Responsible Stewards of the Earth:

Narratives, Learning and Activism

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Abstract

This study on engagement in environmental activism can offer valuable insights into how Ontario's young people come to be responsible stewards of the earth. This research seeks to understand the narrative complexities put forth by teachers and students (Gr. 11-12) about the influence school plays for environmental activists. The teachers' involvement with activism is mediated by students and the social networks that support their actions. The students' involvement in action is influenced by *teacher mentors, learning about/in the environment*, and having *a venue for activism*. These findings suggest that in order to live up to *Acting Today, Shaping Tomorrow* schools should be seeking to have at least one environmentally literate teacher who wants to provide students with a venue for action. To assist the teachers and students with activism, there needs to be support for environmental action initiatives from the school administration and the community.

Keywords: responsible stewards of the earth; environmental education; activism; action; youth

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Chapter 1: Introduction

Narrative inquiries "are always strongly autobiographical" (Clandinin & Connelly, 2000, p.121) and therefore my subjectivity cannot be removed from my thesis. In other words, I cannot claim to be fully objective—after all, my personal experience has influenced my choice of topic and methodology for this study. Moreover, to inform the reader about where I am coming from I offer a short personal narrative (below). This narrative exploration is ultimately linked to the positive meaning that I have attributed to the natural environment—and environmental education (EE)—throughout my life. (In Chapter 6, I also provide a brief reflection on how the study has impacted me at a personal level.) However, the main focus of the narrative inquiry of this study is on the participants. It is through their narratives that I identify what factors in their lives could be influencing their current environmental action.

Becoming a Steward of the Earth: Orienting to my Research through Narrative Inquiry

There has always been one special place in my life which was my home regardless of where my family lived. My whole family calls this place "The Cottage", and I have been going there since before I was born. This name stuck with this place even after my grandparents retired and renovated it into their house. The Cottage sits on a large forested lot beside—what I will always believe to be—one of the most beautiful lakes in the world. I remember making the trek up to The Cottage with my family almost every weekend when I was younger. This trek, thankfully, was eliminated when we moved to a nearby town and could spend more time there.

While The Cottage could be said to be merely a location that could be replicated on any number of the scenic lakes in Ontario's cottage country, I believe the significance of this place is in what it represents: a lifestyle grounded in a place. The person that I have become is considerably shaped by the lifestyle that I experienced at The Cottage. Interestingly, I only

understood the true depth of my connection to this place when my grandmother sold it several years ago.

While we were at The Cottage, my parents and grandparents were involved in many outdoor activities with my sister and me: playing games, swimming, boating, and hiking through the forest. During all of these activities they encouraged us to explore and respect nature. During excursions down the road, or in the forest, my grandparents pointed out animals and tracks enthusiastically and we hypothesized where the animal was travelling, and where it lived. Through these discussions they encouraged my interest in nature by challenging me to think about other animals and plants as well as our impact on them.

Experiences with these adults were not the only influential aspects of my childhood. Additional learning about the environment and an attachment to The Cottage was generated through the unstructured and unsupervised play in which my sister, cousins, and I engaged. Countless hours were spent playing in the forest and collecting materials for building forts.

Besides taking part in these active adventures, I have also been shaped by the culture of living at The Cottage. My grandparents emphasized conservation to all guests. Having a septic tank meant that everyone was expected to send as little down the drain as possible. This eliminated the mentality that drains make waste disappear. Furthermore, I developed an awareness of the human impact on the lake ecosystem. For instance, I learned the importance of keeping soap out of waterways through my parents' distressing glares directed at neighbours who bathed in the lake. Additionally, I knew where our garbage and recycling went to from our exciting trips to the landfill! Curb-side garbage pickup did not exist in this municipality, requiring all residents to drive to the landfill; therefore, we took these trips as little as possible. Similarly, the two garbage bag limit ensured that everybody knew how to recycle. Through these conservation tactics, I developed an understanding of the issue of consumption and waste. The

landfill was only a short distance from The Cottage, and over time I witnessed it filling up. I was concerned when my dad explained that once the landfill was full, they would expand the site into the surrounding forested area, or simply open a new location, destroying more forest.

My grandparents were actively involved with township policies and advocacy to limit development as well as sources of pollutants from reaching the area. This formed a basis for my interest in gaining new information on the environment as well as to protect and sustain the area that I loved.

The frequent guests visiting The Cottage were encouraged to participate in our regular activities. Additionally, several friends had the opportunity to visit The Cottage. It was during these visits that I witnessed how my friends from urban areas lacked the same understanding and respect for outdoor activity and nature to which I was privy. At first, this confused and frustrated me. I worked to convince them to stay outside for extended periods of time, as well as clarify how to play in the forest or at the lake to protect the environment and be safe. My parents and grandparents explained that it was my responsibility to teach my friends how to enjoy and respect nature as much as I did.

Due to the experiences with my urban-raised friends, I realize that many children and adults may never have the opportunity to learn about and enjoy outdoor activity in a natural environment. Consequently, they would also be removed from witnessing the impact of human development and pollution that destroys these beautiful areas.

My parents and grandparents have demonstrated ways to foster a passion for the natural environment through how they lived their lives. From my experiences, I have developed a desire to give children the opportunity to experience activities in the natural environment. Originally, through my work with children in an educational context I had planned to model my enthusiasm for outdoor activity and nature, and provide similar experiences to mine. I believed that this

would encourage children to develop a love of the natural environment and outdoor activities and fuel action for protecting and sustaining the natural environment. However, it is likely that my experiences are not the only way to learn about and develop affect for the environment—thus I ventured into this journey to learn about the narratives of other experiences that might be just as effective as mine in fostering pro-environmental behaviour in people. Moreover, I am particularly interested in the influence that persons and places have and to learn of their stories.

My personal experience shared in my narrative, and my affiliation with the environment, are the initial reasons for choosing to conduct this research in the field of EE, with a focus on how to foster a desire to take action for the environment within children and youth. To build the foundation for this research, an overview of the history of EE leading into the Ontario context is essential.

Environmental Education and Responsible Stewards of the Earth: The Link to Schooling

Moving beyond my personal, informal experiences, ideas around formally teaching students to care for the environment have developed and changed over time. The evolution of these ideas can be tracked through several international initiatives. For instance, the foundations for EE were laid in 1972 with Recommendation 96 from the *UN Conference on the Human Environment* (UNESCO, 1984). This recommendation—although centered on the idea of managing and controlling the environment—encouraged the UN and other groups to consult and,

> take the necessary steps to establish an international programme in environmental education, interdisciplinary in approach, in-school and out-of-school, encompassing all levels of education and directed towards the general public, in particular the ordinary citizen . . . with a view to educating him as to the simple steps he might take, within his means, to manage and control his environment. (Recommendation 96, United Nations

> Conference on the Human Environment, Stockhom, 1972, as cited in UNESCO, 1984, p. 1)

This recommendation was the catalyst behind the *International Environmental Education Programme* in 1975, which contained several objectives for EE (see UNESCO, 1984, for further discussion). The success of the first stage of action—promoting awareness of EE within the programme—was demonstrated when the world held its foremost *Intergovernmental Conference on Environmental Education* and produced the Tbilisi Declaration (UNESCO, 1978; 1984). The goals developed for EE within this declaration were centred around providing every person with the chance to learn and develop the necessary knowledge and skills to protect the environment (UNESCO, 1978)—an important component to consider as few people worldwide would have a place like The Cottage. *The Earth Summit* in 1992 was an international meeting where the first real discussion of sustainability of the planet occurred (UNESCO, 2007). In 2000, with the increasing recognition that the world's societies and ecological systems are greatly interconnected, *The Earth Charter* was published (UNESCO, 2000). This charter, which contains a lengthy list of principles for sustainable living, was created with the understanding that everybody has a responsibility to care for the earth and its people (see UNESCO, 2000, for further discussion). In 2002, at the *World Summit on Sustainable Development*, the international community recognized not only the interrelatedness of natural, social, and economic systems, but also that sustainable development[1] can and should be taught at the heart of the education system in order to properly address the drastic, human-caused damage to the earth's ecological systems[2] (UNESCO, 200-7). Using the principles of *The Earth Charter* as foundational guidelines, the

[1] "Sustainable development (SD) seeks to meet the needs of the present without compromising those of future generations" (UNESCO, 2011).

[2] The terms environmental and ecological are used interchangeably in this document. For example, ecological literacy is a newer, reworded version of environmental literacy; however, the terms are said to be synonymous by Orr (1992), the creator of the phrases (Magntorn & Hellden, 2007).

United Nation's (UN) Decade of Education for Sustainable Development (DESD) was developed and designated to run from 2005 to 2014 (UNESCO, 2007).

Through the DESD, the UN has pushed for the incorporation of education for sustainable development (ESD) into the heart of school curricula worldwide. The aim of this initiative is to produce global citizens who have "the attitudes, skills, and knowledge to make informed decisions for the benefit of themselves and others" (UNESCO, 2009, "Education for sustainable development", para. 1). In this regard, many researchers agree that the concept of ESD is a more multifaceted program than EE because it addresses social, economic, and ecological systems as a whole (Chansomsak & Vale, 2008; Stevenson, 2007). However, Canada has yet to assimilate the term into its vocabulary. Indeed, it has preferred the label of EE[3] as an umbrella term that encompasses several different trends where only one of them is ESD (Jickling, 2006). Nevertheless, beginning EE or ESD early in children's lives can help develop positive attitudes and respect for the natural[4] environment as opposed to an unnatural fear (or biophobia; Orr, 2004) that may increase environmentally destructive behaviour (Wilson, 2005). Without concern for and understanding of the importance of our ecosystems, people can easily damage the planet (Nisbet, Zelenski, & Murphy, 2010). Regrettably, this can and is leading to destruction—environmental pollutants that are toxic to the health of all living things, thinning of the ozone layer which creates higher rates of cancers, among others—and consequently makes the world a less pleasant and desirable place to live and develop a connection with (Orr, 2004). This is already the reality for some people; for example, consider the cases of Alberta's Athabasca Tar Sands, or industrial agriculture. On a seemingly less drastic scale, the use of phosphorous-laden

[3] While ESD and EE are recognized to be different, they share many goals (Chansomsak & Vale, 2008) and thus represent similar initiatives implemented by different countries.
[4] For the purposes of this thesis a "natural environment" includes living and non-living things and systems that occur naturally; therefore, a natural environment is something that was not created by humans.

detergents, among other factors, can wreak havoc on lake or river ecosystems and degrade the waterways. This was the case for Three Mile Lake in Muskoka in 2005 when there was a blue-green algae bloom which made the lake dangerous for people to use (Muskoka Watershed Council, 2005).

MacPherson (2005) argues that the world's education needs to foster the development of citizens who can participate globally to address the needs of the world by considering social, economic and ecological systems as a whole. Through actions "that are undertaken as a manifestation of one's pro-environmental values and beliefs" (Huddart-Kennedy, Beckley, McFarlane, & Nadeau, 2009, pp. 312-313), these citizens work to care for and sustain their natural environments (Kusmawan, O'Toole, Reynolds, & Bourke, 2009). In turn, Hungerford (1996) suggests that there are three levels of behaviour within this citizenship: 1) entry level, which includes basic knowledge and attitudes towards the environment; 2) ownership, wherein people comprehend the impact of their actions; and 3) action, where people utilize their beliefs, knowledge, and skills to create change (as cited in Heimlich & Ardoin, 2008). Therefore, taking action for the environment is a desirable educational outcome. The focus on action is highlighted in this thesis through the use of the term *responsible stewards of the earth* to indicate the kinds of people who participate in environmental action/activism[5]. More specifically, the act of responsible stewardship entails "a deliberate strategy involving decisions, planning, implementation and reflection by an individual or group that intends to achieve a specific environmental outcome" (Emmons, 1997, as cited in Schusler et al., 2009, p. 112). Environmental action is required to tackle the changes caused by western industrial development (Drengson, 2000) and to create a global society that works in harmony with the earth's

[5] Environmental action and environmental activism are used interchangeably throughout this paper.

ecosystems (Brown, 2008). Fortunately, an international EE movement is occurring to foster the development of responsible stewards of the earth (UNESCO, 2011).

Having explored the history of EE and the definition of responsible stewards of the earth/environmental action that will be used throughout this research, next I discuss EE specific to public schooling in Ontario. This section is meant to provide an understanding of the Ontario Ministry of Education's (Ministry) beliefs about EE as well as background and support for my research questions, especially the second one (p. 19).

Defining Environmental Education in Ontario School Curricula

According to the Ministry (2009a), society needs to understand the complex social and environmental systems that interact in the world today in order to live sustainably. Similar to the UN, the Ministry (2007b) states that preparation for a role as a responsible steward of the earth occurs in a large part through EE in schools. Because of the Ministry's belief, through this research, I will focus on school-related experiences influencing student and teacher involvement in environmental activism. The Ministry recognizes that family situations and experiences differ throughout Ontario and some children and youth may not receive EE through their home life (i.e., comparable to my experience at The Cottage). Therefore, based on a combination of the beliefs and other global initiatives such as the DESD, the Ministry mandated an expert panel to research the needs for teaching EE (Ministry, 2009a). In 2007, *Shaping our Schools, Shaping our Future* was published with recommendations for Ontario's first EE policy[6] (Ministry, 2007b). This document put forth the current definition of EE for Ontario schools, which states that:

> [Environmental education is] education about the environment, for the environment, and in the environment that promotes an understanding of, rich and active experiences in, and

[6] While there have been previous reports with recommendations for EE, *Acting Today, Shaping Tomorrow* is the first official EE policy document for Ontario schools (Ministry, 2007b).

> an appreciation for the dynamic interactions of: the Earth's physical and biological systems; the dependency of our social and economic systems on these natural systems; the scientific and human dimensions of environmental issues; and the positive and negative consequences, both intended and unintended, of the interactions between human-created and natural systems. (p. 6)

Acting Today, Shaping Tomorrow is the Ministry's integrated response to both the recommendations in *Shaping our Schools, Shaping our Future* and the priorities for public education from *Reach Every Student* (see Ministry, 2009a, p. 5, for further discussion). This policy[7] document outlines the actions that will be taken at the Ministry, board, and school levels to fulfill the goals for EE: 1) foster an understanding of the connections between people, the world, and all life; 2) increase student engagement in school; and 3) increase implementation of research-based EE at the school, board, and Ministry levels (see Ministry, 2009a, p. 18 for further discussion). The Ministry's creation of this policy indicates the necessity of exploring school-based factors influencing the development of responsible stewardship. Formal schooling is represented as another venue for learning EE and encouraging student involvement in environmental action now and in the future. This may be an essential element in expanding my understanding as a teacher of how to encourage students to care for the earth. However, I first need to explore *Acting Today, Shaping Tomorrow* to see how the Ministry intends to encourage Ontario students to become responsible stewards of the earth.

As demonstrated in *Acting Today, Shaping Tomorrow*, through public schooling, the overall vision of the Ministry (2007b) is that "students will acquire the knowledge, skills,

[7] "Curriculum documents define what children are taught in Ontario public schools. They detail the knowledge and skills that students are expected to develop in each subject at each grade level. By developing and publishing curriculum documents for use by all Ontario teachers, the Ministry of Education sets standards for the entire province. . . . Policy documents set government standards. Resource documents support implementation of policy." (Ministry, 2011)

perspectives, and practices they need to participate as responsible citizens at the local, national, and global level, caring for each other and all living things" (p. 4). In sum, the school system aims to produce graduates who are responsible stewards of the earth. Consequently, strongly committed teachers and decision makers at all levels of the school system are necessary to carry out the Ministry's current EE policy (Ministry, 2007b).

