academic theory or research. Ellen explained that while she likes reading good books her own experience is what influences her, “I don’t have a specific book’s philosophy or author’s philosophy” (Ellen, Final interview, p. 1). Danny explained that he is mainly influenced “by nature itself”. “I think it’s my passion for the outdoor world that really influences me” (Danny, Final Interview, p. 2). One would think that for persons like these bridging rhetoric-reality gaps would be relatively easy. Their personal, realistic experiences over the years would compel them to modify their ideas and expectations. This, however, is clearly not the case.
For some, one possible explanation of this situation is that some degree of paradigm paralysis may exist within the staff. In other words it may be that many of these educators are so invested in a particular worldview or ideology (especially about outdoor education) that they find it difficult to think beyond it, even in the face of contrary evidence. From their own recollections and experiences of challenges they face in their work lives I got the distinct impression that many of these educators hold ideas that they passionately believe in and are reluctant to give up. However any paradigm paralysis (and I am unsure if this term is even applicable here) may be a symptom rather than an explanation of what is occurring in this context. To me there are several root causes for the rhetoric-reality gap described above. In the literature review (Chapter 3) it was noted that there is a dearth of current quality research being done on outdoor education. Such research, if it existed, would be expected act as a wellspring of ideas to challenge outdoor educators in their thinking and stimulate pedagogical innovation. In its absence these outdoor educators have continued to work with their long held ideas. Also the history of their situation (outdoor educators at Faraway Dale) should be taken into account. Low job security and marginalization of their work by their employers in the past (See Theme 4, Structure 3) may have contributed to a sense of disempowerment that may be the true descriptor of what is going on in this situation.

Whatever their reasons for holding on to ideas contrary to their experience and the reality which exists, what seems clear is that outdoor educators need to reassess the fundamental ideas that underpin their practice. To assist in this process they need to make themselves aware of current research in education and perhaps engage in critical discussion and self-generated research in their field of endeavor.
Structure 3: Incompatibilities with the structural regularities of mainstream schooling- Over the years, several scholars have discussed how mainstream schools are dominated by certain ideologies that result in certain practices (for example, Apple, 2004; Giroux, 1981). Some of these practices which have been found to be common across school systems are referred to as the ‘structural regularities of mainstream schooling’. Furthermore, these structural regularities of mainstream schooling have been shown to be deeply entrenched and oftentimes unrecognized by educators and students within schools. They are also the result of a complex mix of popular culture, sociology, philosophy, history and politics at work within the fabric of societies. For some time now they have acted as a springboard for criticizing mainstream educational practice. Everything, from problems in economy to the marginalization of certain minorities has been linked to invidious regularities of mainstream schooling. In 2007, Stevenson applied the idea to EE. In an insightful article he argued that schools unwittingly continue to be run in ways that are antithetical to the successful implementation of EE within their bounds. During data collection at Faraway Dale, I came to realize that the structural regularities of mainstream schooling may be having an even wider effect. They may also be hampering the work of educators at outdoor centres in their efforts to provide EE.

Faraway Dale Outdoor Education Centre caters to a visitor population drawn from mainstream indoor schools in their vicinity. One of the aspects of outdoor educators’ experiences I sought to explore is the challenges they face in providing EE. Through their stories and from my experiences with them I came to realize that many of the challenges they face can be ascribed to incompatibilities between their ideology and practices, and those of mainstream schooling. Simply put, they often face problems because their ideas and practices do not fit with what teachers, students and education officials from their parent school board are used to. As I described in Themes 2 and 3 many of the ideas about education and the environment that shape
the pedagogical practices at the outdoor centre differ from those of mainstream indoor education. In particular, the outdoor educators at Faraway Dale hold alternative ideas about the nature of knowledge, values, teaching and learning. In their practice they favor non-cognitive aspects of knowledge, the ethics of compassionate care and the idea of nature as a teacher. The main pedagogical theory they utilize is experiential education. They apply these to EE by portraying nature as a living Other to know and learn from through direct experiences of which they (the educators) are facilitators.

In Theme 4 Structure 1, I noted that the study participants explanation of the relationship between outdoor and environmental education, suggests that outdoor education is a different approach towards education, of which EE is an intrinsic embedded aspect. This idea of providing a different type of education often acts as a source of tension for Faraway Dale’s educators in dealing with the mainstream education system that they are attached to. According to all the participants the situation is one that sometimes goes beyond a simple incongruence with their mainstream colleagues. It has manifested in them having the feeling that outdoor education is a marginalized enterprise that has to “justifying its existence all the time” and “fight for a place to survive” (Trevor, Interview1, p. 11). It has also led to the lack of stability in their employment situation. According to Keith:

Over the years, working here has been, “Will there be money next year? Will this continue?” And while that’s kind of changed a little bit, with provincial elections looming and maybe a difference in thinking coming in, we could easily find ourselves having to justify and prove what we do here is valuable. (Interview1, p. 3)

Their fears are not unfounded. During my first semi-structured interview (referred hitherto as Interview1) with the participants I asked them to describe significant experiences
from their work with outdoor environmental education. Several chose to describe experiences when their jobs at the outdoor centre were under threat. In the past 15 years, the parent school board has seriously considered shutting down Faraway Dale and its entire outdoor education division at least three times. Neesha explained how on one occasion the situation reached the stage where the educators had all been given end of employment notices. A last minute modification in the final vote by school board saved the centre. Three other similar facilities were not so lucky. They were shut down and never re-opened. When I asked what prompted these occasions, Arlene explained that it was about finances and ideology. In times when the school board is strapped for cash, cuts in expenditure have to be made. According to her, the relevant officials generally hold mainstream ideas about the nature and processes of education. They tend to see outdoor education centres and the work of outdoor educators as non-essential, luxury commodities, “a bit of fluff to be cut” (Arlene, Interview1, p. 15). Trevor was more judicious in his assessment of the situation but no less direct. As he put it:

If a school board has to trim down its budget, where is it going to look to? It’s not going to be Language or Math they’re going to cut. I think they decide what’s essential. Kids need to learn how to read and how to learn math. Period! After that what’s the next layer of things that are essential? Outdoor ed [sic] is just further down the list in terms of what they deem as essential. (Trevor, Interview1, p. 11)

He was quick to add the caveat though that for him outdoor education would be at the very top of the list of essential student needs.

Throughout the research process, I found myself wondering about which aspects of the outdoor educators’ ideology and practice with respect to EE might be particularly difficult for mainstream officials and educators to accept. Two aspects stood out as particularly troublesome
to me. Firstly, their emphasis on non-cognitive aspects of knowledge is often unfortunately accompanied by a de-emphasis of traditional cognitive knowledge. Examples of their anathema for propositional or book knowledge has already been described in Theme 1 Structure 1 and Theme 3 Structure 2. During the field visits in which I accompanied educators I often noted their bias towards providing experiences that were physical, emotional and spiritual rather than those that were traditional knowledge based. Teachers and students sometimes seemed disconcerted by this. On more than one occasion I overheard comments from them, to the effect of questioning when any ‘real learning’ would take place. The second aspect of the outdoor educators’ practice that I thought might be particularly difficult for mainstream thinkers is the lack of hard assessment accompanying their practice. During my stay at Faraway Dale I never saw any traditional form of assessment being administered to assess the efficacy of daytrips or activities. Mostly what the educators rely on are immediate emotional reactions of the students as the major form of assessment they practice:

A really basic non-curriculum assessment is what they are like at the end of the day. So did they have a good time? Did they enjoy themselves? (Bruce, Interview1, p. 20)

I would say just the level of engagement with students When they are engaged and they’re into what they’re doing you get to see that. When you’re working with a different class every day you know by your experience whether the class is engaged or their group is engaged or not. (Trevor, Interview1, p. 3)

I know that I am doing a good job when I look at the kids’ faces, when I listen to their answers…when they start not to need me when I am outside. When I see them becoming more autonomous outside, then I know this is working and I am doing the right thing.
When I disappear, when I start not to matter anymore, then I know that I am doing what I am supposed to be doing. (Danny, Interview 1, p. 15)

Despite their positive outlook, the outdoor educators are aware of problem the lack of hard assessment of their practice entails. They themselves seem to want something more. According to Ellen (Interview 1, p. 11), “There are classes at the end of the day when you’re wondering if you’ve really made a difference.” But as Arlene pointed out direct assessment is difficult because, “it’s hard to take the outdoor experience and translate that into a test score” (Arlene, Interview 1, p. 13).