While a policy lays out the government standards that are to be followed, they may not be sufficient in the eyes of various people. Some authors take issue with the Ministry's beliefs about and goals for EE as presented in the policy document. For example in one of few criticisms, Pardy (2010) stresses that there is a lack of emphasis throughout the document on critical thinking skills that would prepare students to think through environmental issues. He fears that without critical thinking skills the socially established beliefs will be unconsciously accepted as truth. This uncritical acceptance could limit the development of new and effective pedagogies as well as the application of a diverse set of knowledge and skills by students and graduates. Similarly, decades ago, Robottom (1987, as cited in Jickling & Spork, 1998) believed that education *about* and *in* the environment was likely "to reinforce (rather than transform) existing structures" (p. 311), while education *for* the environment was the way for teachers and students to become empowered to tackle environmental issues. Pardy (2010) also highlights the fact that "education from the environment" (p. 23) is ignored in the official definition of EE. From this, one can infer that the documents imply that the teacher is always in control of students' learning whether she or he is teaching *about*, *for*, or *in* the environment. Interestingly, these phrases which currently appear in the definition of EE were being debated decades ago. Jickling and Spork (1998) claim that the words *about*, *for*, and *in* were used to describe different components of EE since their development by Lucas in 1979. However, while Jickling and Spork (1998) believe that EE has benefited from the component of "education *for* the

environment", they claim that uncritical acceptance of the term could "limit possibilities in environmental education and contribute to an increasingly sterile discourse in this field" (p. 311). The past and present literature critiquing phrases within and beliefs of EE demonstrate that the definition, visions, and goals will likely have continuous debate. According to Jickling and Spork (1998), this debate is necessary for the betterment of EE.

Criticisms aside, as a policy document, *Acting Today, Shaping Tomorrow* is meant to ensure that all Ontario students in publicly funded schools experience EE (Ministry, 2009a). "Accordingly, the framework will guide school boards and schools towards the development of the skills and knowledge needed to implement [EE] in a community-centred context" (Ministry, 2009a, p. 4). This statement indicates that *Acting Today, Shaping Tomorrow* is a guide for the Ministry, school boards, and schools for putting EE into practice. On the other hand, while the Ministry has mandated expectations and recommendations for the teaching of EE within this policy framework (Ministry, 2009a) and curriculum documents (see Ministry, 2009b; 2009c) and provided resource guides to assist teachers (see Ministry, 2007a; 2009b; 2009c), the daily experiences of students throughout the province ultimately vary. These students experience EE in many forms including differences in setting (i.e., classroom, schoolyard, outdoor EE centres, or natural settings) or varied educational formats such as traditional, didactic or experiential learning. In addition, EE can be taught from many different perspectives depending on the individual teacher's values, beliefs and attitudes toward the environment. For instance, a teacher may believe that technology will solve all environmental issues; or a teacher may believe that each species is important, whether or not humans have a use for it. Freedom for teachers to deliver the curriculum in their own way can make teaching unique and successful—or not. Perhaps some guidance is necessary. Therefore, by exploring school-based factors that youth believe influenced them to become involved in environmental action, this study can provide

guidance for teachers when interpreting and implementing *Acting Today, Shaping Tomorrow*. Additionally, the Ministry (2009b) claims that the documents[8] entitled *Environmental Education: Scope and Sequence of Expectations: Resource Guide* is a resource for teachers meant to assist in their implementation of EE. Nevertheless, I have found that this document mostly provides a list of curriculum expectations across all subjects that relate to EE. This makes EE curriculum expectations easier for teachers to find, however, it still lacks suggestions of pedagogy that could assist students in achieving the expectations and the goals of EE. Consequently, a practical resource guide which shares research-supported pedagogy for EE could be developed to provide examples for integrating EE for teachers of all subjects. In this context, it becomes important for me to explore (in this chapter) if and how the policy document can be incorporated into the education system and help produce responsible stewards of the earth. The intent of this exploration is not to assess how participants were using the document, rather, from this brief introductory analysis shared below, stakeholders in the education system can gain an understanding of how this research with responsible stewards of the earth can provide guidance for the interpretation and implementation of *Acting Today, Shaping Tomorrow*. For the purpose of this study, it does not matter whether the participants in my research were following the document, what matters is that the students appeared to have met the Ministry's goals and therefore we can learn from their experiences[9]. Thus, the analysis shared below will provide justification for my second research question, which will be presented at the end of this chapter.

Through this introductory analysis of *Acting Today, Shaping Tomorrow*, several components contain vague wording which could lead to different interpretation of the Ministry's intent. While many instances of vagueness within the document that are addressed here may be

[8] Two documents exist with the same title, one covering Grades 1-8, and the other covering Grades 9-12.
[9] Indeed, the participants were not specifically asked about the policy document.

considered to be out of the scope of the policy document, the intent of this section is to demonstrate the potential for many different interpretations of the policy framework by teachers, schools, school boards, and the Ministry. Ultimately, I hope my research can be used to provide ideas for people in all of the aforementioned positions in how to interpret and implement EE into the education system.

Goals, strategies, and actions for EE.

Goals and strategies.

To achieve the Ministry's vision for EE, the goals, strategies, and actions for EE are first organized into three categories within the policy document (Ministry, 2009a, p. 8). Each category contains one goal and two strategies for meeting the goals (see Table 1). Under each strategy are actions to be carried out at the Ministry, school board, and school levels to facilitate the achievement of the goals.

Table 1

Categories, Goals, and Strategies

Category	Goal	Strategy
Teaching and Learning	"Students will acquire the knowledge, skills, and perspectives that foster understanding of their fundamental connections to each other, to the world around them, and to all living things" (p. 11).	"Increase student knowledge and develop skills and perspectives that foster environmental stewardship" (p. 12).
		"Model and teach environmental education through an integrated approach that promotes collaboration in the development of resources and activities" (p. 13).
Student Engagement and Community Connections	"Increase student engagement by fostering active participation in environmental projects and building links between schools and communities" (p. 14).	"Build student capacity to take action on environmental issues" (p. 15).
		"Provide leadership support to enhance student engagement and community involvement" (p. 16).
Environmental Leadership	"Increase the capacity of system leaders to implement evidence-based environmental education programming,	"Increase the extent to which environmental education is integrated into school board policies, procedures, and strategic plans" (p. 19).

	practices, and operations" (p. 18).	"Enhance the integration of environmentally responsible practices into the management of resources, operations, and facilities" (p. 20).

The categories, goals and strategies as grouped within *Acting Today, Shaping Tomorrow* (Ministry, 2009a).

In a quick analysis, one can see that there are several components of *Acting Today, Shaping Tomorrow* that contain vague wording, potentially leading to different interpretations and application throughout the province. For example, in the document's third goal, there is discussion of using research supported EE teaching strategies (Ministry, 2009a). However, an indication of what these strategies are, or how to locate them is lacking. Additionally, stating this goal is not enough. The goal could lead one to believe that actions and strategies under this objective would discuss specific pedagogy, or at least guide teachers to a resource that does. Yet, this goal heads a section which excludes teacher tips or techniques. Consequently, research-supported pedagogy changes over time, therefore, the Ministry would be required to revise the policy document if these examples were included.

While there are few areas of concern within the *goals* and *strategies*, the section on *actions* below contains several statements which are open to interpretation.

Actions.

By situating *Acting Today, Shaping Tomorrow* on the definition of EE, the Ministry (2009a) suggests that they endorse "rich and active experiences" (Ministry, 2007b, p. 6) occurring outdoors. As asserted in the policy's vision, students can build on their knowledge both in the classroom and within the community. While experiences in the community may involve outdoor learning, this statement remains vague, requiring the reader to determine if the intent is learning in natural settings or learning in a constructed environment, such as at local businesses, museums, or outdoor urban areas. "[T]he 'outdoors' is difficult to interpret. It can

include streets, basketball courts, and atheletic [*sic*] fields, which are very different experiences than play and exploration in natural areas" (Chawla, 2006, pp. 367-368). The actions within the policy document require additional reading and research, either within other Ministry publications, or research articles addressing successful EE pedagogy.

According to *Acting Today, Shaping Tomorrow*, curriculum revision is guided by the document *Standards for Environmental Education in the Curriculum* (Ministry, 2008). These standards state that students should have relevant, real-life learning opportunities within the local environment, including the natural environment, where they can form a connection with nature and expand their understandings and appreciation of the natural world (Ministry, 2008). In addition to curriculum revision, the Ministry is responsible for sharing resources that will assist teachers in planning activities within the local environment (Ministry, 2009a). Determining what these resources include requires looking beyond the document. Moving down the chain of command, the school boards are responsible for three actions that are related to learning outdoors. At the most basic level, school boards first need to encourage teachers to actually teach EE in the classroom (Ministry, 2009a). Therefore, school boards are encouraging the teachers to do what is required of them for every subject: teach according to the curriculum guidelines. Second, school boards are to encourage the incorporation of field work into teachers' unit plans (Ministry, 2009a). Third, school boards are supposed to "share information about local resources that support environmental awareness and protection, energy conservation, waste management, protection of the biosphere, and outdoor education" (Ministry, 2009a, p. 17). Such vague requirements leave one to wonder where the information originates, how the school boards acquire this knowledge, and how it will be disseminated. Finally, through their only action related to outdoor learning, schools ultimately enhance the regular learning that occurs in the classroom by supplementing with outdoor activities. The example provided is "naturalization of

the school yard" (Ministry, 2009a, p. 17). What is unclear, however, is whether these activities are part of the curriculum, or additional school-wide, extracurricular activities that could foster a sense of spirit and ownership of the communal space by administrators, teachers, and students.

Such school action implies that teaching EE in the classroom appears to be the assumed place for teaching, and opportunities in other locations aid or complement the in-class learning. While this may not be a problem in theory, there is the potential for these complementary learning experiences to become viewed as optional add-ons. Once viewed in this light, these experiences could be dropped for several reasons, such as when teachers feel the pressures of standardized testing, and/or believe they are unprepared to teach outside (Ernst, 2009; Waite, 2010). Other reasons include money and liability—once a type of learning experience is viewed as optional it becomes easier to cut it from the budget. To assist in living up to the definition of EE which includes learning within the environment, and potentially altering the status quo of education, all teachers need pedagogical training in EE—training which has not been universally implemented (Bennett & Heafner, 2004; Ernst, 2007).

Addressing teachers' knowledge and practices at the pre-service level by ensuring that EE is a component of teacher training is an important action for the Ministry (2009a). Attending to the importance of integration in EE would require that EE not only be present in some areas of teacher training or available for the select few interested candidates, but instead, be integrated throughout the entire program (Desjean-Perrotta, Moseley, & Cantu, 2008; Ernst, 2007). The Ministry states that it will provide EE resources for in-service teachers. Yet, an explanation of what these resources are is absent, leaving one to guess whether they mean funding and/or access to outdoor education centres, or perhaps documents and teacher guides. Additionally, the Ministry states that they will provide teachers with current research in the field of EE that discusses best practices. There is no mention of what the practices are or how this knowledge

will be disseminated. Relating to students, the Ministry will ensure that all subjects contain learning of EE skills and knowledge. However, what kinds of opportunities will be provided to the students, and through what pedagogy, is unspecified. Perhaps this could mean that EE should be the basis of an integrated curriculum (Ernst, 2007). The policy document "emphasizes the necessity of ensuring that young people become environmentally active and responsible citizens (Ministry, 2009b, p. 3). Embedding opportunities for students to build their capacity for activism in the classroom and beyond is essential for Ontario's education system to become one which "will prepare students with the knowledge, skills, perspectives, and practices they need to be environmentally responsible citizens" (Ministry, 2007b, p. 4). There is no mention within the policy document of what these opportunities—for building capacity for activism—might be, and when this activism takes place (Ministry, 2009a). For example, this action could mean projects during school time that incorporate local issues, or it could be purely extra-curricular, and unrelated to the school. At the school level, learning opportunities are to be provided to facilitate the achievement of the goals (Ministry, 2009a). There is no mention of what these learning activities include, and if they are research-based best practices.

One could argue that the lack of clarity within the document allows for teacher freedom and may result in unique and successful teaching, similar to what was mentioned earlier about delivering the curriculum. However, even though appropriately executed teaching in real-life situations outdoors have been shown to be effective, "teachers tend to avoid outdoor activities because they are frequently unfamiliar with the philosophy, technique, and organization of using the outdoors as an effective medium for teaching" (Barnett et al., 2006, p. 4). Providing teachers with research-based tips, techniques and pedagogy will supply adequate grounds on which teachers can make *informed* decisions for developing their own means for delivering the curricula—thus allowing for teacher freedom.

In sum, "all education is environmental education. By what is included or excluded, students are taught that they are part of or apart from the natural world" (Orr, 2004, p. 12). These points touch on Renton and Butcher's (2010) argument that policies are not doing enough to place EE at the foundation of the education system. The globalization of education in combination with the growing worldwide disconnection from nature (Louv, 2008) justify the current concerns with EE in schools in Canada as much as in any other countries that have made EE one of their social-educational priorities. The vagueness attended to within this section highlights the importance for research on how teachers and students are living up to the need of becoming responsible stewards of the earth. Research of this sort is important for policy makers and teachers. The continual discovery of research-supported pedagogy for influencing responsible stewardship will help refine the recommendations laid out in policy, curriculum, and teaching resources. Besides, research exploring how responsible stewards of the earth learned EE in schools could become a great asset for interpretation of *Acting Today, Shaping Tomorrow* by school boards, schools, and teachers throughout the province. From this context provided, I now present my research questions.

Research Questions

We have now surpassed the halfway point of the DESD[10]. Therefore, students should be attaining the Ministry's vision and goals for EE as these are how the DESD is to be demonstrated in Ontario. Notably, the Ministry's goals were not published as a policy until 2009, which left the Ontario education system without an official EE framework for the first half of the decade. Because responsible stewards of the earth do exist in Ontario, this indicates that there are many school-based EE initiatives that began before the policy, and possibly the DESD were first

[10] Decade of Education for Sustainable Development.

introduced. Regardless of their longevity, I am interested in examining the ways in which EE in the Ontario public school system contributes (or not) to the development of students into responsible stewards of the earth. In order to explore these factors, I will work retrospectively with a group of youth who are currently participating in environmental action, in this case as members of a club. These students can be considered to be responsible stewards of the earth who have achieved the Ministry's EE goals. Therefore, they are essential participants as they can provide a personal student view of what factors encouraged them to become environmental activists. In turn, their stories can provide ideas and guidance for teachers, schools, school boards, and the Ministry for working with other students to reach the goals of EE. While this study does address the workings of this club, the club itself is not the focus of the analysis. The students from this club are participants in this study because they represent an accessible group of responsible stewards of the earth. This means that several youth who are participating in environmental action can be found through one venue rather than searching through the general population. Through exploring the participants' elementary school and prior secondary school experiences, I hope to learn what influenced the participants to engage in environmental activism. The following two questions will guide my research:

1) What school-related experiences influence student and teacher engagement with environmental activism?
2) How might the participants' stories of learning about/for/in the environment assist in the interpretation and implementation of *Acting Today, Shaping Tomorrow*?

In order to begin to address the first research question and develop guidance for my data analysis, the next chapter will discuss current literature addressing the notion of environmental action; factors influencing the development of responsible stewards of the earth; and ways to mediate youth involvement in environmental action.

Chapter 2: Literature Review

The first research question is important because EE research states that students should become competent in taking action. This competence allows students to visualize the type of world they would like to live in, understand complex environmental and societal issues, and respond to these issues through local, national, or global actions (Barrett, 2006). Moreover, these actions should be critically reflected upon to allow for adaptation, as opposed to becoming "automatic and socially reinforced" (Heimlich and Ardoin, 2008, p. 220).

In Ontario, a person who has attained the Ministry of Education's (2007b) vision for EE would be considered to be an "environmentally literate and responsible citizen[11]" (Farmer, Knapp, & Benton, 2007, p. 33). According to Bruyere (2008), environmental literacy has three components: affect, knowledge, and behaviour. Therefore, an environmentally literate person would have a caring attitude towards the environment (affective component), knowledge about the environment, and demonstrate competence in integrating this attitude and knowledge with positive action for the environment (Magntorn & Hellden, 2007). Such a person also has "an understanding of how people and societies relate to each other and to natural systems, and how they might do so sustainably" (Orr, 1992, p. 92).

According to Stables and Scott (1999), there are three levels of environmental literacy: (a) *functional*, encompasses basic knowledge and abilities, such as naming species and pollutants, (b) *cultural*, includes understanding why society values the environment and the significance of locations and historical natural events, and (c) *critical*, which is a combination of functional and cultural with a move beyond to action—or, in the case of the present study, responsible stewards

[11] In this case, an "environmentally literate and responsible citizen" (Farmer et al., 2007, p. 33) is equivalent to a responsible steward of the earth.

of the earth through youth activism. The difficulty, however, is determining what is needed to promote this critical environmental literacy (Arnold, Cohen, & Warner, 2009).

Critical environmental literacy, equivalent to responsible stewardship in this context is a desirable outcome for youth in Ontario. The next section will explore youth activism in more detail, providing greater background about what the research literature says is environmental action. This explanation will support my choice of participants for this study along with providing ideas for codes to be used during data analysis.

Striving for youth environmental activism.

> Any discourse about the future has to begin with the issue of youth because more than any other group youth embody the projected dreams, desires, and commitment of a society's obligations to the future. This echoes a classical principle of modernity in which youth both symbolise society's responsibility to the future and offer a measure of its progress. (Giroux, 2003, p. 141)

Youth participation in civic activities is important not only for democracy, but also for positive youth development (Flanagan & Levine, 2010; Schusler & Krasny, 2010). Flanagan and Levine assert that "civic engagement is a key part of the transition between adolescence and mature adulthood. . . . [and] the opportunities and choices of these years shape interests and pathways" (2010, p. 160). This civic engagement includes collaborative action resulting in benefits for society (Lauglo & Øia, 2008). Remarkably, many elements of citizenship among youth have declined greatly from rates in the 1970s, especially in the context of the US. They include "belonging to at least one group, attending religious services at least monthly, belonging to a union, reading newspapers at least once a week, voting, being contacted by a political party, working on a community project, attending club meetings, and believing that people are

trustworthy, [and volunteering]" (Flanagan & Levine, 2010, p. 161). However, these youth have a higher likelihood of participating in activism on a global scale than their 1970s counterparts—perhaps due to the information-communication technology that allows for information and ideas to span the globe in an instant, regardless of geographical boundaries (Youniss et al., 2002). The youth participating in my study, as members of their environmental club, are demonstrating some of these desirable elements of citizenship put forth by Lauglo and Øia (2008). Therefore, through exploring the research questions, these youth will help me to understand some of the factors to increase civic engagement which are beneficial not only for society, but also for the overall development of youth.

Lauglo and Øia (2008) state that preparing elementary and secondary students for democratic society requires modeling. Therefore, preparing for a role as a responsible steward of the earth could also require modeling of such action skills within the classroom or learning context. Although there is general agreement that the education system needs to teach students how to be good citizens, there is a lack of agreement on what this citizenship entails (Westheimer & Kahne, 2003). Furthermore, the ideas behind the meaning of good citizenship span from "being a good neighbor" (Westheimer & Kahne, 2003, p. 10) to taking action for beliefs by critically assessing social structures and targeting the underlying problems. In other words, citizenship ranges from the personally responsible citizen who follows the laws of society, to the participatory citizen who takes part in some initiatives, and finally, the justice-oriented citizen whose action targets the roots of issues (see Table 2; see Westheimer & Kahne, 2004, for further discussion).

Table 2

What Kind of Citizen?

Personally Responsible Citizen	Participatory Citizen	Justice Oriented Citizen
Description		
• Acts responsibly in his/her community. • Works and pays taxes. • Obeys laws. • Recycles, gives blood. • Volunteers to lend a hand in times of crisis.	• Active member of community organizations and/or improvement efforts. • Organizes community efforts to care for those in need, promote economic development, or clean up environment. • Knows how government agencies work. • Knows strategies for accomplishing collective tasks.	• Critically assesses social, political, and economic structures to see beyond the surface causes. • Seeks out and addresses areas of injustice. • Knows about democratic social movements and how to effect systematic change.
Sample Action		
Contributes food to a food drive.	Helps to organize a food drive.	Explores why people are hungry and acts to solve root causes.
Core Assumptions		
To solve social problems and improve society, citizens must have good character; they must be honest, responsible, and law-abiding members of the community.	To solve social problems and improve society, citizens must actively participate and take leadership positions within established systems and community structures.	To solve social problems and improve society, citizens must question, debate, and change established systems and structures when they reproduce patterns of injustice over time.

The breakdown of types of citizenship and corresponding behaviours and actions, from Westheimer & Kahne (2004, p. 240).

Activism is equivalent to justice-oriented citizenship (Flanagan & Lavine, 2010). For the youth to act as justice-oriented citizens they need the skills, knowledge and authority to "fight deeply rooted injustices in a society and world founded on systemic economic, racial, [environmental] and gendered inequalities" (Giroux, 2004, p. 35). Interestingly, while the youth activists are working to address the roots of an environmental issue, some researchers (see Schusler & Krasny, 2010, for further discussion) state that the aim of this work is not specifically the betterment of the environmental situation, but rather the development of skills that would permit students to succeed in their roles as justice-oriented citizens. Nevertheless, people with the skills and initiative for environmental action are extremely important for society and so are people who live in environmentally friendly ways in their regular day-to-day lives (Chawla, 2001).

In a study with Grade 5 students in the US, Lester, Ma, Lee and Lambert (2006) found that students are more likely to include ideas for environmental action in their written answers for a task when they have better understandings of the scientific processes relating to environmental issues. These authors classified social activism as accepting personal responsibility and participating in solutions to environmental issues, along with "influencing the actions of others" (p. 316). This definition includes some important components of activism, however, it is limited in comparison to the one utilized for the purpose of this thesis research[12] as it lacks mention of the level of involvement of youth's participation from the planning stages through to carrying out the action. Moreover, their findings were limited to what students expressed on paper, and lacked exploration into real actions that students might take. In recognition of this point, Lester et al. (2006) indicated a need to answer the following question in future research: "what does it take to create learning experiences that are authentic enough for the students to go beyond knowledge and awareness into action in the 'real world' beyond school?" (p. 333). Lester et al.'s (2006) proposed question is in line with my first research question, indicating the importance of research about school-related factors that influence youth activism. In answering this question, one must recognize that while students may grow up with knowledge about environmental systems, and a positive attitude about the environment, this does not guarantee positive behaviour and action enough to deal with the environmental problems that the world faces today (Chawla & Cushing, 2007; Heimlich & Ardoin, 2008). On the other hand, certain programs may be capable of pushing youth beyond knowledge and helping to foster a culture of environmental activism (to be discussed under the heading Factors Influencing the Development of Responsible Stewards of the Earth).

[12] Environmental action is "a deliberate strategy involving decisions, planning, implementation and reflection by an individual or group that intends to achieve a specific environmental outcome" (Emmons, 1997, as cited in Schusler et al., 2009, p. 112)

The extent to which youth are influenced by certain initiatives is uncertain. Olofsson and Ohman's (2006) survey compares youth and adults in North American to Scandinavian countries. In this survey, adults are more likely to transfer their attitudes to behaviour than youth. However, this study was limited to specific criteria—"gender, age, education, urban/rural/political affiliation/general beliefs" (Olofsson & Ohman, 2006, p. 774). By not including a qualitative element to the study such as observations and open-ended interviews, they may have overlooked more informative factors that young individual participants attribute to their environmental concern, such as an influential teacher. On the other hand, Huddart-Kennedy et al.'s (2009) questionnaire study of environmental concern among Canadian adults was grounded in the belief that where people reside until the age of 18 has a greater effect than where they live for the remainder of their lives. Their study argues that youth are more easily influenced to be environmentally responsible and take action than are adults and offers counter evidence to the study conducted by Olofsson and Ohman (2006). Huddart-Kennedy et al. (2009) also noted that people living in rural areas were more involved in environmental action than urban inhabitants were. Moreover, while the environmental concern between urban and rural participants was similar, rural residents valued the environment more altruistically—they valued the natural environment in and of itself, rather than for reasons of human benefit.

Environmental concern and how the transfer of this concern into action takes place is highly controversial (Blanchet-Cohen, 2008). Notably, the Tbilisi Declaration, states that the world needs to strive for environmental activism in all people (Chawla & Cushing, 2007). However, meeting this goal is rarely an easy task and more research—especially from the perspective of a number of fields—is beneficial for those concerned. For instance, ecofeminism and bioregionalism are two intersecting fields from which environmental activists could draw ideas and information. Ecofeminism links the treatment of women and nature, and states that to

have true equality between men and women, we need to heal "the relationship that all humans have with the earth" (Fike & Kerr, 1995, p. 22). Likewise, bioregionalism extends this idea to state that "our connectedness with the earth and other life [is] the most important factor of our existence" (Fike & Kerr, 1995, p. 22). Ecofeminism and bioregionalism share some interesting perspectives, and indicate that "connection to the environment" could become a category when answering my first research question. David Abram (1997) extends upon bioregionalism's argument. He suggests that solutions imposed from high-up authorities will never be sufficient to address the current environmental problems, ensure environmental protection for the future, and attempt to reverse previous damage. Moreover, Abram (1997) claims that "it is only at the scale of our direct, sensory interactions with the land around us that we can appropriately notice and respond to the immediate needs of the living world" (p. 268). These ideas demonstrate that environmental activism should tackle the deep underlying context that surrounds our current society and is the root of our current ecological issues. In addition, Bowers (2009) suggests that the activism addressing environmental issues needs to tap into what he calls the "cultural commons". The cultural commons in North America encompasses a wide range of elements, including:

> activities, knowledge, skills, and patterns of mutual support that do not rely on a monetized economy. . . . [and]the intergenerational knowledge, skills, and activities that range from how to prepare and share a meal, to healing practices, creative arts, narratives and ceremonies, craft knowledge and skills, games and outdoor activities, and political traditions such as civil liberties and democratic debate. (pp. 196-197)

Through industrialization and globalization the cultural commons have been reduced. This often results in greater negative environmental impacts and a dependence upon the global economy rather than the local community. Therefore, Bowers (2009) urges for educators to assist youth in

taking action for environmental issues through helping them to become aware of what features of the cultural commons they experience, and critically analyzing what aspects need to be maintained, and which could benefit from being adapted with respect to current knowledge. Hence, this avenue for activism helps to strengthen ties within the local community while also targeting environmental issues in a way other than through using the same institutions and thinking that created them (Bowers, 2001). Roth (2010) expands on Bower's idea by stating that when students participate in activism as a venue for learning, they improve the cultural commons (for instance, by improving the health of a river), rather than producing a piece of paper demonstrating their knowledge—or memory—that is disconnected from society.

Another perspective on activism can be found from Kennelly (2009), a feminist theorist who looked at youth activist cultures in Toronto, Montreal, and Vancouver to determine how these youth became involved in activism. She theorizes that youth activism occurs through a "relational process" (p. 250) which contains the following three components:

- Habitus: the set of commonsense assumptions and embodied characteristics that are marked by such social factors as class, race, and gender;
- Cultural Capital: the abilities, attitudes, and ambitions that one carries, again strongly associated with such factors as class, race, and gender;
- Field: the differentiated social space within which one's habitus and cultural capital are either aligned or misaligned. (p. 260)

Based on this relational process, she posits that opportunities for entry into activist cultures are simple or challenging depending on a person's upbringing, social class, ethnicity, and gender. This is demonstrated through this author's findings of the two ways of becoming part of, and deepening roles within, activist cultures: being invited by a peer, and developing friendships

within the activist groups. Once again, the quality of the relationships developed with the other activists in the group is greatly dependent upon habitus, cultural capital, and field.

There are many elements to consider when striving for youth environmental activism. Youth activism is said to include collaboration (Lauglo & Øia, 2008), involvement with a community project, belonging to a club and attending the meetings, volunteering (Flanagan & Levine, 2010), an acceptance of responsibility, and a desire to influence others' environmental behaviour (Lester et al., 2006). Moreover, for environmental action to be classed as such, it must address the cultural commons (Bowers, 2009), and also target the root causes of issues (Giroux, 2004; Westheimer & Kahne, 2004). These components will assist in determining who to recruit for this study, to ensure that the participants are in fact involved in environmental action. This section has also provided an initial understanding of the importance of a connection to nature in influencing activism (Abram, 1997; Fike & Kerr, 1995), and the potential importance of modelling of skills by teachers (Lauglo & Øia, 2008). These factors will be kept in mind during the data analysis process. Alternately, Kennelly (2009) and Olofsson & Ohman (2006) indicate that the influence that factors have vary between individuals, and that due to the relational process involvement in activism may be more difficult for some people. With these ideas in mind, the next section will discuss many factors that influence youth to become responsible stewards of the earth. This section will assist in answering the research questions, and providing ideas for coding categories during data analysis.

Factors Influencing the Development of Responsible Stewards of the Earth

As recognized throughout research in the field of EE, many factors interact and may mediate children and youth in becoming responsible stewards of the earth. Two influences in particular are highlighted by researchers as indispensible for creating environmental activists:

influential people and influential experiences (Arnold et al., 2009; Gruenewald, 2003a). According to Sobel (1996), environmentalists perceive that these two influences shaped the foundation of the activists that they have become (as cited in Gruenewald, 2003a). These two venues work in conjunction as well as independently throughout the lives of children and youth. For example, children may have independent, influential experiences in natural settings, such as playing in the forest behind their house; and/or there may be a person in their lives that is passionate about the environment and influences their attitudes. Additionally, this influential person may have taken them places where they shared influential experiences. Therefore, Arnold et al.'s (2009) research with adolescent environmental activists , along with Sobel's (1996, as cited in Gruenewald, 2003a) research indicates that influential people and experiences from home and/or school play a large role in maintaining the child's sense of wonder in the environment. Another important influence for students in their learning of EE are teachers (Barrett, 2006; Desjean-Perotta et al., 2008; Duvall & Zint, 2007; Ernst, 2007). Attitudes of teachers can easily be transferred to students (Littledyke, 2008). For instance, teachers can foster several "attitudes to learning, which include: curiosity, interest, enjoyment of learning . . . ; confidence, creativity . . . ; criticality, understanding of uncertainty . . . ; awe and wonder, understanding of interconnectedness of living things . . . ; empathy/care of self, others and environment" (Littledyke, 2008, p. 9). Due to this influence, some researchers believe that for teachers to adequately encourage the achievement of the goals of EE they themselves must be environmentally literate, and hold a positive environmental attitude (Desjean-Perotta et al., 2008; Ernst, 2007). This literacy will assist students in working through all stages that lead up to action. Also, pedagogy can influence whether students become engaged in their learning and make connections to the world (Littledyke, 2008), thus affecting their future as decision-makers as well as their current actions (Renton & Butcher, 2010). For example, Roth (2010) explains

that activism is a pedagogy that teaches students content, skills, and allows them to positively impact the environment. In order to capitalize on these influences Blanchet-Cohen (2008) presents a framework developed through her interviews of 10- to 13-year-old children involved in environmental action. The framework addresses the processes that she believes children and youth must experience on their journey towards environmental activism: 1) connectedness; 2) engaging with the environment; 3) questioning; 4) belief in capacity; 5) taking a stance; and 6) strategic action (see Figure 1; Blanchet-Cohen, 2008, p. 263).