Of all the structures described in this theme, participants seemed most aware of the ones dealing with the tensions they face due the incompatibilities of their ideologies with those of mainstream schooling. But while they were acutely aware, they remain unsure of how to resolve them, since they are unwilling to compromise on their own commitments and beliefs. They (like many others) believe that mainstream education is faulty at its core. According to Arlene:

I think we have lost sight of the fact that we should be educating people to be responsible, wonderful, contributing, positive citizens of our world. That’s what school should be…I think if at the core of what schools are for, was community and healthy living, this would be a no brainer! Outdoor and environmental education would be logical and natural. We haven’t! Our school system is for other things. (Arlene, Interview 1, p. 14)

Danny clarified what the negative focus of mainstream schooling is:

They just want to build, build, build! We live in [name of city]. There are hundreds of building projects right not, because there is a boom in our city. That’s where the focus is. If you want to get ahead in this world, you have to get into big business. You have to
work in a bank! That’s where the focus is. And the forest and nature are forgotten.

(Danny, Interview 1, p. 14).

Furthermore these educators believe that what they have to offer may be better than what the mainstream has to offer. With respect to EE, I find myself increasingly wondering if they may be correct.

5.2 Summary

This chapter described the findings of the study. The main structures that characterize EE at Faraway Dale Outdoor Education Centre were described. To improve the readability the structures were organized into four themes: (1) the goals of EE; (2) educators main understandings of the term environment; (3) educators’ main understandings of term education; and (4) tensions and contradictions of providing EE at an outdoor centre. I found that the overall goal of EE at the centre was to foster healthy people and healthy environments. This is translated into pedagogical practice in three ways: connecting people to the environment, encouraging a care-based relational orientation to the environment, and building agency for living low consumption, low impact lifestyles. Theme 1 went on to describe the meanings of each of these three sub-structures in detail. Early on during data analysis it became clear that educators understandings and practice of EE was greatly influenced by their understandings of the concepts ‘the environment’ and ‘education’. Themes 2 and 3 explored these. Finally, Theme 4 highlighted the salient tensions and contradictions apparent in the participants’ ideologies that seemed to be weakening their practice of EE. I chose to focus on three of these: EE as only one of the multiple roles of outdoor education; educators’ idealized expectations vs. practical realities; and the incompatibilities of outdoor education with the structural regularities of mainstream schooling.
In Chapter 6 I discuss the findings in the light of the literature review provided in Chapters 2 and 3 and explore their implications for a variety of related contexts.
6 Discussion, Implications and Conclusion

This is the final chapter of this thesis. It begins with a summary that seeks to capture the essence of environmental education at the Faraway Dale Outdoor Education Centre. In it I summarize the main structures that make up EE in the study context and clarify the relationships among them. These summaries are derived from the findings described in Chapter 5. Next, I discuss this essence of EE, in terms of the body of literature reviewed in Chapters 2 and 3, and explore its implications to a variety of related contexts including: environmental education theory, practice, research and outdoor education. The chapter ends with a personal reflection of my experience during this research project and a speculation of my directions and research plans for the future.

6.1 The Essence of EE at an Outdoor Education Centre

This section seeks to capture the essence of environmental education at Faraway Dale Outdoor Education Centre. In it I summarize the main structures that make up EE in that context, and clarify the relationships among them. In other words this section is a summary of the results presented in Chapter 5. While the ideas in the section are presented in a linear way to improve readability, the reader is asked to be mindful of applying too much of a linear structure to them. It is not my intention to suggest that EE in any context is a simplistic or easily construed phenomenon. The structures in the context of the outdoor education centre studied interact and overlap with each other in complex ways that are difficult to convey fully.

For these outdoor educators, the overall goal for environmental education at the outdoor centre is to foster a culture that leads to healthy people and healthy environments by encouraging
a more equitable interplay among people and nature. The nature of EE at the centre is heavily relational. Furthermore, it is concerned with inspiring deep, intrinsic changes in individuals’ behaviours and characters rather than simply passing along knowledge about the living world or bringing about superficial, extrinsically motivated actions for saving or preserving the environment. The overall goal of fostering the wellbeing of all living things is translated into pedagogical practice at this site in three ways. These are: connecting people to the environment, encouraging a care-based relational orientation (an ethic of compassionate care) towards the environment, and building agency for living low consumption low impact lifestyles. While there is some indication in the data that complex relationships may exist between these components to produce a complex model of EE, the majority of educators at the centre described the components as acting in a simple linear way (see Figure 3). In other words, they believe that if people are provided with opportunities to connect to, care and practice agency for the environment, this in turn will motivate them to act more generally in environmentally friendly ways. Over time, they believe the entire process will result in healthier people and environments.

Figure 3

*Simple Model of EE at Faraway Dale*

The contextual meaning of the phrase ‘connecting to the environment’ is difficult to convey. Connecting is more than something that can be simply or rationally explained. While it
contains a cognitive aspect, it is more than simply understanding facts or ideas about the environment. It implies the formation of a personal bond with nature—one that includes physical, emotional and spiritual components in addition to a cognitive aspect. It is important to note that while the connective bond is tangible and positive, it also has metaphysical qualities to it. It involves touching a person’s consciousness and inner heart. Indeed, it may be the metaphysical aspects that distinguish ‘knowing about’ from ‘connecting’. Knowing about the environment is limited to the physical realm—to the mind and body. Connecting to the environment includes these but also has the potential to reach a person at a deeper soul level to form a bond that is not a burden or threat to either party but is rather symbiotic in nature. It can be compared to the bond that ties a mother to an unborn child. Further, connecting has different dimensions based on the level of disconnect of students. For students who are very disconnected the primary objective is to get them comfortable in nature. For those who are comfortable, the objective is to foster a positive interest in nature and the environment. The educators in this context seek to build connections to the environment by providing students with immersive, direct experience with it. For the outdoor educators who participated in this study, connecting to the outdoor world is essential to environmental education because it is more impactful in bringing about intrinsic genuine care and motivation to act for the Earth and all its components.

The discussion of the meaning and methods of connecting to the environment given above, suggests that there is a significant emotional component to the outdoor educators’ work with EE. Indeed fostering strong positive emotions through the nurturance of a care-based relational orientation in students towards nature is a significant focus for them. Care, with respect to the environment seems to hold a definite meaning to these outdoor educators. Their orientation is highly reflective of Nel Nodding’s (2002) explication of an ethic of compassionate care which assumes that people are naturally relational, and seeks to encourage a system of
compassionate carers and sensitive cared fors. Applied to environmental education students are encouraged to recognize nature as a living Other that sustains human life, and in turn respond sensitively and positively to form a caring relationship with her. Further this type of care is not primarily derived through a system of rational justice based reasoning but is expected to arise out of an ethic of compassionate care which primarily comes from a place of emotion and spirit. In other words, one should care for the Earth as one would for a loved other, out of a natural compulsion born of a relational bond rather than valuate her in terms of material, economic or political assets. Faraway Dale’s educators foster a care-based relational orientation to the environment in several ways in their practice: through explicit activities that emphasize the consciousness of other life forms and how they should be treated, and implicitly, by modeling it for students in their own treatment of the environment and the natural world.

In addition to fostering connections to the natural environment and care-based orientations toward the natural world, a visit to the centre is designed to inspire students to enact this new relationship. Educators do so by providing opportunities for building agency among students to act in more Earth friendly ways. Students are encouraged to think critically about their actions, and introduced to alternatives for living low impact, low consumption life styles that will not damage the Earth further. They are also provided with options that allow them to actively participate in Earth Repair Projects (ERPs) designed to ameliorate human caused damage to the facility’s grounds. For the outdoor educators, building agency to live in more environmentally friendly ways is important. More than connecting to the natural world and fostering a feeling of care for it, it shows students how they can act on their new understandings. In other words, it provides a bridge between theory and practice, scaffolding students’ in their movement from wanting and thinking about helping the environment, to feeling empowered to do so if they are so inclined. It also highlights an important aspect of the nature of EE in the
study context, that is, the emphasis on working with positive aspects: building care, hope and agency within students. In doing so it presents a compelling alternative to the negative tone of guilt and fear that mainstream EE has been accused of (Sanera & Shaw, 1996).