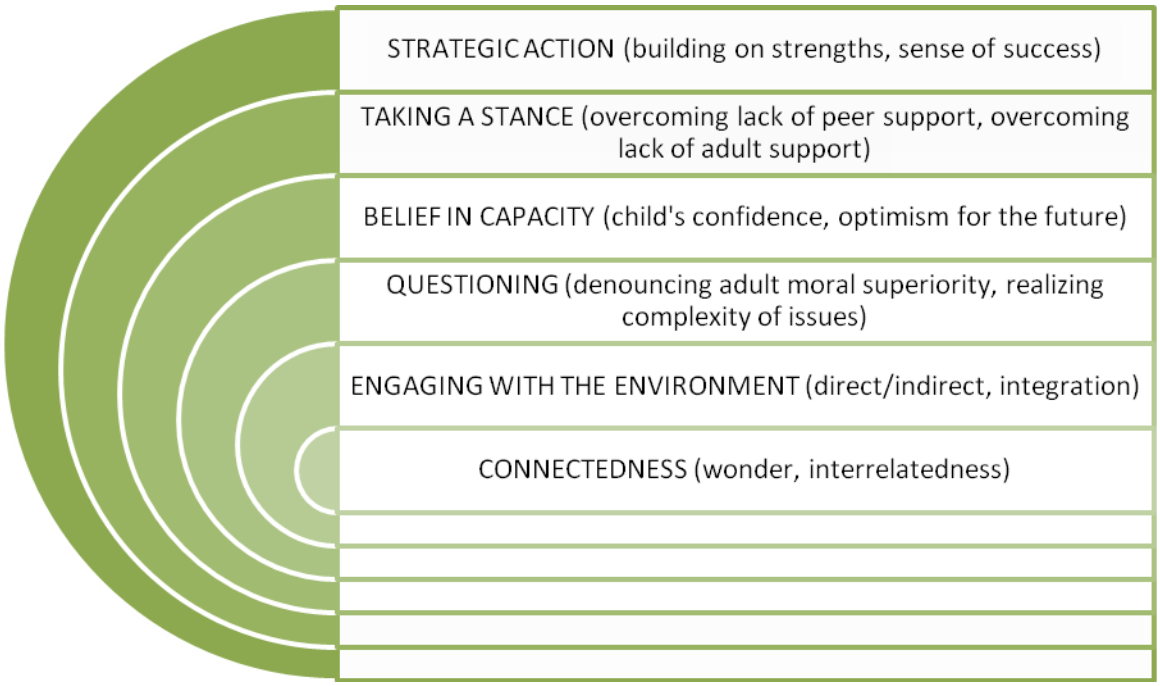

Figure 1. Blanchet-Cohen's framework for the development of environmental action (adapted from Blanchet-Cohen, 2008, p. 263).

The stages are used to frame the discussion of research that addresses factors influencing the development of responsible stewardship. I recognize that much of the research literature overlaps multiple stages and it was placed in the most appropriate section possible.

Stage 1: connectedness.

Emotions play a significant role in present and future decision making for people of all ages (Jacobson, Mcduff, & Monroe, 2007; Reis & Roth, 2010). Therefore, in order to have emotions positively affect environmental decision making, each person needs to develop a positive connection to the natural environment. First and foremost, this connection with the earth is achieved through direct exposure to the natural world, where children are able to explore and become comfortable with their surroundings (Blanchet-Cohen, 2008; Farmer et al., 2007; Littledyke, 2008).

As discovered through Zink and Burrow's (2008) study of Grade 7 to 13 New Zealand girls during their residential outdoor education programs, the experiences most valued by the students were those that they had during free time. During these moments, the girls were able to explore the natural world without structured activities. Awareness of the existence and the beauty of the natural world is an important precursor for the development of a connection to nature (Chawla & Cushing, 2007). This exposure may occur at different times depending on the child and his or her surroundings. For instance, as Arnold et al. (2009) uncovered through studying environmentally active 16- to 19-year-olds in Nova Scotia, children may regularly play outdoors in natural settings early in life. However, with the shrinking amounts of green spaces and unstructured play in childhood, connections may occur later through attendance at outdoor wilderness centres or programs (Arnold et al., 2009).

Disturbingly, as highlighted by Louv (2008), connections with nature are less common for people throughout the world today than they were a few decades ago. As discussed throughout his book, and also by Charles, Louv, Bodner, Guns, and Stahl (2009), the children least likely to be connecting with nature are those living in urban areas. The rare experiences that these children and youth have with "nature" are generally found in urban parks. While many

environmental educators have joined the *Children and Nature* movement, which aims to connect children to the natural environment (Charles et al., 2009), others disagree that this will increase positive environmental behaviours. These critics cite a few studies that claim that the *Children and Nature* movement instead only results in "cognitive, emotional, and physical benefits" (Schusler and Krasny, 2010, p. 209). Alternately, one could argue that a person experiencing these benefits when exposed to nature would develop a connection and in turn this connection could become the foundation for environmental action (Jacobson et al., 2007; Reis & Roth, 2010; Sobel, 2008).

Abram (1997) supports an intriguing proposition that the disconnection from nature—which is still highly discussed in the literature today—actually has its roots in the advent of written language, particularly the Roman alphabet. He claims that:

> The belief that meaningful speech is purely human property was entirely alien to those oral communities that first evolved our various ways of speaking, and by holding to such a belief today we may well be inhibiting the spontaneous activity of language. By denying that birds and other animals have their own styles of speech, by insisting that the river has no real voice and that the ground itself is mute, we stifle our direct experience. We cut ourselves off from the deep meanings in many of our words, severing our language from that which supports and sustains it. We then wonder why we are often unable to communicate even among ourselves. (Abram, 1997, p. 263)

Whether this phenomenon recently began or has been creeping up over time, the argument is highlighting that the current society is disconnected from the systems that sustain the planet—and this needs to change to protect the earth as well as the health of humans.

In contrast to Blanchet-Cohen, Bruyere's (2008) three components of environmental literacy—behaviour, affect, and knowledge—are reciprocal, meaning that no one element is

presented as a precursor to the others. Notably, *Roots & Shoots*, an international initiative headed by Jane Goodall, harnesses the idea of environmental literacy and uses it as the foundation for the youth program (The Jane Goodall Institute, 2010). "[*Roots & Shoots*] members learn about concerns facing their communities (often through conducting a needs assessment) and then decide how they will take action to address those problems" (Johnson, Johnson-Pynn, & Pynn, 2007, p. 361). A point of interest is that the knowledge component of environmental literacy is viewed as the most important element for beginning the journey to activism. Thus, *Roots & Shoots* views the components of environmental literacy as a process, rather than mutually reciprocal components. Through knowledge, youth can explore and develop ways to tackle environmental problems within their community and around the world. Along with finding environmental solutions, knowledge is important for the development of affect, or a connection to the natural environment. Finally, personal meaning and understanding of the issues and solutions are developed through the actions, or behaviour that youth are involved in throughout the *Roots & Shoots* projects (Johnson et al., 2007). Interestingly, while this international program appears to demonstrate much success, it seems to borrow an old theory within EE—"if people were well informed, they would become more aware of environmental problems and, consequently, would be more motivated to act responsibly toward the environment" (Pruneau, 2006, p. 4). However, Pruneau (2006) indicates that this theory was only maintained for a short time. Consequently, Morrone, Mancle, and Carr reveal that "experts also indicate that, to change an individual's behavior, knowledge about the environment must be associated with environmental sensitivity, personal beliefs, and decisionmaking [*sic*] and problem-solving skills" (2001, p. 33). While Morrone et al. (2001) do not specify when the environmental sensitivity should occur, they do indicate the necessity of a connection with the natural world. In support of this claim, Alp, Ertepinar, Tekkaya, and Yilmaz (2008) state that supplying knowledge about

environmental issues will not necessarily lead to environmental action without affect towards the environment. Instead, Hwang, Kim, and Jeng (2000) propose that three relational factors influence environmentally friendly behaviour: cognitive (knowledge and skills), affective (connection to nature and attitudes toward environmental issues), and situational (societal context; as cited in Pruneau, 2006). While these authors are discussing *behaviours*, their arguments are relevant to environmental *action* because they include action skills in the explanation of the cognitive component.

Similar to Blanchet-Cohen's framework is a framework presented by Gayford (2002) for developing critical environmental literacy (see Figure 2).

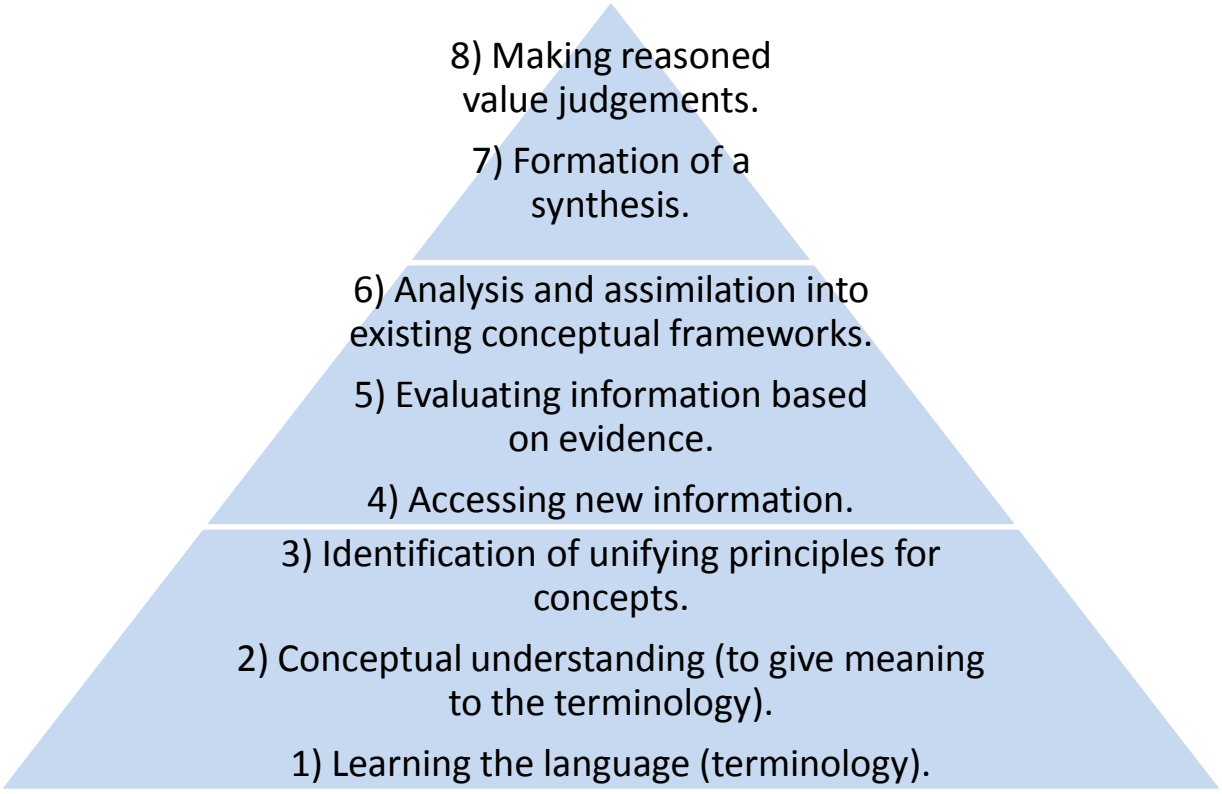

Figure 2. Gayford's "hierarchical model for developing environmental literacy" (adapted from Gayford, 2002, p. 104).

Within this framework, a person first needs to develop the language and terminology of environmental topics (such as terms and definitions within ecology: habitat, carrying capacity,

etc.). This knowledge is built upon through the stages until the person has the knowledge and skills to take action for the environment (Gayford, 2002). While Gayford's stages appear to act in a linear fashion, this is not always the case. Notably, Gayford excludes any mention of developing a connection to the environment from this framework.

Jacobson et al. (2007) contend that the arts could be used as a catalyst for developing this affect. According to these authors, song, dance, and the written word have a strong emotional trigger for many people. The use of the arts is therefore helpful for influencing a wider audience to assess their values and rethink their behaviours toward the environment (Jacobson et al., 2007). Similarly, Heimlich and Ardoin (2008) assert that positive environmental attitudes that have a foundation in and a strong connection to nature are the ones that are most likely to transfer into environmental action; however, a person also needs self-esteem and the skills to take action. Lugg (2007) supports Blanchet-Cohen (2008) and Morrone et al. (2001) by noting that outdoor and EE research maintains the notion that exposure to nature plays a considerable role in the development of responsible stewards of the earth. In agreement, Sobel (2008) explains that:

> It's [the] childhood experiences [in nature] that provide the essential glue, the deep motivational attitude and commitment, the connection to the animals and dirt of the natural world. These primary experiences then fuel the pursuit of knowledge that leads to conservation behaviour. (p. 12)

This pursuit of knowledge that is initiated when one develops a connection with the environment leads into the next stage of Blanchet-Cohen's (2008) framework where children or youth engage with the environment.

Stage 2: engaging with the environment.

Blanchet-Cohen (2008) believes that after a connection with nature has been established, children can engage with the natural environment in the form of learning how natural systems work. As children begin to understand nature, they can investigate their roles in relation to the environment. This engagement with the environment often occurs in a "special place" for each child (Sobel, 2008). Sobel (2008) believes that children between the ages of seven and twelve years have a "universal tendency . . . to create or find their own private places" (p. 39). Having a special place in nature can be an avenue for developing independence. For children, this place not only allows them to develop a connection to nature, learn about their natural surroundings, and cultivate a passion to protect it, but also helps provide a safe space for exploring their increasing autonomy from their families (Sobel, 2008). Unfortunately, this "universal tendency" may be vanishing. Here, Pyle's (2008) disheartening observations indicate:

> Virtually every naturalist and person of kindly disposition toward the natural world can recite the particulars of such as grounding in a particular place. So can many others, giving at least an opening to their better nature as regards the environment. I feel I have gotten through to people who did not consider themselves environmentalists through connection with a place they hold in their hearts. In fact, the number of adults in my audiences incapable of naming a "first place" is vanishingly small. But in recent years, I have been distressed to discover that many younger people have no such sites or experiences to relate. Graduate students and older undergraduates of my acquaintance may still respond positively, but many younger college and high school students have no idea what I am talking about. (p. 158)

Societal trends, such as reduced amounts of free, unstructured play during childhood, and changing focuses of schooling could be impacting children and youth's universal tendencies

(Louv, 2008). For instance, up to, and into the beginning of the 20th century, the American Nature Study movement had children exploring and engaging with the local natural environment daily during school, in order to learn essential knowledge and skills related to their locality (Pyle, 2008). Unfortunately, half way through the century, this movement was abolished, resulting in industrial societies who lack knowledge and "personal acquaintance with local flora and fauna" (Pyle, 2008, p. 155). In light of this, Pyle (2008) asks, "How can a culture confront imperilled ecosystems when a large majority of the members have no functional knowledge of the system's working parts?" (p. 155). When people engage with the natural environment, they begin to see patterns and understand how things work. Without this understanding, children and youth would have difficulty in moving to the third stage and beginning to question societal norms.