Early on, in the research project it became clear that the nature of EE at the centre could be traced to educators’ fundamental understandings of the concepts ‘the environment’ and ‘education’. These understandings form underlying structures that explain how the overall nature of EE at the centre described above, has come about and continues to be fostered. With respect to the environment, educators in this study hold three salient assumptions: nature as a living Other; nature as a natural teacher; and ecocentric understandings about the environment. Throughout the research process all the participants conveyed the notion that natural world is a living, conscious Other of intrinsic worth rather than a commodity or thing that humans have a right to selfishly exploit. The linguistic devices they most often use in referring to the environment are those one would use when talking about a living, conscious being. At the same time, it was clear that they strive not to convey the idea of nature or the natural environment in a disneyfied way; that is, as a human dressed up in animal skins or leaves. They are clear that nature is a non-human Other who can be fun, but who can also be dangerous, uncontrollable and unpredictable. In addition to agreeing that the natural world is a living Other, all the educators agreed that humans have a special role to play in caring for and sustaining her. It is important to note that this latter conclusion, though the same among all the educators, was buttressed by subtle differences in reasoning. For some, we need to connect and care for the environment because it is a gift from God, for others because nature and people are equal interdependent aspects of the world, and for a third group because humans are totally dependent on nature. Nature as living Other is the root metaphor that validates educators’ conviction that we can connect to natural world and relate to her in a care-based personal way. In addition to being a living Other, these
educators also ascribed transcendent qualities to nature. They described the natural world as amazing, mysterious, magical, therapeutic, exciting, and ingenious. They draw upon these transcendent qualities to suggest that nature is a natural teacher. Acting upon this root metaphor these educators, to varying extents, treat the natural world as a partner or fellow teacher in their practice. In their estimation, nature as a teaching partner enhances the teaching learning experience in different ways. Activities inspired by her are more realistic and less contrived. She can also act serendipitously and spontaneously to engage all students in ways human teachers cannot. In addition to viewing nature as a living Other and teacher, all the outdoor educators at Faraway Dale hold an ecocentric stance with respect to the environment. They agree that nature is an extremely complex living entity that works in systemic, interconnected ways. They also recognize that humans are a part of nature subject to ecological laws. This seems to further reinforce their conviction about the essentialness of fostering the human-nature relationship or what they call connecting to nature.

While education is a complex construct with philosophical, psychological, sociological, ethical and political dimensions, three aspects seem most salient to their work with EE. These are: education as a care-based endeavor; a partiality for experiential education; and education for agency. Earlier in this section, a relational orientation based on compassionate care was identified as the overall orientation towards the environment that educators at Faraway Dale seek to foster in students. On further analysis of the data, it became clear that the participants’ support for compassionate care stemmed from a deeper orientation of all education being a care-based endeavor. This was indicated in their general talk about education, what it means and how it should operate and in their overall practice. Care is explicitly suggested to students throughout daytrips as an orientation to adopt, and it is also modeled for them by the staff in many of their interactions with each other and the students. Students are actively treated with responsive,
genuine, individual care throughout their stay at Faraway Dale. An understanding of care as an intrinsic aspect of education seems to explain its emphasis in their orientation towards EE. Care seems to flow naturally as orientation congruent with EE in this context.

In addition to an orientation of care, the educators who participated in this project also subscribe to definite ideas about the nature of knowledge, the nature of learning and the nature of the learner in enacting their pedagogical practice. They put these together to identify the main educational theory they subscribe to as ‘experiential education’. With respect to knowledge, they believe that knowledge is out there. But it is not something that can be easily picked up. It needs to be realized. Knowing therefore has a strong personal and individual component to it. In other words it takes individual effort to realize knowledge. Further knowledge and experience are inextricably connected so that true knowledge is best achieved through direct personal experience with phenomena. Finally, knowledge is not only a cognitive phenomenon but also has non-cognitive components like somatic, emotional and spiritual dimensions. While cognitive components of knowledge may be derived propositionally, the non-cognitive components can only be derived through direct experience. With respect to the learner, since these educators hold that knowledge has a personal dimension to it, they treat the learner as the unit of education. Indeed, education is primarily concerned with individual personal growth. This is coupled with the idea that learners have a great capacity for discovery and self-directed learning, to support the conclusion that learners can learn many things on their own with minimum intervention of teachers. The job of the outdoor educator, then, becomes a process of providing students with effective educational experiences to stimulate knowledge realization. However, for these educators, an educational experience is not a trivial thing. Because humans are complex beings and knowledge not only cognitive, educational experiences are imbued with a certain amount of transcendence and serendipity. Good experiences are supposed to be active, engaging (fun),
immersive, sensory and involve real objects or situations. All educational experiences are expected to accumulate within students to act as wellsprings to stimulate knowledge realization for years to come. The ideal experience should also lead to an epiphany; a sudden expansion of the self or some realization one did not have before the experience. Applied to EE, it means providing direct experience with nature and the environment, experience that will allow students to learn in the natural world, with the natural world and through the natural world.

A third underpinning idea of education that all the educators in this study seem to hold that shapes their work with EE is an understanding that agency is a fundamental goal of education as a whole. They all agreed that ideally education should be more than transmissive. It should empower people to make changes for the better. However they were adamant that their idea of transforming people should not to be equated with creating activists or becoming directly involved in the socio-political sphere. These educators were clear that their job is to foster a sense of agency, which, for them, means empowering students by providing them with knowledge, skills and attitudes that give them a choice for acting if they choose to. Student autonomy is important. With respect to EE it means showing students how they can ameliorate human caused damage to the world around them. It is about introducing students to the complexity involved in making environmental choices, providing them with alternative courses of action and fostering the sense that they can think through the issues, make decisions and act on their decisions if they choose to.

What has gone before in this section may suggest that a comprehensive, alternative, unproblematic theory of environmental education exists, which guides practice at Faraway Dale Outdoor Education Centre. In actuality this is not the case. Several serious tensions and contradictions are at play within the context that affect educators’ practice of EE. Three of these
are: EE as only one of the multiple roles of outdoor education; educators’ idealized expectations vs. the practical realities of teaching (a theory-practice gap); and the incompatibilities of ideologies between the outdoor centre and the mainstream school system within which they exist. Early on in the data collection process, it became clear that EE is only one aspect of outdoor education as it is practiced at Faraway Dale. In addition to EE, other goals for education at the outdoor centre are: teaching the provincial curriculum, fostering physical fitness through outdoor recreation and character/leadership education. Educators are clearly aware of the multiple goals inherent in their jobs and seem to have reconciled these by compiling them into one overall definition of outdoor education. Indeed they seem to believe that the multiple roles work together synergistically or at least without contradiction to each other to benefit students. Yet despite the educators conviction that the multiple roles are unproblematic a consequence of having multiple goals to any enterprise is that due to lack of time one or more goals can get marginalized. During the research study this seemed to be happening to EE on several occasions. The situation was exacerbated by the educators’ tacit conviction that EE is an embedded, inseparable aspect of outdoor experience, so that EE does not always have to be explicitly taught. Another consequence of having multiple goals for an endeavor is that often the goals may be underpinned by different philosophical bases. In this case classic outdoor education goals (those other than EE) are underpinned by a humanistic base, which focuses on human growth and development. EE it has been argued by many is underpinned by an ecocentric base which emphasizes the interconnectedness of all aspects of the environment. This difference seemed rarely recognized by participants in this study and remains a source of contradiction in their practice where messages about the human-environment relationship change within daytrips based on the goal educators are trying to meet.
One of the most acute sources of tension that outdoor educators in the study face on a daily basis has to do with the gap between their idealized expectations of what should occur during a typical daytrip versus what usually occurs. In particular, they seem to hold certain expectations of the learners and the learning process. Students are expected to be self-motivated, interested in nature, respectful, sensitive, cooperative, open-minded, flexible, curious and adventurous. They are expected to discover knowledge through direct experience. During my stay at the centre and from educators’ own comments, these expectations rarely manifest themselves in a complete form. Indeed, a typical visiting group tends to be mixed consisting of: a few extremely well behaved students (who fulfill the educators’ expectations), a few badly behaved (who act opposite to educators’ expectations) and a median group who just seem to be going along with the day. Yet educational programs that these educators create and continue to use have the idealized expectations built into them. The contradiction here is that students seem to have to come to Faraway Dale with certain predispositions: attitudes, skills and capacities in order for the educational experiences to be of value. Ironically, they already have to be compassionate carers, environmentally minded and ready to learn experientially to benefit fully from a trip to Faraway Dale. Of all the tensions within this context, the gap between educators’ idealized expectations and their practice was the one that they seemed least willing to explore. The reason for this gap is difficult to determine. I have speculated (see Chapter 5) that this gap may be a symptom of the deep sense of disempowerment that these educators feel which in turn may be rooted in other factors related to their situation.

A third source of tension, that educators face in this context, has to do with the incompatibilities of their ideologies with the structural regularities of the mainstream school system to which they belong. Many of their ideas about education and the environment that shape their practice of EE differ from those of educators in mainstream settings. Three aspects
that seem particularly troublesome to negotiate in this respect are: their emphasis on the non-cognitive aspects of knowledge, their de-emphasis of traditional cognitive knowledge and the lack of hard assessment accompanying their practice. This situation has gone beyond theoretical differences of opinion. Mainstream suspicions concerning the validity and quality of outdoor education ideology and practice has led to a lack of stability of outdoor educators’ employment situations and a contributed to the feeling of marginalization and disempowerment among them. Of all the structures described in this theme, participants seemed most aware of the ones dealing with the tensions they face due to the incompatibilities of their ideologies with those of mainstream schooling. But while they are acutely aware they remain unsure of how to resolve them, since they are also unwilling to compromise on their own commitments and beliefs.

In summary EE at Faraway Dale Outdoor Education Centre is a complex phenomenon. The overall goal is to foster a culture that leads to healthy people and environments for all. The centre seeks to achieve this in three ways: connecting people to the environment, encouraging a care-based relational orientation to the environment and building agency for living low consumption, low impact lifestyles. Pedagogical practice at the centre is shaped by educators’ alternate conceptualization of the terms ‘the environment’ and ‘education’. They view nature as a living Other and natural teacher; ideas buttressed by ecocentric understandings of the environment. They conceptualize education as a care-based endeavor, with the ultimate responsibility of building agency (or the capacity for autonomous change) in students. They hold alternative ideas of knowledge, learning and the learner which they translate into pedagogy that they label experiential education. However outdoor educators’ work with EE is not unproblematic. It is fraught with tensions and contradictions that affect practice. Three of these tensions have to do with: EE being one of the multiple roles of outdoor education; educators’
idealized expectations versus the practical realities they face; and the incompatibilities of their ideology with the structural regularities of mainstream schooling.

6.2 Implications for EE Theory

In Chapter 2 several ideas with respect to the state of EE theory were explored. In it I characterized EE as a field of possibilities that is still dominated by certain paradigms in practice. In an attempt to explain how this situation has arisen, I traced the evolution of EE from its beginnings in the mid-1970s to the present day. I noted that political and intellectual wrangling in the field is common, resulting in various camps each with their own interpretation of key terms and their own conceptualization of what EE should be and how it should be pedagogically enacted. An important feature of the various camps within EE is that they tend to be polar, radically different in their fundamental philosophical assumptions; so that increasing theoretical complexity has not resulted in a straightforward advancement or evolution in the field characterized by the refinement of theories over time and the superseding of older theories with newer. Rather, it has led to a mushrooming of the field where all notions of EE remain as options for practitioners to negotiate. Sauvé (2005) for example has suggested that there are at least 15 different typologies (what she calls currents) at work in the field. For some (for example, Barrett, 2007; Disinger, 1985) this type of diversity has been interpreted as a problematic aspect in the field, one that may be at the heart of explaining why EE continues to struggle in practice.

Put another way, EE is a field with a rich and complex theoretical life that is continuing to grow as scholars from diverse theoretical orientations continue to take it up. But this rich theoretical life is neither reflected in mainstream practice nor does it exhibit much success in the teaching and learning or EE (Rickinson, 2001). Indeed, mainstream EE continues to be
dominated by certain paradigms. Science-based EE is perhaps the dominant orientation. It is characterized by well-defined knowledge, ethical and behavioural components, along with a suggested pedagogical strategy (Hungerford, Peyton & Wilke, 1983). Science-based EE emphasizes the learning of traditional science based knowledge about the environment. The ethical component is derived from a justice base which emphasizes the democratic principles of fairness, equity and responsibility as reasons to care for the environment. The behavioural change emphasized is the doing of actions for the environment. Although some have suggested that the pedagogical relationship between these three components is complex (Kollmuss & Agyeman, 2002), most often the assumption is that these components are linked together in a simple linear way described as the Know-Care-Act model (Southern, 1969). In other words, if students know about the environment, they will be motivated to care for it, and prompted to act for it. The suggested pedagogical strategy for science-based EE is scientific inquiry, most often interpreted as a cognitive-constructivist approach to teaching and learning in which students are expected to learn by asking questions, gathering and analyzing evidence in a scientific way. Teachers are supposed to act as facilitators supporting students in their inquiries. In Chapter 2, I noted that in recent years, while the knowledge premises of science-based EE have remained largely unchanged—evidence-based knowledge about the physical world gained through experimentation and objective observation—there has been a shift towards the more explicit teaching of the ethical and action components of EE expressed in the SSI (Zeidler & Keefer, 2003) and STSE (Pedretti & Nazir, 2011) movements and the increased call for ‘activist science education’ (Hodson, 2011). Growing criticism of the traditional scientific paradigm has also led the development of critical EE programs like place-based education and ecopedagogy (Gruenewald, 2004; Kahn, 2008) which suggest that critical theory perspectives can be more productive approaches to EE.
Another major premise offered in the literature review, derived from the work of scholars such as Hart, Jickling and Kool (1999), Robottom and Hart (1993), Sauvé (2005) and O’Riordan (1988), is that educators’ conceptualization of the terms environment and education are major factors affecting the theories of EE that they finally espouse and put into practice. In Chapter 2 I explored some of the various interpretations of environment and education that can exist and how widely these may differ. From Naess (1988), I derived the idea that educators could be divided into two camps with respect to their stance toward the environment: anthropocentric (human-centred) and ecocentric (life-centred). O’Riordan’s (1988) scheme provides an alternative and perhaps more nuanced classification. According to him we can view the environment as a living thing (ecocentrism) or as a mechanism (technocentrism). How we think of the environment further determines our relationship to it, so that there are four possible stances with respect to environmentalism and EE. These are: intervention-technocentrism, accommodation-technocentrism, communalism-ecocentrism and Gianism-ecocentrism (see page 44 for detailed meanings of these). I also noted that in current popular literature there seems to be a growing support for the communalist-ecocentrist stance toward the environment (Bookchin, 2007). This stance appeals to many people because it is essentially anthropocentric in nature, in that it equates environmental problems to human problems that can be solved by communal human action. It other words it appeals to people to care and act for the environment because in doing so they are essentially acting for their own good and long term survival. The problem with this stance is that it does not seem to fully take other than human components of the environment into account. These latter are only of worth to the extent that they are of worth to humans. The ecological paradigm was presented as an alternative idea that has been offered by some scholars (for example, Garrard, 2010; Gough, 1987; Jicking & Spork, 1996) as an alternative to this growing popular formulation. It is essentially Gianist-ecocentrist in nature. A main difference
between this stance and a communalist-ecocentrist stance is that it challenges anthropocentrism. It takes nature into account as living Other and equal partner of intrinsic worth and calls for a complete paradigm shift in determining our views and actions with respect to the environment. According to Gough (1987) the ecological paradigm requires individuals not to learn about, in and for environments but to learn to live with environments.

While the literature concerning the environmental aspect of EE is fairly well-developed, the situation with respect to the conceptualization of education seemed much less developed. Indeed in Chapter 2 I noted that several authors (for example Jickling 1997; Jickling, Hart & Kool, 1999) have pointed out that the educational dimension of EE is still largely unexplored. These authors view this as a major weakness in EE theory. Other than the broad notion that EE should contain knowledge, ethical and behavioural change components, environmental educators rarely seem to explicitly consider what these mean in educational terms; how they relate to the overall goals of education, the nature of knowledge, the teaching/learning process and the ethical aspect of education. Indeed with respect to the ethical dimension of education I noted that a justice based stance is most often assumed and warranted as the only ethical stance available to environmental educators. An ethic of care (Noddings, 2002) was presented as an alternative possibility that may be a viable source of ethics for scholars and educators to consider.

The one educational aspect for which there seems to be some agreement is that EE should take on a transformative educational stance (for example Green, 2008; Stapp, 1969, UNESCO, 1975). However, the nature of transformation, especially to what extent it should challenge the existing structures of schooling and society remains unresolved (Woodhouse & Knapp, 2000). One of the consequences of weak educational foundations discussed in Chapter 2 is that it leads to questionable programs in practice especially teaching/learning strategies that employ indoctrination and behaviour modification strategies that have become largely outmoded in
modern educational rhetoric. One of the newer strands of discussion within EE theory (Bowers, 2008; Garrard, 2010) that has arisen is that mainstream education theory in itself is faulty. It is anthropocentric and opposed to environmental education goals. Supporters of this view suggest that a totally new educational paradigm is needed, which is reflective of a Gianistic-ecocentric perspective towards the environment and in many respects of the ecological paradigm suggested by Gough (1987).

The findings of the study support the premise that many understandings of the nature of EE are possible. These are not only theoretically possible but can lead to significantly different modes of practice as well. From the study the overall goal for environmental education at the outdoor centre is to foster a culture that leads to healthy people and healthy environments by encouraging a more equitable interplay among people and nature. This overall goal is further conceptualized in three ways: connecting people to the environment, encouraging a care-based relational orientation (an ethic of compassionate care) towards the environment, and building agency for living low consumption low impact lifestyles. It is translated into pedagogical practice through what the educators call experiential education. It is has been noted in the section 6.1 (above) and in Chapter 5 that the phrases used to describe the nature of EE at the outdoor centre are not simply descriptive terms, but represent complex constructs that outdoor educators have specialized meanings for, so that EE at Faraway Dale is clearly of a different orientation from EE as it occurs in other contexts. This can be confirmed by juxtaposing mainstream science based EE (described earlier) with outdoor EE at Faraway Dale (Table 3).