Stage 3: questioning.

After children have developed a concern for the environment fostered through the first two stages, they can begin to question the accepted norms in society that may be maintaining destructive environmental behaviour (Blanchet-Cohen, 2008; Chawla & Cushing, 2007).

Stage 4; belief in capacity.

When students reflect on their roles within the environment in relation to how they are questioning norms, they can move into the fourth stage, belief in capacity (Blanchet-Cohen, 2008). Children must have hope for the future of the planet to allow a self-perception as catalysts that can bring about positive change (Farmer et al., 2007). This hope may be established and maintained through their experiences in healthy natural settings and through the influences of significant people in their lives (Arnold et al., 2009).

Stage 5: taking a stance; and stage 6: strategic action.

The fifth and sixth stages build upon the prior experiences and require the skills that will allow youth to take action for the environment (Arnold et al., 2009; Blanchet-Cohen; Farmer et al., 2007). While achieving these goals is not always easy, many researchers do agree on some key actions that increase the probability of developing responsible stewards of the earth (Carrier, 2009). Through their literature review, Chawla and Cushing (2007) outline several non-linear factors that influence whether or not children and youth achieve the goals of EE. These factors are: education, social networks, experiencing success, dialogue, involvement with organizations, regular everyday experiences, influential people, attributing personal significance to experiences and information, and the development of action skills. These factors are interwoven throughout children and youths' lives as they learn about EE and become active in causes. Additionally, Kusmawan et al. (2009) believe that the unique combination of the social, cultural, and physical aspects of the local context for each individual impacts development into a responsible steward of the earth, making exact replication difficult. Blanchet-Cohen (2008) believes that the achievement of the above framework would not be possible without the initial exposure to the natural world. However, continual exposure to, and learning in the natural world is a necessary component of the learning process throughout all stages of the framework (Carrier, 2009).

Blanchet-Cohen's (2008) framework, and the authors cited within these sections have provided insight into many factors that can influence people to become involved in environmental action. These are general factors that may exist throughout various aspects of life. There is a possibility that many of these factors will be present in the narratives of my participants. The focus then will be to determine if and how these influential factors appear through school-related experiences. The following two sections integrate these factors with schooling.

An integrated curriculum.

Determining pedagogies that address and engage all students while attending to the curriculum is essential for reaching the goals of EE. In this sense, Carrier (2009) recommends the utilization of active, authentic learning experiences in outdoor, natural settings to increase the engagement and learning for all students, especially boys. This author states, for example, that during a unit about soils, students could dig up soil samples from around the school, touch, look at, and discuss their ideas and findings as opposed to viewing pictures, and reading about soil from books. Extending this idea, Ernst (2007) stresses teaching through what she calls environment-based education (EBE). Instead of singling out EE into one subject, generally science, EBE utilizes the local environment as the foundation for learning an integrated curriculum of many core subjects through real, relevant, and local experiences. EBE parallels the better-known field of place-based education where students are:

> [immersed] . . . in [the] local heritage, culture, ecology, landscapes, opportunities, and experiences as a foundation for the study of language arts, mathematics, social studies, science, and other subjects. Place-based education encourages teachers and students to use the schoolyard, community, public lands, and other special places as resources, turning communities into classrooms. (PEEC, 2010, p. 2)

In addition, Knapp (2008) puts forth several elements of place-based education. First, like EBE, an integrated curriculum is created from the local environment, which ultimately "contain[s] ecological, multigenerational, and multicultural dimensions" (Knapp, 2008, p. 13). Second, the division between school and community is broken, and teachers and students interact productively within their community. Third, questions and creativity are essential for students to actively build knowledge in addition to what they are being taught. Finally, students are also assessed in terms of the contribution that they make to the health and vitality of their community

(Knapp, 2008). In short, place-based education aims to give students and teachers personal, hands-on experience within their local environment (Gruenewald, 2003b). Utilizing the above ideas and integrating the outdoor learning into an action project is also helpful for students who struggle in the traditional school setting. For instance, Roth (2010) described how a student with a learning disability was singled out during traditional learning situations, however, he became a leader and essential member of the group when outdoors carrying out environmental action.

With the lack of time and resources for addressing each subject daily, education policy stakeholders from England and Denmark also believe that placing EE within every subject, similar to EBE, or place-based education, can be a successful strategy (Carlsson & Sanders, 2008). However, there are issues with this technique, related to interpretation of EE policy, and the training and support that the teachers receive both pre-service and in-service that may result in a lack of focus on EE (Ernst, 2007). By teaching about local issues that directly impact their lives, students can be encouraged to take action to improve the environment (Barrett, 2006). Continuous learning about the environment in a natural setting is an important element that increases the probability of learning and achieving the goals of EE (Arnold et al., 2009; Farmer et al., 2007; NACC, 2008).

The one area in life that all Ontario children have in common is a guaranteed access to schooling. If the opportunity to develop a connection with and understanding of nature is lacking in home life, schooling can ensure that students have access to the same learning expectations, and, as Weintraub (1995) supports, help students develop behaviours that demonstrate their mutual relationship with Earth. However, there are some obstacles to creating responsible stewards of the earth through public schooling. As Barnett et al. (2006), discovered through their mixed methods analysis of a Boston Public School District urban ecology science program, traditional secondary school science classes rarely provide students with an understanding that

local environmental issues affect them, and result in a connection to the earth and responsible stewardship. Without recognition and implementation of the many influential factors, the education system could fall short of the Ministry's goals for the outcomes of EE (Carrier, 2009; Ministry, 2007b).

The experiences that students have in school can be important factors for influencing them to become responsible stewards. Ideally, to target all students, the influential factors discussed throughout the six stages of Blanchet-Cohen's (2008) framework could be used to interpret and implement *Acting Today, Shaping Tomorrow* in order to reach all students. My research will potentially emphasize the importance of some of these factors and help to share more specific interpretations for implementing EE in an Ontario context. Furthermore, the policy document discusses activities conducted beyond the regular class. My participants demonstrate their environmental activism through their membership in an environmental club. Therefore, clubs may be an alternative form of school-based EE. A review of the literature in this area can provide ideas for the influence that clubs may have on student and teacher activism.

Clubs as Alternative School-Based Environmental Education

After increasing in the early 1990s, environmental concern among American youth has been decreasing (Wray-Lake, Flanagan, & Osgood, 2010). With narcissism characterizing this generation (Twenge & Campbell, 2009), the majority of American youth believe that the government and other consumers must deal with the environmental problems (Wray-Lake et al., 2010). Similarly, since the 1970s in Australia and in other countries, attitudes toward science—a subject in Ontario that contains the greatest links with EE—have been less favourable as students advance into higher grades (Littledyke, 2008). With these trends around the world, it is intriguing that there are youth who have become responsible stewards of the earth. This paradox

leads to the following question: What is/was different for these youth? To help address this question, Carlsson and Sanders (2008) highlight the fact that student collaboration in environmental action can help students to build their understanding of environmental problems, develop their skills for action, become motivated to carry out a project, view themselves as catalysts for change, and also believe that they are part of something (pp. 321-322). Building upon this point, Flanagan and Levine indicate that youths' commitment to their community increases through collaborative work such as "socializing with diverse groups of peers, discussing social and political issues with fellow students, joining student organizations, and participating in learning communities" (2010, p. 170). These benefits could potentially be achieved by youth activists participating in school-based environmental clubs, and may be uncovered through this study.

Youth who participate in environmental action often do so out of an intrinsic desire grounded in their own *understanding of* and *authentic concern for* the environment (Fones, 2004; Schusler et al., 2009). Additionally, in order to acquire the benefits listed above, youth action manifests as sharing of responsibility and decisions with the adults who may be involved to address the source of an issue (Schusler & Krasny, 2008; Schusler et al., 2009). In the school context, students develop the intent to act on an issue by getting involved in a project from the beginning stages of identifying the issues to be dealt with through to the action (Kennelly, Taylor, & Jenkins, 2008). From this, one can infer that schools can be considered ideal places for the introduction of EE to children—not without controversy (Weston, 2004). However, activism still requires students to be involved at a personal level (Reis & Roth, 2010). Otherwise, the disconnect between knowledge and action tends to widen.

Dyment (2008) cites a study of environmental clubs conducted in the 1990s in the Toronto District School Board. The study found that because schools were afraid of confrontation arising

from controversial topics (for example, targeting forestry practices of a local company in a logging dependent community), action that students were allowed to take was degraded to basic activities such as recycling. Additionally, she assessed the process and levels of involvement of students in school greening projects through surveys and interviews with teachers, principals and parents. However, this study failed to address the reasons why these students became involved, if there was a choice. Interestingly, while many schools are creating environmental clubs for their students, Howard (2008) is concerned that this growth does not indicate a resurgence of connections to the natural world. Rather, the same author fears that through school-based environmental initiatives, society and school systems may instead be fostering a "resourcist attitude toward nature" which results in all action taken for human benefit, instead of in the interest of the health of the environment (p. 309). If environmental clubs are carried out to allow authentic environmental action by youth, and the benefits discussed by Carlsson and Sanders (2008), these clubs could be a venue for supporting the attainment of the goals of EE by students in Ontario schools. This, in turn, justifies their choice as a research site.

Limitations within the Reviewed Literature

While all of the studies examined in the above literature review were related to EE and the development of responsible stewards of the earth, each study had slightly different foci. These foci include: *environmental action* (Arnold et al., 2009; Blanchet-Cohen, 2008; Carlsson & Sanders, 2008; Chawla & Cushing, 2007; Dyment, 2008; Gruenewald, 2003a); *learning EE in school* (Carrier, 2009; Duvall & Zint, 2007; Farmer et al., 2007; Lugg, 2007; Zink & Burrows, 2008); *teachers' challenges and successes with EE* (Desjean-Perrotta et al., 2008; Ernst, 2007; Schusler et al., 2009); and, *environmental literacy* (Bruyere, 2008; Gayford, 2002; Magntorn & Hellden, 2007; Morrone et al., 2001; Olofsson & Ohman, 2006). Even though these studies

greatly contributed to the field of EE through their range of ages of participants, locations and contexts, there is still a need for further research in terms of the Canadian context, and more specifically Ontario due to its recent implementation of the EE curriculum policy document. While it has been recognized through research that there are great similarities in environmentally active people's foundational experiences internationally (Chawla & Cushing, 2007), each country, and each Canadian province and territory has its own policies and curriculum guiding education.

Educational experiences across the world with regards to EE may have been influenced by the DESD. Therefore, because the majority of studies were conducted before 2005, there is a need for new research as Ontario students now live in a society that mandates the teaching of EE within schools. There could be newer school-based factors influencing current students in becoming responsible stewards of the earth that may not have existed during earlier research. For example, while Arnold et al.'s study was conducted with an age group of youth who were represented in my study (16 to 19 years of age), their research was conducted in Nova Scotia before the DESD began. Moreover, while some studies about EE and environmental activism focus on children (Blanchet-Cohen, 2008; Carrier, 2009; Duvall & Zint, 2007; Farmer et al., 2007), the majority of studies that investigate reasons for becoming involved in environmental activism focus on adults (Chawla & Cushing, 2007). These two points highlight the limited coverage of youth (14 to 19 years of age) environmental activism. As Chawla and Cushing (2007) highlight in their article, studies focusing on adult environmental activists have fielded much criticism because they depend on adults' memories of their childhood influences instead of current youth experiences. Furthermore, Gough (1999) asserts that youth are having very different formative experiences as compared to those of adults who were youth several decades ago. This indicates the necessity of learning from today's youth. Therefore, my research

attended to this criticism by looking at youth who are currently in the education system, while simultaneously addressing childhood and early adolescent experiences that are more recent memories than those held by adults. The Ministry (2009a) and researchers (Flanagan & Levine, 2010; Jennings & Stoker, 2004, as cited in Hooghe & Wilkenfeld, 2008) believe that students who demonstrate activism and civic involvement during their school years will continue to be responsible stewards of the earth as adults, which points to the significance of studying youth.

As the limitations in the literature and the way that my study will fill these gaps have been shared, it is now time to situate this study within a theoretical framework. Many of the factors influencing responsible stewardship that were shared throughout this literature review discussed influential experiences. By reflecting on these experiences and developing into responsible stewards, the learning of the youth can be demonstrated in part through the Experiential Learning Theory.

Chapter 3: Theoretical Framework: Experiential Learning Theory (ELT)

While there are several theories that could apply, this study is grounded within aspects of the Experiential Learning Theory (Kolb & Kolb, 2005)—or ELT. In linking the ELT with this research, it is important to note that the research questions are in line with this theory as they explore the subjective meanings that youth attribute to their multitude of experiences in learning about/for/in the environment. The first research question addresses the compilation of experiences, reflection on those experiences, and intention to take action. The second question takes a broad view of the youth's learning processes involving the above components, and reflects on the policy framework in relation to the narratives of participants. With respect to the discussion throughout the literature review regarding the importance of learning in the natural world, and the definition of environmental activism, the ELT is the most appropriate model in

which to ground my research. I will also be sensitive to any sociocultural elements of participants' narratives and the complex interactions of the influential factors that shaped who they are today.

ELT is founded on past experiential learning theorists' ideas of learning, such as Dewey, Lewin, and Piaget (Healey & Jenkins, 2000). According to those theorists, learning is "'the process whereby knowledge is created through the transformation of experience. Knowledge results from the combinations of grasping and transforming experience'" (Kolb, 1984, p. 41, as cited in Kolb & Kolb, 2005, p. 194). Moreover, ELT is built on the following six beliefs about learning: (1) Learning needs to be viewed as a process in and of itself, not assessed based on pre-determined outcomes; (2) Learning is a continual review of prior knowledge. In other words, students must bring their prior knowledge with them to an experience and challenge and consciously refine their understandings; (3) Learning occurs when there is conflict between what we think we know and the new experiences that challenge it; (4) Learning involves multiple factors—i.e., "thinking, feeling, perceiving, and behaving [or acting]" (Kolb & Kolb, 2005, p. 194); (5) Learning is about assimilation (fitting new information into already existing schemes, without refining) and accommodation (developing new schemes to fit the new information); and (6) Learning is the construction of knowledge, meaning that the learner creates their own interpretation of information or an experience (Kolb & Kolb, 2005). According to this theory, learning encompasses two distinct elements: grasping (concrete experience and abstract conceptualization) and transforming (reflective observation and active experimentation) (see Figure 3).