Table 3

A Comparison of the Structures of Science-based EE and Outdoor EE
<table>
<thead>
<tr>
<th>Science-based EE</th>
<th>Outdoor EE at Faraway Dale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowing about the environment</td>
<td>Connecting to the environment</td>
</tr>
<tr>
<td>Justice-based care for the envir.</td>
<td>Compassionate care towards nature</td>
</tr>
<tr>
<td>Action for the environment</td>
<td>Agency for the environment</td>
</tr>
<tr>
<td>Scientific Inquiry</td>
<td>Experiential Education</td>
</tr>
</tbody>
</table>

Table 3 shows that in both cases EE has epistemological, ethical and behavioural structures along with a preferred pedagogical strategy. However comparable structures in each context are significantly different, reflective of educators’ different fundamental understandings of knowledge, ethics the goal and processes of education. For example, the epistemological structures: ‘knowing about’ vs. ‘connecting to’ nature reveals the cognitive bias of science-based EE and the de-emphasis of non-cognitive aspects like the somatic, emotional and spiritual dimensions of knowledge included by outdoor educators at Faraway Dale. Also the different orientations to care in both settings make apparent the ethical bias of mainstream science-based EE. Mainstream EE privileges justice-based ethics. In perusing the literature I could find no adequate explanation for favoring justice based ethics over an ethic of compassionate care in teaching EE. Furthermore the findings of the study suggest that an ethic of compassionate care may be quite suitable in the teaching of EE. It can add an emotive component to the field that can engage, motivate and connect students to the environment in a more than cognitive way. These findings are congruent with the work of Martin (2007) who has conjectured that care based environmental education has the potential to increase a sense of solidarity or connectedness.
between the self and the environment, ideas fundamental to the Gianistic-ecocentric perspective and the ecological paradigm.

The summary provided in Table 3 also clearly provides evidence for the premise that educators’ underpinning conceptualization of the term education is important in determining their orientation to EE. In particular their understandings of the nature of knowledge, the ethical dimension of education, the goals of education and the teaching/learning process seem salient to the nature of EE they espouse. With respect to the outdoor educators studied, their overall understanding of education is reflective of an understanding of knowledge as multi-dimensional (inclusive of physical, cognitive, emotional and metaphysical aspects), an ethic of care, a transformative goal for education and an understanding that the teaching/learning process is a highly individual, self-directed, situated process. They (the outdoor educators) have translated this into a pedagogical practice for EE which they call experiential education. This practice involves providing students with direct experiences to interact with nature and other aspects of the environment so students can formulate their own understandings and connections to the non-human world, learn to care and build agency for positive environmental actions. For the participants of this study experience connotes the more than cognitive aspects of the teaching/learning situation that they try to provide students with in order to facilitate learning.

Other study findings also support the connected premise that educators’ understanding of the term environment is also important in determining their orientation to EE. In interrogating outdoor educators’ understandings of the environment two sets of ideas seem important: what one thinks the environment is and human relationship to it. All the educators in this study conveyed the notion that nature and the non-human world is a living conscious Other, even according her the status of being a natural teacher. They also expressed ecocentric
understandings about the environment as being a complex, holistic, interconnected system of living and non-living components of which humans are a part. These understandings of nature and the environment as a living being ascribe personhood to the non-human world and translate directly into according intrinsic worth to it. The non-human world becomes an Other that we can care for, have a relationship (or connect with) with and even learn from. This is antithetical to viewing it as a mere commodity or mechanism that humans have a right to selfishly use or exploit.

Another important aspect that outdoor educators’ understandings of the environment highlights is the possibility of forming a bond with the non-human Other as the non-human Other without anthropomorphizing it. In other words ecocentric understandings of the environment, which place humans as one component of a complex holistic system, negate to some extent our need to transform the non-human world into a human dressed up in animal skins and leaves in order to have a relationship with it. To some extent this challenges the anthropocentric roots of many popular formulations of EE that some scholars (for example, Gough, 1987) have criticized and identified as a root weakness of mainstream paradigms of EE.

An important implication of what has gone above is that the nature of EE that an educator espouses can differ not only superficially or cosmetically but in deeply philosophical ways. This in turn is of significance to the further development of EE theory and the translation of that theory into practice. By exploring the root metaphors behind educators’ particular paradigms for EE we can begin to understand these paradigms more deeply, their strengths and weaknesses and how to transform them into more successful practice. A re-examination of Table 3 at this point highlights the deeper reasons behind the features of mainstream science-based EE and EE at Faraway Dale. The underpinning ideas of education and environment that each is built on
provides some explanation as to why science-based EE may be stagnating in practice and how the type of outdoor EE uncovered at Faraway Dale can address the situation. Indeed, outdoor EE at the study site supports and advances the notion of the ecological paradigm that some scholars have called for. Rather than educating about, through and for the environment it shows what one version of educating for living with environments (Gough, 1987) might look like and the type of changes in notions of education and environment that are required to do so. A brief caveat here: while the human-environment relationship which educators at the outdoor centre endorse is still communalistic-ecocentric and not Gianistic-ecocentric (O’Riordan, 1988), EE at the outdoor centre still represents a shift from the technocentric to the ecocentric—a move which though still fundamentally dualist addresses ideas of equity and interdependence among humans and the non-human world.

The implication that paradigms or models of EE exist with deeply different natures is significant in another way. Over the years much energy has been spent by many scholars in defending some particular model of EE, while at the same time criticizing others. For example, in an impassioned article titled “Yes EE does have a definition and structure” Hungerford, Peyton and Wilke (1983) stubbornly insist that the knowledge required for EE equates with science-based facts about the environment, that the ethical component is derived from traditional justice based ethics and that the overall goal for EE is socio-political activism for the environment. Another group of scholars (for example Fien, 1993; Lucas, 1979; Palmer, 1998) have tried to develop an integrated model for EE, one that seeks to take the best of all existing paradigms and incorporate them into one. In reading papers delineating the ideas of both sets of scholars’ it seems to me that neither group has fully taken into account the fact that they are dealing with paradigms containing fundamental philosophical differences. This weakens their resulting arguments. In taking up a defensive stance authors in the first group seem not to fully
grasp what proponents of alternative paradigms are saying because the essences of their arguments too often revolve around judging other paradigms from their own philosophical biases. For the second group of scholars (the integrationists), not taking into account the deep and often incompatible philosophical elements underpinning different paradigms has meant that whatever integrated model they have come up with, however theoretically appealing, remains inoperable in practice. For example, Palmer’s integrated model for EE (described fully on page 34) combines the knowledge-care-action model (Southern, 1969) with the about-through-for model (Lucas, 1979) and grounds them within a framework of formative life experiences. While Palmer claims that the overall goal of her model is to address EE in a systemic and balanced way, by including all perspectives, one weakness of her conception is that it does not provide for situations when contradictions may arise from the different components of the model. Simply put, teaching about, through and for the environment often entail different understandings of education and environment that do not fit congruently together for either teachers or learners in practice.

It seems to me what is needed is a rethinking of the situation. Rather than arguing about their various positions or trying to form simplistic integrated systems, all environmental educators need to engage in genuine dialogue based on the understanding that different paradigms of EE can exist underpinned by different ideologies. Dialogue should be committed to understanding different orientations and a genuine seeking of the commonalities and departures of understanding. As a simple illustration of how such a process might work, let us consider the science-based and outdoor education paradigms for EE discussed earlier (Table 3). A discussion of the underpinning understandings of knowledge for both paradigms reveals that while science emphasizes cognitive, rational, reason based knowledge, the outdoor education paradigm emphasizes non-cognitive knowledges (emotional, physical, metaphysical). A deep
understanding of the difference in meanings of knowledge for both paradigms can lead to a change in the direction of the subsequent discussion; one that seeks to positively assess both positions with respect to what constitutes the knowledge aspect of EE.

At this point one overarching theory of EE may not be possible (nor may it be desirable to all) because educators and scholars cannot arrive at the points of universal agreement required for such a result. However the situation is not hopeless. We must remember that EE is a relatively young field. Also, EE as it exists is not weak because it is diverse. Indeed great diversity is a sign of health in systems; this is a well-accepted ecological principle. The weakness in EE stems from a lack of dialogue and understanding among stakeholders within the field. For this reason, I fully agree with Hart, Jickling and Kool (1999) and Orr (2004) who have pointed out that, environmental educators need to become more engaged with the underpinning ideas of education. Further to this I would add that all educators have to become more engaged in elucidating their fundamental positions with respect to the environment and how these interact with their ideologies of education. The approach to such an exercise should be research based, philosophically deep and tolerant to the possibility that while we may not be able to achieve universality, it may be the only choice we have, if critical environmental literacy for all is to be achieved.