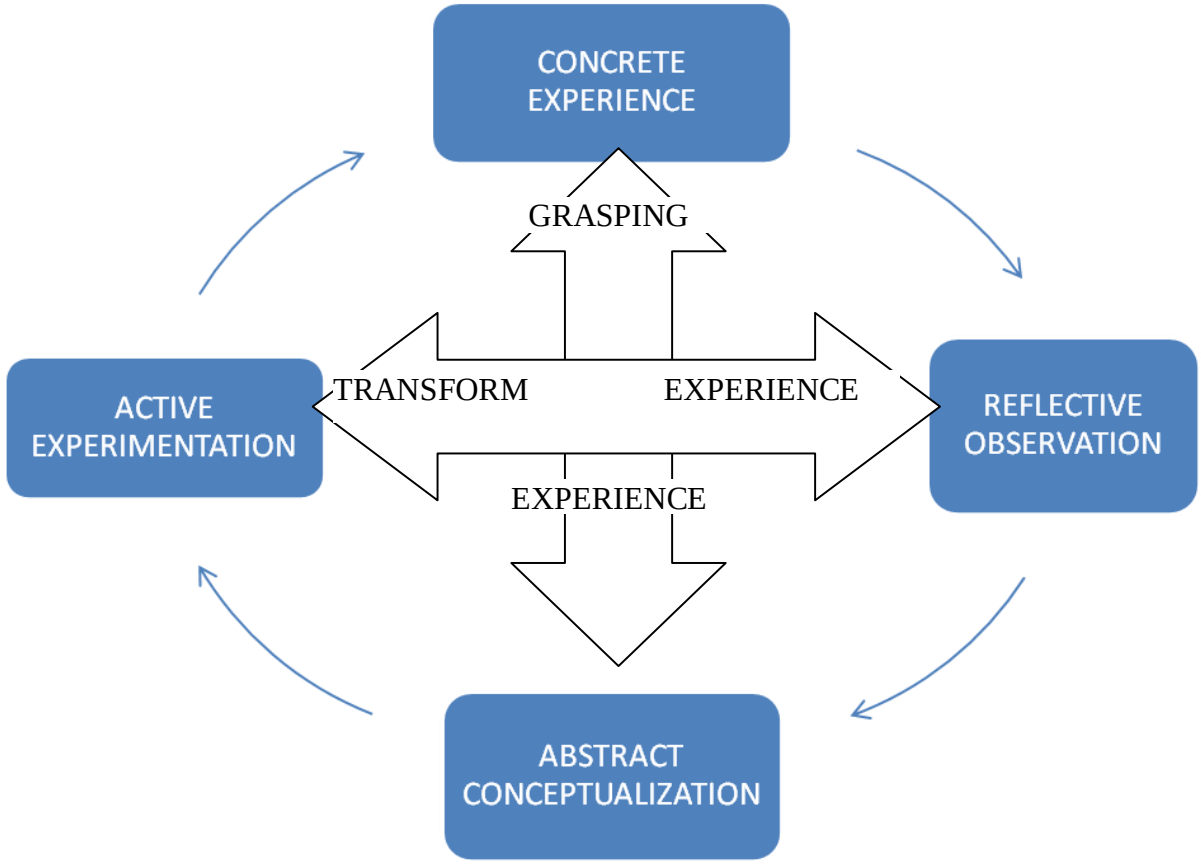

Figure 3. The Experiential Learning Cycle. "[The] experiential learning . . . . process is portrayed as an idealized learning cycle or spiral where the learner 'touches all the bases'. . . in a recursive process that is responsive to the learning situation and what is being learned" (Kolb & Kolb, 2009, pp. 298-299).

Essential to this theory is the role of reflection in the learning process. Though simplified by Kolb and Kolb (2009) for clarity (a fact criticized by Jarvis, (2009) because "it is too simple to reflect the reality of the complex social process of human learning" (pp. 22-23)), the construction of knowledge is said to occur in a cyclical fashion. In this cyclical process, the learner works through the four parts—experiencing, reflecting, thinking, and acting. This theory promotes the idea that learning and education are intertwined lifelong processes (Healey & Jenkins, 2000). For instance, in terms of the development of responsible stewards of the earth, ELT supports the notion that many factors and experiences build up over the course of a person's life; and these

factors interact and influence the development into the environmental activist that a person becomes (Packer & Ballantyne, 2010).

Similar to the Theory of Planned Behaviour—a highly cited theory in EE (Ajzen & Driver, 1992; Heimlich & Ardoin, 2008)—intention is an important component of ELT and also activism (Emmons, 1997, as cited in Decker, 2009, p. 112). To highlight a link between reflection and activism, Kyburz-Graber, Hofer, and Wolfensberger (2006) claim that "the process of reflection on the interaction between nature and society [is] . . . indispensable" to acting on environmental problems (p. 107). When children and youth reflect on real life situations that personally impact their lives and the environment they can create forms of action to tackle the issues (Kyburz-Graber et al., 2006).

The four stages of the experiential learning cycle are portrayed as separate elements. However, I wonder whether the elements truly occur at distinctly separate times, or if they could overlap during experiences. According to Yuen Lie Lim (2011), reflection appears to be a stage separate from the actual concrete experience—a notion which is challenged below. For instance, "reflection: (1) is deliberate; (2) is stimulated by a problematic situation; (3) involves an inward examination of personal knowledge with reference to the problem situation; and (4) leads to new insights" (Yuen Lie Lim, 2011, p. 172). Nevertheless, van Manen (1995) argued that there are three different types of reflection depending on what situation a person is in: (1) retrospective reflection (reflecting on the past); (2) anticipatory reflection (reflection for future experiences); and (3) contemporaneous reflection (reflection in the moment of the experience, also known as 'thinking in on your feet'). Similarly, Barnett and Brill (1990) explained that Schön (1983) believes that there are two types of reflection, reflection-*on*-action and reflection-*in*-action. van Manen's (1995) three types of reflection and Schön's (1983, as cited in Barnett & Brill, 1990) two types of reflection can be integrated with the experiential learning cycle. For instance, when

considering the cycle to contain separate elements, retrospective reflection—or reflection-*on*-action—could be linked in with the reflective observation stage, as this is when a learner reflects on a past concrete experience. Furthermore, anticipatory reflection could be likened to abstract conceptualization, as the learner is thinking and planning for action during similar future experiences. Alternately, if the stages of the experiential learning cycle are thought to overlap in some circumstances, then contemporaneous reflection—or reflection-*in*-action—represents this overlap. For instance, a learner reflects during an experience and as a result adapts behaviour and action for the remainder of the experience (Barnett & Brill, 1990). Consequently, Barnett and Brill (1990) explain that reflection-*on*-action occurs during reflective observation, abstract conceptualization and active experimentation, while reflection-*in*-action can occur during part of active experimentation and the concrete experience stage. These authors put forth the idea that reflection is not one stage of the cycle, rather an underlying foundation of the entire process. Confusion may arise over the idea of reflection-*in*-action. However, Schön (1983, as cited in Barnett & Brill, 1990) highlights that there is a zone of "action present" that represents the time period in which new action affects the experience. The action present can encompass a very short time period such as a couple of minutes, or "hours, days, or even weeks or months depending on the pace of the activity and the situational boundaries that are characteristic of the practice" (pp. 61-62, as cited in Barnett & Brill, 1990, p. 180). Therefore, this supports the notion that there is time during the experience where the learner reflects and adapts future actions which indicates that reflection is not a separate stage.

Similarly, Yuen Lie Lim (2011) presented his ideas about reflection through Mezirow's (1997) hierarchical levels of reflection (see Figure 4).

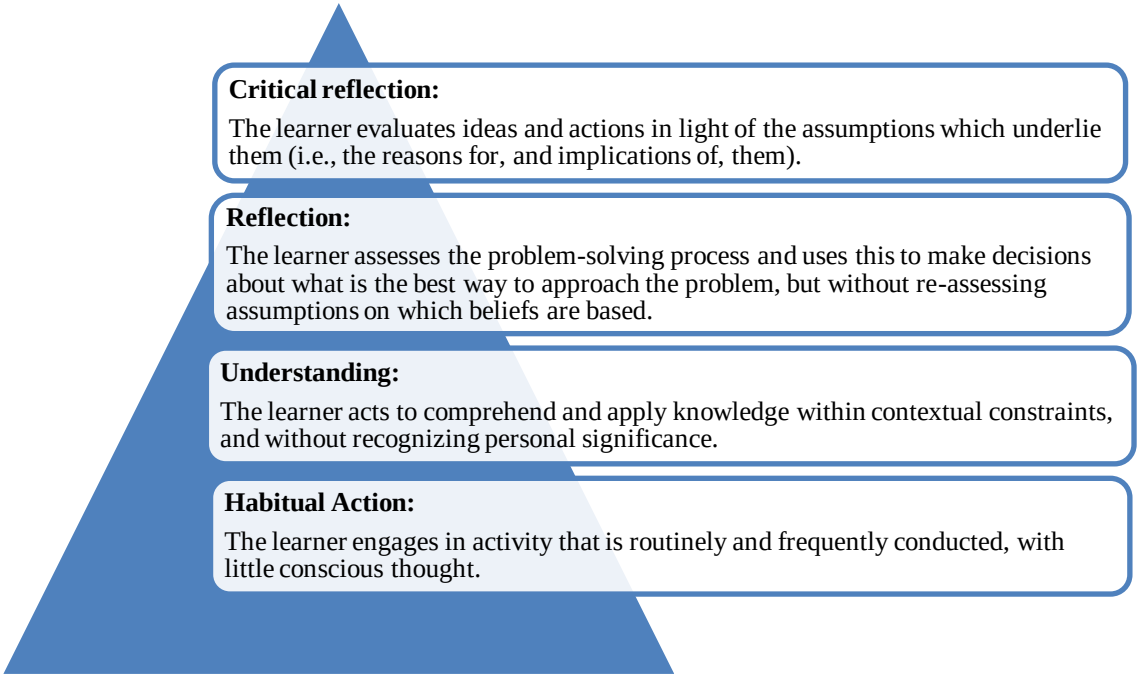

Figure 4. Mezirow's hierarchy of reflective thinking (adapted from Yuen Lie Lim, 2011, p. 173).

Only the top level of critical reflection is classified as *true* reflection (Yuen Lie Lim, 2011). The author states that this level of reflection requires one to step back from a situation and assess the underlying values and assumptions which led to the decisions that were made during a concrete experience—a type of reflection that is rare. Mezirow's hierarchy, along with the components of reflection presented by Yuen Lie Lim (2011) indicate that van Manen's (1995) contemporaneous reflection, which occurs during a concrete experience, cannot be classed as true reflection, and thus indicates that the concrete experience and reflective observation stages of the experiential learning cycle occur separately. Notably though, Schön's (1983, as cited in Barnett & Brill, 1990) notion of "action present" could afford opportunities for critical reflection to occur during reflection-*in*-action (overlap of all stages of the learning cycle) because of the variability of the length of time which an activity spans.

General Critiques of the ELT

Unlike authors who have greatly criticized the Learning Styles Inventory (LSI) component of ELT for lack of validity and reliability (Bersteiner, Avery, & Neumann, 2010), Healey and Jenkins (2000) state that the 1985 version of this test is supported as reliable in certain disciplines. These authors also believe that ELT is an excellent theory, due to the combination of the learning cycle and the learning styles. De Ciantis and Kirton (1996) on the other hand argue that too many measures have been incorporated into ELT and that no theory on its own can deal with all of the elements present—style, level, and process. An important point to note regarding this critique is the timeline: De Ciantis and Kirton published this article in 1996, while Kolb and Kolb revised the LSI and published the revision in 2009. Therefore, researchers' assessments of the ELT, and more specifically, the LSI, may be arguing points which have been addressed and updated by Kolb and Kolb in 2009, thus requiring new evaluations by other authors. Notably, Bersteiner et al. (2010) have recently addressed the ELT and concluded that many problems with the theory remain, especially with the LSI. For example, referencing the article by De Ciantis and Kirton (1996), Bersteinger et al. highlight that "Kolb's learning styles in fact define a learning process rather than a style (personality trait)" (2010, p. 31). In support of this point, ELT is being viewed and utilized as a process for the purposes of this study rather than for addressing learning styles. Similarly, Kamis and Kahn (2009) also chose to forego use of the learning styles within their study in favour of the experiential learning cycle. Their choice was based on the belief that higher quality learning occurs when each learner travels through the whole cycle, instead of focusing on one preferred learning style. Interestingly, the issues that the above authors highlighted are not with the conceptions of the theory itself, rather the logistics of how the model was actually drawn (Bersteinger et al., 2010). The argument centres on the fact that because the model was drawn using inappropriate "graphic

syntax", therefore, the message is also incorrect (Bersteinger et al., 2010, p. 34). However, besides the assessment of the drawing of the model, the authors failed to address the underlying constituents of the theory.

Furthermore, as noted above, the ELT has been criticized for being too simplistic. This point is supported by Jarvis (2009). Due to this belief, and after many years of his own research, this author developed his own model of learning which is based on the ELT learning cycle. He states "that learning involves three transformations: the sensation, the person, and the social situation" (Jarvis, 2009, p. 29). Therefore, he has integrated the social aspect of learning into his learning cycle. The social aspect is enormously important to learning as it allows learning experiences to be applicable to real life (Wenger, 2009). He states that:

> Being alive as human beings means that we are constantly engaged in the pursuit of enterprises of all kinds, from ensuring our physical survival to seeking the most lofty pleasures. As we define these enterprises and engage in their pursuit together, we interact with each other and with the world and we tune our relations with each other and with the world accordingly. In other words we learn. (Wenger, 1998, p. 45, as cited in Korthagen, 2010, p. 99)

I question, however, if the ELT does in fact ignore the social aspect of learning highlighted as important by Jarvis (2009), Korthagen (2010), and Wenger (2009). Perhaps, rather than interpreting the lack of the social aspect within the ELT—both in the description of the theory and the drawing of the model—as a message that learning is individual, this omission could be viewed as inclusion of both individual and social aspects of learning. By this, I purport that the broadness or generality of the ELT could be viewed as encompassing the social aspect of learning. For instance, the ELT's learning cycle can be interpreted in many ways: concrete experiences could include those individually experienced, or experienced within a group;

reflective observation could be completed individually, or as a group; these examples can be applied to the abstract conceptualization and active experimentation stages as well. Additionally, cultural narratives always influence the learning context (Barrett & Sutter, 2006), thus insisting that the learning cycle is grounded within a sociocultural framework.

The critiques of the ELT are generally relevant and have indicated the necessity to maintain an open mind during my research. For instance, the authors cited (Barnett & Brill, 1990; van Manen, 1995; Yuen Lie Lim, 2011) in the discussion on reflection share varied views of this important component of the ELT. Considering Yuen Lie Lim (2011), who states that true reflection is a completely separate element within the cycle, and van Manen's (1995) retrospective reflection, I will work with the experiential learning cycle as drawn by Kolb and Kolb (2009) (see Figure 3). However, during the analysis of my data I will be open to learning from the participants' narratives and potentially modify this cycle to better fit with the outcomes of this study. Also, in terms of my research questions, I am open to the possibility of my participants working through the four stages as we carry out our interviews and they reflect on and explain their experiences and involvement with environmental activism. With this in mind, I will move forward to discuss the methodology of this study.

Chapter 4: Methodology and Data Collection

Narrative Inquiry

> [M]en and women and children looked at one another, at the land, at the sky, at rivers and oceans, at mountains and deserts, at animals, and plants, and wondered, as it is in our nature to do: what is all this that I see and hear and find unfolding before me? How shall I comprehend the life that is in me and around me? To do so, stories were constructed and

> told, and remembered, and handed down over time, over the generations. (Coles, 1989, p.189).