6.3 Implications for EE Practice

One of the main contradictions of EE noted above and discussed in detail in the literature review is that despite the existence of a diversity of theory, in practice, the outcomes of EE remain questionable (Rickinson, 2001). Indeed educators continue to struggle with developing successful pedagogy for EE to the extent that some are beginning to seriously question its
effectiveness. Most troubling is the allegation that rather than increasing environmental
behaviour, mainstream EE may be making students apathetic toward the environment and
environmental issues (Tan & Pedretti, 2009). One of my premises is that a strong, consistent
theory is necessary for successful pedagogical practice. In the section above I focused on how a
lack of understanding among environmental educators who approach EE from different
ideological assumptions may be acting to inhibit the productive evolution of EE as a theoretical
field. In this section I focus on the implications of the study findings for environmental
educators, especially the improvement of pedagogical practice for EE.

Baldly stated, what has gone before strongly suggests that in order to enhance practice,
educators’ personal theories of EE need to be enriched. The complexity of formulating a strong
theory of EE has been highlighted above. Different paradigms for EE exist since EE is a complex
construct made up of other complex constructs like ‘the environment’ and ‘education’. The
difficulty of unpacking these terms and stitching the resulting components together to form a
consistent theory to guide pedagogy has already been indicated elsewhere in this thesis. Still, if
successful pedagogy for EE is to be developed it is clear that this process is a necessary
undertaking which all environmental educators must engage in.

To facilitate the development of educators’ personal theories of EE I suggest that many
more formal opportunities for professional development both at the pre-service and in-service
levels be provided for environmental educators. Such opportunities should focus on assisting
educators to develop a personal theory of EE by providing opportunities for them to: interrogate
the different paradigms of EE that can exist; to become aware of the tensions and contradictions
within their evolving theories; and negotiate theory-practice gaps that they encounter. With
respect to first of these suggestions, educators are already faced with choosing among different
orientations to EE. School curricula, curriculum support materials and textbooks available to
them contain pedagogical activities based on often unstated (sometimes contradictory)
ideological assumptions about EE. I suggest that one aspect of professional development should
be to expose educators to the different paradigms possible, allow them to unpack the
fundamental assumptions about education and environment inherent to each and the pedagogical
implications of these.

A second focus for professional development suggested above could be the provision of
opportunities for educators to become aware of inconsistencies within their evolving theories. An
underpinning assumption here is that a personal theory of EE is not something that is static or
easily developed, but something that is expected to evolve over time in tandem with educators’
experiences of practice and research. Rigorously interrogating existing ideas is essential to the
growth of educators’ personal theories of teaching and learning. This is a well-established
principle in teacher education (Schon, 1991). Disinger (1985) warns of the dangerous
consequences that can manifest if inconsistencies in theory are allowed to occur. A chimera of
bits and pieces evolves that leads to weak or non-viable practice. The problems that can arise
from educators having a non-consistent guiding theory were highlighted in this study. While
many of the reported findings suggest that outdoor educators are working from an alternative
paradigm and possess alternative working understandings of environmental education, early on
in the data collection it became clear that EE is only one aspect of the outdoor education
mandate. In addition to EE other educational goals at the outdoor centre are: teaching the
provincial curriculum; fostering physical fitness and character/leadership education.
Inconsistencies in theory and practice arise as educators try to combine these multiple goals
together into an unproblematic whole. At least two of the goals: fostering physical fitness and
character education seem to be underpinned by traditional humanistic (anthropocentric)
assumptions of education which focuses on human growth and development and unwittingly ignores non-human elements of students’ surroundings. Indeed many pedagogical activities designed to promote these goals utilize students’ surroundings, including trees, rivers, rocks and animals in a non-ecocentric way that some scholars have shown (for example, Sandell & Ohman, 2010) are undermining of EE. What was most disturbing is that these inconsistencies in theory and how they manifest in practice were rarely recognized by the educators who participated in this study. When they were pointed out, educators’ only reluctantly acknowledged them often stating that they had never thought of things from that perspective. They also often expressed an inability to address that type of problem on their own and admitted that they would require assistance to do so. This latter finding is encouraging since it suggests that educators may welcome professional development opportunities as I have suggested.

The third focus for professional development that I suggest is the provision of opportunities for educators to negotiate theory-practice gaps they encounter in their daily work. In this study, in addition demonstrating inconsistencies in theory, one of the most acute sources of tension that the participants manifested were significant theory-practice gaps, meaning there was a significant problem in translating the theories educators held into successful practice. The problem seems twofold. Firstly, these educators seem to hold certain idealized expectations especially about learners and the learning process that rarely manifest themselves in the field. Yet they continue to use these idealized assumptions in creating educational programs and pedagogical activities. This in turn results in a second problem: inconsistent pedagogical activities that do not match the needs/capacities of students. Of all the sources of tensions that outdoor educators face uncovered by this study, the existence of theory-practice gaps in their work was one that educators seemed least willing to explore. In other parts of this thesis, I have speculated that this problem is a complex one bound up with the socio-political milieu within
which outdoor educators exist. Whatever the exact reasons for the existence of theory-practice gaps, the need for professional development in this area is warranted. Educators need to become more aware of theory-practice gaps that they face. Further they need to be supported in developing strategies to respond in productive ways. This may mean facilitating educators to critically think about and ultimately change unrealistic fundamental assumptions that form parts of the personal theoretical frameworks from which they work. It also entails supporting educators in translating these theories into strong and consistent pedagogical activities.

6.4 Implications for EE Research

In an earlier section of this discussion I suggested that there is little understanding among stakeholders of the various interpretations of EE. Before productive dialogue can occur, quality research aimed at illuminating its various paradigms is necessary. In the literature review one of the identified problems facing EE is a lack of quality research about it. In an insightful article, Hart and Nolan (1999) have characterized research in EE as limited in scope and methodology lacking epistemological and ontological depth intrinsic to the research process and consequently inadequate to answering important questions about EE. This problem was noted (in Chapter 3) to be particularly true concerning research about the relationship between outdoor education and EE. In particular I noted that many existing studies seem shallow in terms of research questions and methods and that very few studies focused on the experiences, viewpoints and activities of outdoor educators. An auto-ethnographic study by Brody (1997) was offered as an intriguing possibility of the type of insights that could be obtained from an in-depth qualitative study of outdoor educators.
The findings of this study support the premise that research on educators can yield new insights and perspectives about EE. In this case observing and interrogating the experiences of outdoor educators illuminated a whole different paradigm for EE. Outdoor educators at Faraway Dale conceive the goal of EE as that of fostering the wellbeing of all living things. They try to utilize experiential education to show people how to live with environments. Pedagogically this translates into providing experiences to connect people to the environment, encourage a care-based relational orientation towards the environment, and build agency for living low consumption low impact lifestyles. The study also revealed how this paradigm of EE is underpinned by educators’ fundamental understandings of the environment and education and some of the contradictions and tensions within it. I suggest that similar studies of educators in other contexts can be equally useful in illuminating perspectives about EE that other studies may not be as successful in illuminating. This conclusion is supported by literature form the broader educational research base which has highlighted the importance of research into practitioner perspectives in discerning the nature of education and tackling problems of pedagogy (Clandinin & Connelly, 2000; van Manen, 1997).

The outcomes of the study also address the problem of the type of research that may be valuable in EE. As noted earlier one of the criticisms of EE research is that it tends to be philosophically simplistic and lacking in rigour. Hart and Nolan (1999) have made it patent that future research should look beyond surface meanings and take into consideration underlying philosophical assumptions in analyzing data and interpreting results. In this research study I employed a phenomenological approach to discern the nature of EE at an outdoor centre. On reflection I believe this type of methodology was suitable for this task.
In fact it possesses several advantages which recommend its use. Firstly, it treats EE as an essentially human (living) phenomenon which indeed is a characteristic of any educative enterprise. It focuses on studying a phenomenon through participants’ experiences rather than as an objective thing unto itself, thereby humanizing the research process and allowing for the inclusion of emotions, thoughts, opinions and other non-physical data that other methods do not. In so doing it avoids the tendency to provide simplistic, physical explanations for complex phenomena common of scientistic reductionism by always leaving room for the possibility of the metaphysical or transcendent. This latter proved significant in this case since much of outdoor educators work with respect to EE has to do with more than physical understandings of nature knowledge, teaching and learning. Secondly, the emphasis on the search for essences provides a clear goal to the guide the research process. The essence of an experience is supposed to reveal the structure of a phenomenon in such a way that the reader is able to grasp its nature and significance in a hitherto unseen way. Essences are discerned by seeking the essential structures that characterize the phenomenon and the interrelationships among these. See in this light, phenomenology inherently contains the seeds of the philosophically complex, layered, deep type of approach to EE research that seems sorely lacking in the field.

A third aspect of the phenomenological approach that I found useful was the process of ‘bracketing’ during the research process. Bracketing involves declaring and suspending pre-conceived notions, also referred to as making a concerted effort to suspend the natural attitude, so as to see clearly the content of consciousness and the essences of the phenomena being investigated (Husserl, 1931). During this research study I utilized the process of bracketing throughout the process. I began my research with an intense period bracketing. I engaged in a period of intense reflective writing which focused on my own experiences and beliefs of environmental education, outdoor education, outdoor educators and the work of outdoor
education centres. This formed the beginning of a reflective journal which I continued to keep throughout the research process. In my bracketing journal I recorded my shifting thoughts and feelings about EE, the research process and my experiences at the study site. Periodically during the research process, I re-read my bracketing journal and kept notes of persistent trends and shifts in my thinking about salient issues surrounding the phenomenon under study. Later, during data analysis, these notes proved extremely useful in assisting me in identifying and countering the effects of my personal biases in determining essential structures of the phenomenon. I was alerted to recheck emerging findings that aligned closely with my own recorded thoughts to ensure that they were adequately supported by the data, and not merely self-fulfilling prophecies that I was generating.

A criticism of EE research that I have noted several times within this thesis is that it tends to be biased, often reflecting researchers pre-conceived notions of the phenomenon they are studying. The process of bracketing allows the researcher to uncover and take into account their biases by asking him/her to be self-reflective during the research process and facilitates the reporting of what is really there and not what they want to see. While I do not believe it is possible for any researcher to become totally unbiased during the research process, the type of bracketing I engaged during this study assisted immensely in helping me to keep aware of my own personal biases and how they were being manifested in the research I was doing. In summary then, I suggest that a broadening of the methodological base for EE is warranted. A phenomenological approach such as I have used in this research project can provide important insights into the nature and practice of EE which other methodologies may not be able to.
6.5 Implications for Outdoor Education

In Chapter 3 I noted that there is some disagreement concerning the relationship between EE and outdoor education. While some insist that there is a strong inherent connection between the two (for example Louv, 2005; Sauvé, 2005; Sobel, 2008; Van Matre, 1990) others have argued that outdoor education may be antithetical to EE (for example Loynes, 2002; Lugg & Slattery, 2003; Gough, 2007); especially that its guiding ideas of education and the environment are rooted in anthropocentrism which devalues any true environmental learning. Annette Gough (2007) has gone so far as to state that despite vocally supporting the importance of environmental education, outdoor educators “have tended to see outdoor education as simply education in the environment, and not possessing the distinguishing characteristic of being education for the environment, or even teaching much education about the environment” (p. 19).

Existing research concerning the relationship between outdoor and environmental education has not been helpful in resolving the situation. Research studies exist that report either a strong positive connection between the two or at the other extreme, little or no connection between the two. In Chapter 3 and earlier in this chapter I speculated that the inability of the existing research to illuminate the relationship between outdoor and environmental education may lie in a general weakness in the research methodology used to carry out many reported studies. This problem was addressed in Section 6.3 above.

The results of the study reported in this thesis support the notion that there is an overlap between outdoor and environmental education. The outdoor educators in the study context demonstrated a strong commitment to the environment and in educating others in this respect. They believe that EE is intrinsic and inherent to what they do. Further they have developed their
own version of EE characterized by the following features: fostering connections to the environment; encouraging compassionate care towards it and building agency to act in more environmentally friendly ways. They enact it through the provision of carefully designed educational experiences that take place in the outdoors. I have suggested that they are working from an ecocentric orientation (O’Riordan, 1988) and to some extent what Noel Gough (1987) calls an ecological paradigm—learning to live with environments. Seen in this light, I suggest that some of the harshest criticisms against the work of outdoor educators with EE be tempered and revisited from the perspective that they (outdoor educators) may be acting from a different ideological bases altogether. In other words outdoor educators may not see the importance of teaching for and about the environment Annette Gough (2007) has noted because they do not see the distinction. Their efforts are towards teaching students how to live in and with environments.

A cautionary note is needed at this point. I do not wish the reader to get the impression that outdoor environmental education as has been revealed by this study is a silver bullet which can be applied to solving all the problems of EE. It is clear that while the findings support that outdoor education has new perspectives to offer to EE, these perspectives in themselves are not unproblematic. Earlier on (Section 6.3) the existence of inconsistent philosophies and their impact in undermining practice has already been discussed. A more pressing problem facing outdoor educators in their efforts to provide EE is that outdoor education as a field seems to be declining. Indeed a literature review of outdoor education suggests that it is a moribund field, which was at its peak in the mid-1970s. Today very little new or productive work is being documented concerning theoretical and pedagogical development in the field. Exceptions to this are the few scholars involved in the development of critical outdoor education (Loynes, 2002; Nicol, 2002) and *friluftsliv* (Henderson & Vikander, 2007).
For me this represents one of the most serious challenges that the majority of outdoor educators need to address if they are to be taken seriously by other environmental educators and the broader educational community. What is sorely needed is a rekindling of the field. Outdoor educators need to begin to see themselves not only as deliverers of the provincial curriculum but as curriculum developers and as researchers in their own field. They need to become more engaged with newer educational and environmental perspectives and theories and become active researchers and scholars in their own right. They need to become active advocates of the ideologies and perspectives they work in and continue to develop—perhaps through becoming more involved in public speaking events and scholarly activities. With respect to environmental education, I suggest more self-initiated (by outdoor educators), collaborative action research projects between outdoor and other educators could be helpful first step in stimulating theoretical and pedagogical development in the field.

6.6 Future Directions

To a great extent this study was prompted by my personal disenchantment with the philosophy and practice of EE in mainstream in-school settings. Over the course of my doctoral journey, I came to realize that my interest and fundamental ideas about EE came from two sources: personal outdoor experience and science-based education. Ironically in my role as a teacher required to teach EE, I mostly privileged a science-based avenue to EE—particularly one that emphasized cognitive ecological knowledge about the environment and a justice based value system of addressing this. During that time, I provided very little opportunity for outdoor experience or practice derived from alternative ideas about the environment and education. Indeed, I greatly took it for granted that these were things that did not require treatment in any formal way.
My formal studies into EE provided alternative ideas of EE like place-based education and other critical approaches to EE. These alternative ideas are heavily steeped in critical theory and justice-based ethics. They assume that the environmental problems facing society are due to unjust social, political and economic structures that constitute mainstream society. They point out that schools often reproduce these structures. Mostly they call for a revolutionary pedagogy that challenges them. The major focus of many of these formulations is to make students aware of the unjustness of the existing organization of society and link these to negative impacts on the environment. The main goal of critical EE is to foster positive action or activism for the environment. While these ideas appealed to me at one level, at another I found them problematic. I was not convinced of the adequacy of the underpinning Marxist reasoning regarding the nature of mainstream society. I was also disturbed by the continuing anthropocentric emphasis underpinning critical approaches to education, similar to that found in science education. I kept wondering if a more ecocentric formulation for education was possible.

At the beginning of the study, I expected to find some type of overlap between outdoor and environmental education. In fact I expected to find some variation of the science-based orientation to EE one that incorporated ecocentrism to a greater extent. I did not expect the work at the outdoor education centre to be based on alternative fundamental ideas about the environment and education or to be derived from a different ideological paradigm. Most especially, I did not expect to find the non-cognitive so much a focus and the cognitive so little emphasized. I must admit (and it may have come through in the reporting of the findings) that the participants’ alternative ideas of the nature of knowledge, ethics and the processes of education that should underpin EE were so different from what I was accustomed to that I initially found it very difficult to grasp exactly what they meant by terms ‘connect’, ‘care’, ‘agency’ and ‘experiential education’. This difficulty occurred despite the fact that I was
disillusioned by mainstream paradigms for EE and looking for some alternative. However, as
time passed and my understanding grew I began to wonder about the validity of these alternative
ideas and their implications for mainstream EE.

At this point I believe several alternative ideas that I came to understand from my study
at Faraway Dale will continue to influence me in the future. Firstly, my notions of the nature of
knowledge have been broadened. I better understand now how knowledge can be constituted in
different ways; there are non-cognitive components to knowledge especially physical, emotional
and transcendent components. A comprehensive program of EE should include all of these. The
study has also provided me with fresh ideas of how learning can be facilitated. Direct, immersive
experience with the living and non-living environment may be essential for environmental
learning. It is here that I believe theories of experiential education have much to offer
environmental educators. How they can be incorporated into mainstream schooling is something
that needs to be seriously considered.