As humans, we understand and portray our lives through stories (Bell, 2003), which makes narrative methods appropriate for when in-depth stories about the experiences of a small group of people are desired (Creswell, 2007). Elements of the qualitative research method of narrative inquiry are utilized for this study in order to learn what factors mediated participants' decision to become responsible stewards of the earth. The narrative inquiry plays out through how I conducted the research, and my data analysis and discussion. The focus of this study is on the narratives of the participants, rather than on having my own personal narrative carry throughout the thesis.

Narrative inquiry as a research methodology has become more popular in the last several years, being integrated into various "social discipline[s]: psychology, anthropology, sociology, folklore, history, sociolinguistics, communication, cultural studies, gender studies, gerontology and others" (Spector-Mersel, 2010, pp. 204-205). Similar to many other qualitative research methods, narrative inquirers may collect data through venues such as observations, interviews, and focus groups; the differentiating factor is that stories are placed at the focal point of the analysis (Spector-Mersel, 2010). Besides, every experience is situated within a story and every story is influenced by the context in which it was grounded and by the meaning attributed by the individual (Xu & Connelly, 2010).

Within narrative inquiry, narratives are said to be looked at in one of two ways, either through narratology or futurology (Phelan, 2006). Narrative inquirers using narratology, also called narratologists, work backwards from participants' stories to uncover influential experiences, or to understand a person's life in detail. Alternately, Phelan (2006) explains that futurology is where the researcher explores and predicts future events and life courses.

Narratology—looking retrospectively at narratives—is the type of narrative inquiry utilized within this study because the main focus is on the content of the narratives that addressed experiences from the past (Bamberg, 2006). An overview of the history of narrative inquiry in the following section will provide additional justification for using this methodology.

The history of and rationale for narrative inquiry.

Narrative inquiry gained its footing in the early 1970s when researchers began to question the ability to learn about and understand experiences through the use of quantitative research methods (Spector-Mersel, 2010). Following the disillusionment with statistical methods for research into experience, several studies were published "that depicted narrative as a major cognitive scheme" (Spector-Mersel, 2010, p. 207). Originally, narratives were thought to represent a person's experience, however, current proponents explain that narratives are the constructions of experience (Spector-Mersel, 2010).

Connelly and Clandinin were the original creators of "the term narrative inquiry" (Xu & Connelly, 2010) and have since written a book about this methodology. Clandinin and Connelly (2000) claim that the work of John Dewey provides the foundation for narrative inquiry. As such, experience is a main component of this methodology. According to Dewey, people are shaped by their experiences, which always include personal and social (interactive) elements (Clandinin & Connelly, 2000; Craig, 2009). Furthermore, Dewey stressed the importance in understanding continuity, claiming that "experiences grow out of other experiences, and experiences lead to further experiences" (Clandinin & Connelly, 2000, p. 2). Dewey's theories of experience led to the creation of the three-dimensional narrative inquiry space, also called life space (Xu & Connelly, 2010). A belief within narrative inquiry is that each experience is made up of three dimensions: interaction, situation, and continuity (Clandinin & Connelly, 2000;

Connelly & Clandinin, 2006; Xu & Connelly, 2010). Clandinin and Connelly added the third dimension, situation, onto the two discussed by Dewey because of the influence that locality has on an experience (Xu & Connelly, 2010). The three dimensional narrative inquiry space is not only the foundation of stories, but also the guide for narrative inquiry as a research methodology for this study.

The methodology.

Narrative inquiry is a methodology mainly founded on experience. Narrative inquiry is a "way of thinking" that does not generally ground itself in theory at the beginning of a research project (Clandinin & Connelly, 2000, p. 43). For instance, participants are not viewed as an example of a theory, rather as examples of storied lives (Clandinin & Connelly, 2000; Connelly & Clandinin, 2006). The narrative method is a process which cannot be explained clearly in step-by-step terms. Therefore, as a methodology that requires learning by doing, this research study is an exploration into the process as well as an adventure to answer the research questions.

Research using the narrative inquiry methodology is framed and shaped by the three-dimensional narrative inquiry space, also called *lifespace* or *commonplaces of narrative inquiry* (Clandinin & Connelly, 2000; Clandinin, Pushor, & Orr, 2007; Xu & Connelly, 2010). Within this framework the researcher is able to travel "inward, outward, backward, forward, and situated within place" (Clandinin & Connelly, 2000, p. 49) through the stories shared by the participants. This movement is possible due to the three dimensions of narratives: interaction (personal/inward and social/outward), continuity (past/backward, present, future/forward), and situation (located in a place). The use of this framework for data analysis is discussed further in Chapter 5. Within this process, data is collected through interviews, observations, and subsequent field notes (Spector-Mersel, 2010). Creswell (2007) explains that narrative inquiry is generally used for an

in-depth study of one individual. For this study with 10 participants the three-dimensional narrative inquiry space was used to code and analyze the data. However, the extensive narration and exploration within stories, the travelling outward, inward, backward, and forward is best used with fewer participants (Creswell, 2007) and thus was not utilized to this depth within the current study.

Issues with narrative inquiry.

While there are benefits of narrative inquiry a (i.e., lives are portrayed as stories, thus narrative inquiry explores the stories through the three dimensions) some authors highlight issues with narrative inquiry and also with Clandinin and Connelly's views of this methodology. Firstly, the term narrative has unfortunately broadened over the years as researchers began to use the term to encompass research in many fields as well as work in many professions: "psychotherapy, social work, education, counselling, mediation, organizational transformation, law, medicine, occupational therapy and conflict resolution" (Spector-Mersel, 2010, p. 205). This diversity within the use of the title of narrative inquiry could result in confusion about what narrative inquiry as a methodology actually entails. Furthermore, Juzwik (2010) takes issue with three claims put forth by Xu and Connelly (2010): (i) "stories are beneficent; (ii) narrative inquiry is a way of 'experiencing experience', and (iii) narrative inquiry improves the conditions and situations of persons in and beyond schools" (Juzwik, 2010, p. 375). This author points out that history demonstrates the abundance of stories used in negative ways. However, this point demonstrated by Juzwik (2010) discusses the use of stories through teaching, rather than the gathering of stories for research purposes within a study. Moreover, the same author indicates that Xu and Connelly (2010) claim that narrative inquiry is a way to keep an experience whole, rather than simplifying it with statistical methods. Juzwik's (2010) argument explains that almost

everyone simplifies experiences through stories, thus emphasizing some points while downplaying others. A debate among narrative researchers is whether the aim is to interpret the stories to develop the meaning (Josselson, 2004), or to assist in allowing the stories and ideas from participants to be heard (Spector-Mersel, 2010). Additionally, once a researcher begins analyzing the stories through narrative inquiry, the narratives from participants are further filtered. What is important is to acknowledge that the reported meaning held within the narratives requires this filtering in order for research to be successfully completed (Juzwik, 2010). This filtering allows subjectivity to permeate my writing. Finally, Juzwik (2010) highlights that Xu and Connelly state that narrative research resulted in the betterment of life for the participants, without demonstrating this opinion from the participants themselves. Similar to Juzwik's (2010) problem with this claim, without a follow-up addressing the impacts of my study from the view of the participants, I cannot state that they have been positively influenced just from participating. With the rationale for and the issues with narrative inquiry presented, it is important for the next section to delve into EE research which utilizes this methodology in order to further validate the potential usefulness of narrative inquiry for this study.

Narrative inquiry and EE.

Narrative methods have been used to conduct research in the field of EE. For instance, in the case of youth, the sharing of personal narratives about environmental experiences—or environmental autobiographies—can help them to discover, understand and attribute personal meaning to their stories even if they were unaware of their importance before (Doerr, 2004). As another example, Tooth and Renshaw (2009) discussed a project in Australia that connected students with nature through narrative and drama. Through stories, students were able to reflect on the environments that they were in and intentionally change their behaviours in and towards

the environment and others (Tooth & Renshaw, 2009). Although I am unable to verify this result, these studies demonstrate the possibility that my participants may begin to reflect due to my research, and further change their behaviour and actions for the environment.

One study in particular analyzed both educators and students. Schusler and Krasny (2010) used narrative inquiry as a method to explore educators' descriptions and reflections about their practice of involving youth in environmental action, along with the youth's experiences in these situations. Within this study, the authors focus was on "the narrative as knowledge approach in recognition of stories' potential to generate understanding and contribute to practical learning" (Schusler & Krasny, 2010, p. 212). The goal of this study was to explore how youth environmental action can be mediated by educators both within, and outside the school system. The researchers discovered nine themes that appeared throughout the educators' narratives as helping to foster environmental action: "creating safe spaces, providing structure, building relationships, bridging differences, setting expectations, providing opportunities for meaningful contribution, supporting youth, connecting youth with their community, and expanding horizons" (pp. 218-220). The youth explained their experiences with the environmental action programs as contributing to their intellectual, psychological, and social development. This study is similar to mine in that it explored how youth action could be mediated inside and outside the school system. The themes from this study will assist with the creation of coding categories during my data analysis.

In terms of youth activism, few narrative studies explore the meanings that youth develop from their involvement in environmental action. Barton and Tan's (2010) study lacked deep exploration of the influential factors that contributed to the 10- to 14-year-olds' initial involvement in activism within their community. This is a gap which will be addressed in my study. However, Barton and Tan (2010) did uncover ownership of the environmental project as

evident in the youths' narratives. As demonstrated throughout the narratives of the youth involved in the community action project—obtaining a green roof for their community centre—youth need to buy into the project, take leading roles, and become experts that carry-out *their* locally-relevant project (Barton & Tan, 2010). As part of my data collection, I will explore if and how my participants take ownership and pride in their projects. This will assist in my understanding of how connected the youth are to their environmental actions.

Arnold et al. (2009) demonstrated the use of narrative inquiry for research about environmental action through their interviews with 12 youth involved in environmental activism. They not only asked the youth for the influential factors in their lives, but rather had them reflect on their experiences and their beliefs and explain why these experiences were influential. By exploring the youths' perceived value of the influences, Arnold et al. (2009) improved upon the past significant life experience research by attending to the criticisms—mere identification of influences. This allowed them to gain a deeper understanding of why particular experiences are valued by youth as formative influences. This study is key in the development of my interview protocol for data collection. Arnold et al. (2009) indicated that the creation of a list of influences was a limitation from previous similar studies. Therefore, to avoid this criticism, I will be using Arnold et al.'s idea of exploring why my participants believe that particular factors in their lives are important for their involvement in activism.

Barrett and Sutter (2006) explored the role of museums in engaging secondary school students, teachers, and community members with taking action on environmental issues. These authors concluded that settings such as schools and museums have their own narratives based on the cultures of those places that shape the narratives of each person who experiences them. Thus, these cultural narratives help or hinder engagement with activism (Barrett & Sutter, 2006). Furthermore, Packer and Ballantyne (2010) extended the exploration of environmental learning

into venues such as zoos, aquariums, and wildlife centres. They used narratives to explore if and how visits to zoos, aquariums, and wildlife centres played any role in ESD, and whether the learning from these experiences could influence adults who had visited one of the venues four months before to take action for the environment. In their study, Packer and Ballantyne (2010) explored connections to nature, environmental learning, behaviour change, and action to protect the environment. Through the many stories shared by participants about new knowledge gained as a result of their visit, the researchers found a positive correlation between visits and participants' attitudes and behaviours toward the environment (Packer & Ballantyne, 2010). Similar to the three dimensions of narrative inquiry, these studies remind me of the importance of location within the youths' experiences. Therefore, through my data analysis, I will be searching for mentions of locations within the youths' narratives. The recognition of the importance of particular locations could assist in answering the second research question.

Several authors inspired the narrative methodology of this study based on their own EE research using narratives (Arnold et al., 2009; Barrett & Sutter, 2006; Barton & Tan, 2010; Bell, 2003; Schusler & Krasny, 2010). These studies demonstrate that there is no strict method for conducting narrative inquiries as there are a variety of data collection methods available: interviews, participant observations, videotapes, documents, documentation of student projects, and map drawing (Arnold et al., 2009; Barrett & Sutter, 2006; Barton & Tan, 2010; Bell, 2003; Schusler & Krasny, 2010). "Interviewing is central to narrative research" (Bell, 2003, p. 102) and is the main form of data collection across these studies. Thus, my project will use interviewing for data collection.

Narrative inquiry is "the reconstruction of a person's experience in relationship both to the other and to a social milieu" (Pinnegar & Daynes, 2007, p. 5). Moreover, the words *story* and *narrative* are used frequently to represent the situations through which people attribute meaning

to their experiences (Bell, 2003). This methodology is thus appropriate for this study as it is founded on people's reflection and construction of understandings of experiences—essential components of ELT. There are many ways to understand the world and our experiences within it, of which my thesis is now one. Ultimately, through narratives, my participants can grow as people, and understand more fully how they became who they are and how their past and present influence their choices for the future. In addition, their stories can inspire others to do the same.

In exploring the stories of secondary school students and teachers who seem to have fulfilled the Ministry's goals for EE the present study aims at widening the understanding of important elements that have contributed to participants' growing sense of stewardship. In line with the above studies, narrative inquiry is supported here as an appropriate methodology in which to carry out this EE study. The main form of data collection for this methodology—interviews—were utilized for this study. The interviews were used to elicit stories which looked retrospectively at the participants' influential factors shaping their activism, thus demonstrating the narratology stance within this study (Bamberg, 2006). A further explanation of the data collection process is discussed below.

Data Collection

This narrative study was conducted in a town in South-Central Ontario from late January to early March, 2011. Participants involved are members of the environmental club and represent both purposeful and convenience sampling. These participants were chosen for several reasons. Firstly, as an alumna of this high school, I had contacts that expedited the research process. Additionally, I have developed a deep connection with this community and natural environment where I was raised. Borrowing a term from Orr (1992), I *inhabit this town* even though the place where I reside has changed throughout my university years. This deep connection promotes a

desire to maintain links with this place through my educational and work-related endeavours. These links are both for my benefit and to give back to the town. The town is an urban population as defined by Statistics Canada. With fewer than 20,000 permanent residents, it remains named as a town, rather than a city. It is a unique urban area. This town leans toward the rural end of the spectrum with its population spread throughout natural areas rather than being greatly concentrated at the core. There is potentially an increased chance that youth responsible stewards of the earth in this town value the environment for altruistic reasons (Huddart-Kennedy et al., 2009) instead of resourcist reasons (Howard, 2008).

This extra-curricular environmental club began in September 2008 after its creation by two teachers. Voluntary participation in the club by students in all grades potentially demonstrates these youth's attainment of a role as responsible stewards of the earth. Other possible reasons for membership include a desire to be involved in something, and wanting to learn more about the environment. The fact that the program has been running, and growing for a few years indicates the commitment by teachers and student members. Thus, this club is a relevant site for my research.

Youth responsible stewards of the earth are the focus of the present research because they seem to have attained the vision and goals of EE from the Ministry. As a purposeful sample (Creswell, 2007), members of this club were recruited because they represented a group of individuals who met my understanding of the definition of responsible stewards of the earth. The youth in this study demonstrate actions that are desirable (for instance, initiating and carrying out campaigns to educate and encourage pro-environmental behaviour of others within the community). Therefore, parents and teachers can learn from their experiences to implement with other children and youth. Younger children were not addressed in this study because of the

inadequacy of the methodology for younger ages (interviews) and the difficulty in addressing questions related to their future—i.e., not yet realized—environmental activism.