Another area of growth for me has been my understanding of the ethical component of
EE. At this point I understand more clearly that ethics are inherent to EE and that any program
of EE is incomplete without a full elucidation of the ethical stance assumed within it. The study
introduced me to a practical application of the ethics of care to EE. While I had always been
drawn to the ethics of care, I could never fully grasp how they could be practically applied to EE.
The work of the educators at Faraway Dale provided one example of this. It also seems that the
ethical component is not something that can be applied to EE alone but something that must be
derived from educators’ understanding of education and the environment as a whole. Further an
ethic of care as an underpinning foundation for EE has the potential to reach students at a deeper
emotional and spiritual level and keep students motivated and hopeful in a way justice based ethics may not.

A third area of growth for me stimulated by the study concerns the behavioural goal for EE. I noted earlier that I was uncomfortable with the ‘action’ goal in many existing formulations of EE. My experiences at Faraway Dale have expanded my understandings of agency as an alternative appropriate behavioural goal for EE. Agency focuses on providing individuals with a sense of efficacy to act positively on environmental issues if they choose to. It may be that the emphasis on choice and individual autonomy with respect to environmentalism are aspects that are missing from formulations that emphasize collective, activist behaviours.

Overall, my experiences during this study have further sparked my interests in outdoor avenues for EE. At this point I realize that this study represents a single case; its results are not necessarily generalizable. In the future I plan to do an expanded study of outdoor education centres, aimed at determining if features of EE at Faraway Dale are to be found elsewhere. I believe a multiple case study or survey type study would be suitable for this purpose. The findings of such a study can further be the basis of a series of action research type projects geared towards the professional development of all environmental educators including outdoor educators. Additionally, over the course of this study I have become increasingly aware that the outdoor education centre only represents one type of outdoor education opportunity. Other outdoor education opportunities include conservation centres, residential centres, environmental education centres and Outward Bound schools. These could form the basis of other future studies.

At a broader level the findings of this study have stimulated me to delve more deeply into the theories underpinning EE. They have led me to think more deeply about the nature and
purposes of education and how these interact with our understandings and commitments to the environment. Increasingly it seems to me that scholars like Gough (1987), Garrard (2010) and Orr (2004) may be correct. The theoretical base of EE needs rethinking. Educators need to seriously reconsider the foundations of education they hold to and how this interacts with their perceptions of human-nature relationships. If living and learning with environments is what we truly believe is best for the continued well-being of all life on the Earth then our overall position about the nature of education has to change and become more congruent to one more supportive of what some (for example, Gough, 1987) have called an ecological paradigm for education.
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Appendices

Appendix A

RESEARCH INFORMATION & CONSENT FORM

Introduction:
This research project seeks to explore the nature of environmental education at an outdoor education centre: more specifically to describe its structural meanings, capture its unique flavour and discuss its pedagogical significance to environmental education as a whole. I intend to do this by studying the experiences and perspectives of outdoor educators who work at one TDSB outdoor centre. I am seeking your permission to act as a participant for the study. The research project is the final requirement for me to complete a doctoral program in education at the University of Toronto, and is under the Supervision of Dr. E. Pedretti, Professor. I plan to eventually publish results of the study in professional and peer-reviewed journals and in other academic outlets. A description of the data I hope to collect from you is provided below, along with my responsibilities as the Principal Investigator.

Data Collection: With your approval, I would like to collect the following:

1. Audio-recordings of two semi-structured interview with you. Interview 1 will take place at the beginning of the data collection process. It will solicit general biographical information and ask you to relate stories of your experiences as a provider of outdoor environmental education. Interview 2 will take place at the end of data collection. Questions will focus on the theories/ideologies that you use in your work with outdoor environmental education. These interviews will be set up at a time and place convenient to you.

2. Onsite observations of you at work- Between the two major interviews I would like to shadow you and observe at least 3 educational field sessions your daily activities including possible school visits. I intend to be as unobtrusive during these sessions. Field notes will be used to document observed sessions. Students will not be the focus of data collection.

3. Participant Journals- At the beginning of data collection you will be gifted with a blank journal in which you will be invited to document, at your discretion, your memories/ongoing experiences with outdoor environmental education. Journals will be collected at the end of the data collection period.

4. Copies of relevant documents that you may have retained and are willing to share from your work with environmental education as an outdoor educator e.g., lesson plans, information handouts, guidelines, training materials, scholarly articles, books.

Responsibilities of the Principal Investigator (PI): As the main researcher (PI) of this research, I will ensure the following if you agree to participate in this research:

1. Anonymity: Participants will have knowledge of each other, since they will be working together at one facility. However there is very little limitation in protecting the confidentiality of participants from the general public since outdoor educators are a relatively large diverse body of persons. Still particular care will be taken to ensure anonymity of participants in this research project. Data collection will occur individually with each participant. In cases (e.g. field sessions) where participants are working together prior consent will be obtained before the session is observed. There will be no sharing/comparison/discussion of information provided by other participants without prior consent. During the first stage of data analysis personally identifying information will be removed from all data. A series of coded pseudonyms will be used throughout the rest of the data analysis and for the writing up of the report.

2. Right of Withdrawal/Refusal: You have the right to refuse to participate in the research described above and may, for no reasons given, withdraw from the study at any time without negative consequences. As well, you can refuse aspects of data collection that are objectionable to you. To ensure authenticity of statements made about you, you will be given the opportunity to review analyses of data collected from you before the final report is submitted. You will also be given the opportunity to view and comment upon any academic publication arising from the project.
3. **Risks and Benefits**: There is minimal risk in participating in this project. Your participation will be within your professional experience. Data collection will not be stressful or related to sensitive information that could be legally or socially compromising. You may benefit from participation through increased understanding about the relationship between education, the environment and the role of the outdoors in bridging both. Data will be used for academic purposes only. Participation in the project is voluntary, with no financial compensation involved.

4. **Destruction of Data**: All audio-recordings will be destroyed after their contents are transcribed into typed text. All data collected will be destroyed not later than five years after the completion of the project. Only my supervisor (Erminia Pedretti) and I will have access to the data.

You may contact me or my academic supervisor if you require further clarification about the research. You may also contact the university’s Office of Research Ethics, if you have any additional questions regarding your rights as a participant in this research project.

**CONSENT TO PARTICIPATE**
I, the undersigned, have read and understand the above information and agree to participate in this project. I have received a copy of this information/consent form:

__________ ___________
(Printed name of Participant) (Signature of Participant)

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Appendix B
Interview Protocol I

In preparation for this interview participants will be provided with an interview protocol prior to the interview so that he/she can reflect on the questions beforehand.

Background/Biographical Information
1. Describe your role at the outdoor education centre. What is a typical day/term like?

2. Describe the pathway that led you to become an outdoor educator. What experiences (personal, professional, academic other) were most significant?

Outdoor Centres and Environmental Education
3. What are the roles of the TDSB outdoor education centres in the education system?

4. In general, what does the term environmental education mean to you? How important is it to children’s education?

5. How important are outdoor centres in providing environmental education to the school age population? Explain your answer.

6. How do the different educational roles of outdoor centres work together? Are there tensions or do the different roles act synergistically? Illustrate your answer with examples from your own experience.

Experiences with Outdoor Environmental Education
7. Tell me three stories of educational sessions with visiting students that typify your experience as an outdoor environmental educator. Try to describe one good experience, one poor experience and one other. Please tell your stories in as much detail as possible. You may use photographs or any other memorabilia to tell your stories.
Appendix C

Interview Protocol II

This interview will explore participants’ experiences/perspectives of the major theoretical constructs about education, environment and the outdoors.

1. What are the main sources that influence your work as an outdoor educator? Specifically, name any books, influential authors, significant persons, articles, policy guidelines, and courses that have been most significant to you.

2. What philosophy drives education at an outdoor centre?
   a. Is there more focus on individual personal growth or societal growth?
   b. Is there more focus on transmitting knowledge or transforming people?
   c. Is there more focus on teaching content, skills or attitudes?

3. Which of the following ideas most influence your work with outdoor education? (Please pick your top 5).
   a. outdoor adventure/recreation
   b. experiential education
   c. education for sustainable development
   d. scientific inquiry
   e. integrated curricula
   f. behaviourism
   g. discovery learning
   h. arts based approaches to learning
   i. constructivism
   j. theory of multiple intelligences
   k. differentiated instruction
   l. stewardship
   m. deep ecology
   n. holistic education
   o. other

   a. People as caretakers of the environment
   b. People as connoisseurs of the environment
   c. People as one component of the environment
   d. Other