In line with ELT, data were collected through audio-recorded, 25 to 45 minute individual semi-structured, open-ended interviews (see Appendix A) with each participant. These interviews explored how the student participants learned about/for/in the environment and what factors influence their involvement with environmental action. Asking the participants to take charge and share their constructions resulted in the telling of their stories as they saw them, and also in sharing of insights into EE. I also interviewed the teachers who are actively involved with the club. These individual interviews were one half hour in length semi-structured, and open-ended in nature (see Appendix A). Speaking with each one of the two teachers who developed the club (Dawn Baker[13] and Rachel Smith) helped enrich my understandings of the club by giving all participants an opportunity to talk about their engagement. A broader understanding of the program and a sense of how things were done also developed. Also, I witnessed another side of the influence that teachers are having on the students.

Chapter 5: Data Analysis Method

Data analysis was guided by narrative analysis (Clandinin & Connelly, 2000) and incorporated the flexibility and creativity typical to this methodology. This means that qualitative coding within this type of research methodology develops through trial and error. Through this process, I have to be open to changes, deletions, and new ideas arising from the data (Chawla, 2006). The method for this analysis is inspired by a few authors cited in Chapter 4. Arnold et al. (2009), Bell (2003), and Schusler and Krasny (2010) used similar methods for data

[13] Note, all names, including the name of the town, school, and environmental club are pseudonyms to maintain confidentiality of participants.

analysis (i.e., transcribed interviews), and were important for the development of the analysis for my data. These authors hand-coded their data, allowing the analysis to evolve through subsequent reads of the transcripts. Initially, they recorded margin notes containing their early ideas for themes and codes. The codes for the data were developed either from their research questions (Bell, 2003), or from emerging themes within the transcripts (Arnold et al., 2009; Schusler & Krasny, 2010). These two ideas were adopted for my analysis. In terms of beginning the analysis with main coding categories as inspired by Bell (2003), I used the components of the three dimensional narrative inquiry space—interaction, situation, and continuity—because these are the main components of stories (Clandinin & Connelly, 2000). Then, following the ideas of Arnold et al. (2009) and Schusler and Krasny (2010) I watched for emerging codes and themes through subsequent reads of the transcripts. As Schusler and Krasny (2010) demonstrated, once codes and/or themes are determined, the transcripts were read again to double-check coded quotes, and any sections which may have been missed during previous reads. Similar to Bell (2003), sub-codes within the larger coding categories were developed to assist in the explanation of each code.

Participant interviews were transcribed verbatim. During the initial readings of the transcripts, I recorded margin notes of any ideas inspired by the data. For example, Samantha's following transcript was identified as *interaction – social*: "we would go on like a field trip every day to just uh go like hiking or kayaking or um, like uh, what kind of things did we do? We did tree sampling, and just stuff like that out in the forest and in the wild, learning while we were outside. So that was a big help for learning in the environment". When Samantha mentioned "we" and "tree sampling, and just stuff like that" she indicated that there was an interaction taking place. Because the interaction had to do with external conditions—others and the environment—it was initially identified as interaction-social. The margin notes

interacting/engaging with the environment were also written down to develop preliminary ideas for the sub-code that this quote might fit into. These notes assisted in the formation of initial codes, and then ultimately the final codes. For instance, the quote above was eventually coded as interaction/social/engaging with the environment/place-based education (written in the order of code down to sub-code). As I completed the initial analysis of the transcripts, I gained a holistic understanding of the participants and their lives, which helped me to write individual narratives for each participant, described in chronological order (see Chapter 6).

Using *Microsoft Word*, the transcripts were first analyzed and classified with respect to the three-dimensional narrative inquiry space (Clandinin & Connelly, 2000): interaction (personal and social), continuity (past, present, future), and situation (physical places) (Creswell, 2007, p.158). These three dimensions relate to the research questions in the following ways: First, interaction deals with influences in the youth's life—personal, meaning individual thoughts and feelings, and social, referring to interactions with the environment and people. So, for instance, if a participant said "the biggest, um, benefit to [Algonquin Institute] is that you develop that relationship with the environment and you learn how awesome it is" (Sarah), it would be coded as personal interaction due to the discussion of feelings about the environment. On the other hand, if a participant said,

> it's hard to get something um going by yourself so it's it's nice to be able to join a group and say 'okay well, I'm going to assist you with this and this and this.' Um as opposed to like just you know hopping up one day and trying to start your own movement. So. It's nice. I think it's a it's a good incorporation of like lots of people's ideas from the high school. (Heather)

then it would be coded as social interaction because of the discussion of working together with others to accomplish a task.

Second, continuity addresses how continuous the factors influencing their engagement are. For instance, some factors may have been introduced early on and were present continuously throughout life, while others may have been introduced later, such as in secondary school. For example, Samantha explained: "I would say I started learning about the environment at a young age" indicating the continuity of her learning from early in life to present. However, Heather explained that learning about the environment for her only began in high school: "but I know that Grade 10 science was kind of like the first uh peak into environmental stuff uh that I've really had in terms of the class".

Third, situation refers to influences or experiences that had physical locations, such as a special place or other location. For example, "[what] all of the local elementary schools do is we go to [an outdoor education centre]" (Greg).

The three dimensions of narrative inquiry are used in this analysis as main categories in which to code the data. However, it is important to note that these three dimensions of each participant's story (i.e., inquiry space) are not distinct categories. This means that they constantly overlap throughout all stories, thus resulting in some aspects of participant narratives fitting into more than one dimension. Therefore, the distinctions I make here are artificial and meant to clarify certain aspects of the stories I collected rather than to indicate their independent constitutions.

Student data is analyzed separate from teacher data due to them having different interview protocols and because I want to have a clearer understanding of the narratives pertaining to each group. After all transcripts were coded with the three dimensional narrative inquiry space and initial margin notes, I moved the quotes into tables for each of the dimensions. Separate tables were also created for personal and social interaction. Once all quotes were in their appropriate tables, I realized that I needed a more physical and visual coding method to help me to make

sense of the huge amount of data. This resulted in me printing all of these tables and cutting apart the quotes. Working with one dimension at a time, I stuck quotes up on the wall and moved them around into groups of related quotes (see Figure 5).

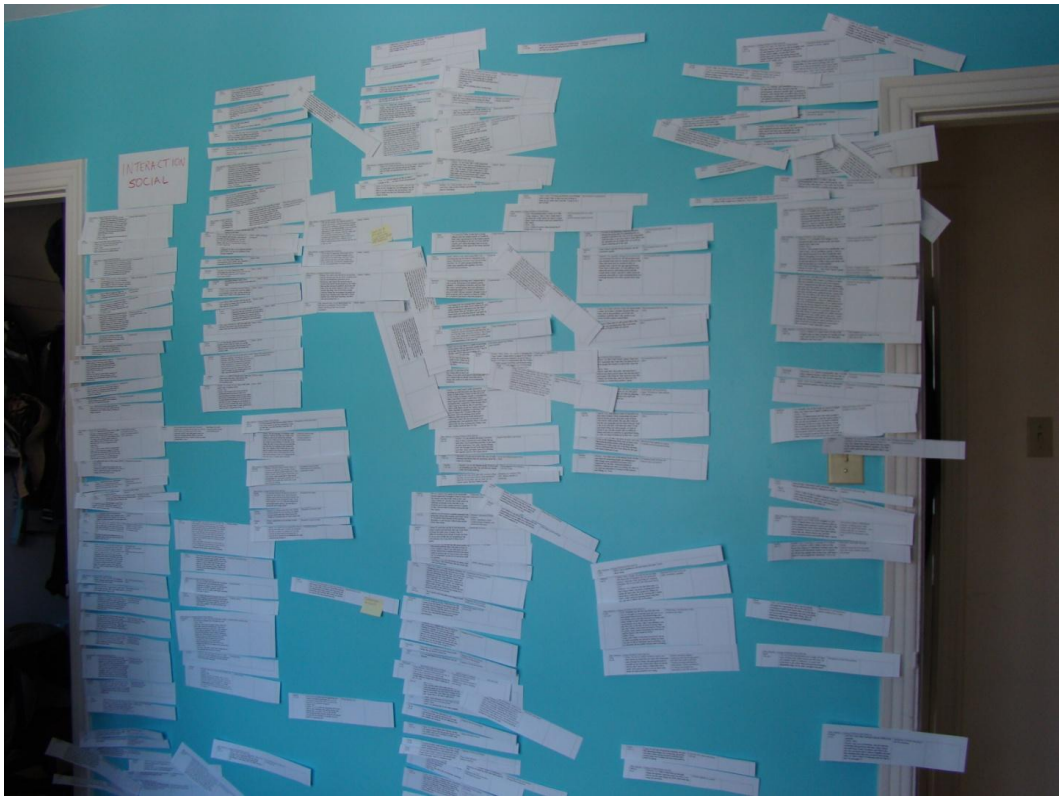

Figure 5. Quotes for social interaction were physically being grouped into like categories.

Moving the quotes around into groups resulted in many small categories and several quotes which were on their own. I began to see relationships between some of the groups. Having one entire category (i.e., social interaction) on the wall at one time helped to visualize all of the categories. When these groups were only viewed on the computer, I could only see a fragmented view of the codes and categories and had difficulty seeing the emerging groups. I gave an over-arching name to the category which represented the shared characteristics of the groups of codes, and then created smaller groups within these categories where applicable. In reviewing initial notes, and the quotes themselves, titles for the groups of data surfaced and became sub-codes of

the dimensions. Within the three main dimensions data were grouped into like categories or sub-codes. Some of the titles for the groups were inspired by Blanchet-Cohen's (2008) framework for the development of responsible stewardship because they appeared to be appropriate titles and important categories. For instance, Blanchet-Cohen's (2008) stage 1 "connectedness" inspired the personal interaction category *connection to nature*; and her stage 2, "engaging with the environment" inspired the social interaction category *engaging with the environment*. These two stages appear to be important factors influencing children and youth's development into responsible stewards as demonstrated by the many articles related to these categories shared in the literature review (Chapter 2).

In the process of creating the categories, the quotes were moved onto large sheets of paper where the groups could be neatly laid out and divided into sub-codes of each category. When moving the quotes from the wall to the paper, I referred to my research questions. The quotes being moved to large paper were quotes that addressed research question one—more specifically, they were quotes relating to school. After the wall was cleared of these quotes, some groups remained. These were placed on separate papers and were used to assist in answering research question two. Once all quotes were coded with their final titles, coding diagrams were created to represent the breakdown of codes. Additionally, quotes from the original tables were transferred (in *Microsoft Word*) into new tables and labelled with the appropriate codes/sub-codes/sub-sub-codes. Quotes that referred to school-related experiences are represented in Figures 6 and 7 and allowed me to answer the first research question: What school-related experiences influence student and teacher engagement with environmental activism? Quotes addressing influential experiences or other information not related to school were excluded from this first group and placed under the umbrella of "Additional Teaching about *Acting Today, Shaping Tomorrow"*, which helped me address the second research question: How might the participants' stories of

learning about/for/in the environment assist in the interpretation and implementation of *Acting Today, Shaping Tomorrow*?

The tables of coded quotes for research question one left me with a large amount of data to try to make sense of holistically to discover the emerging themes. I noticed that by having the vast amount of quotes separated in tables, it was difficult to understand which codes were discussed by several students and which were merely mentioned several times by few students. With this difficulty in mind, and because I am a visual person, I developed graphs to assist in the development of themes to answer research question one for the students. To understand which codes and sub-codes were the most prominent and to assist in the development of themes, I created graphs to represent the distribution of quotes among the codes, and the distribution of student participants among the codes. Finally, all of the data were looked at as a whole to determine the overall answers to the research questions.

Chapter 6: Results

Discovering Responsible Stewards of the Earth

Through this narrative inquiry, I had the pleasure to meet and talk with ten people—two teachers and eight students—who are part of an environmental club (EcoAction) at one high school in North Gate. These participants fit my definition of responsible stewards of the earth. Following the principles of narrative research, the participants and their stories are introduced next to give a more holistic understanding of the individuals and the group as a whole (Lewis, 2008). In order to be loyal to the participants' shared stories from their interviews, any words, adjectives, or statements describing intensity of experiences, or opinions present below were used by the participants themselves during their interviews. These stories are meant to introduce the

ten participants and they are in no way intended to be an analysis. Thus, I am being faithful to their personal descriptions.

For the interviews with the two teachers, I focused on why they started the environmental club and the workings of the club, including actions projects that have been carried out (see Appendix A). Their stories are below.

Dawn Baker: a teacher committed to helping students become activists.

High school teacher Dawn Baker is the developer and supervisor of an environmental club (EcoAction) at her school in North Gate, a town in South-Central Ontario. According to her, the environment plays a huge, important part in her life. Dawn grew up in the area where she now teaches. This greatly influenced her life. She lived away from her home-town for a long time after high school, and gained a really deep understanding of and gratefulness for where she came from. When she returned to her home to teach three years ago, the need for an environmental club at the school became evident to her when students began asking for this type of club. Through her enthusiasm, determination, commitment to the environment, and networking skills, the club began and has been growing stronger ever since. This club now plays a large role in her life: EcoAction is one of the reasons that she loves to go to work every day. She sees her work with the club members as having lasting impressions that go beyond the four walls of the classroom. Not only is this club beneficial to members, but Dawn finds it fun to do with the students—through this club, she gets to see the students' true personalities, and work with them on projects that are meaningful and impact the community. These are the real, authentic teaching opportunities that might be missed when only dealing with subject matter.

Rachel Smith: a teacher keen on having long-term impacts on students.

Rachel Smith and Dawn Baker began working at the high school on the same day. For several years before working at this high school, Rachel worked in the environmental education field, working at outdoor education centres. She worked mainly in residential programs, where youth would come for a week, participate, and then leave. Unfortunately, Rachel struggled with the idea of only working with each group of students for one week. Rachel believed that her work did impact the students, however, she hoped to carry those impacts forward, and also see some results, and for this, she needed to work with students for a longer period of time. This decision led her to her current job at a high school, where she can work in some capacity with the same students for approximately four or five years. The environment has always been an important part of her life, and she wanted to maintain her connection with environmental education and youth activism once she transferred to the high school. She does through using the local environment and outdoor activities to teach skills, and by being a co-facilitator of EcoAction. Her students, however, are not the ones who join clubs and participate in environmental action, so when she heard about Dawn Baker's idea to spearhead the environmental club, she immediately joined. Working with this club allows her to stay in the environmental education realm, and also to work with students whom she may never teach through regular classes.

The student interviews focused more on their past and present learning about/for/in the environment, along with their involvement in the environmental club (see Appendix A). The stories of the eight student participants are below.

Greg (Grade 11): impacted by the "environment" he experienced as a child.

From Kindergarten to Grade 3, Greg lived in a large city, mostly devoid of natural spaces. Each summer however, he would spend two months living at his aunt and uncle's house in cottage country. Summers would be spent outside, participating in all kinds of activities in the environment—such as swimming in the lake, canoeing, and trekking through the woods. After Grade 3, Greg's family moved to the North Gate area and have been there ever since, which is fitting to him as Greg has always loved being outside, running around, and participating in sports. Along with his outdoor experiences, Greg has many great role-models in his life who teach him about the environment, such as his step-dad. He sees these role models as not only important for teaching him about the environment, but also essential for teaching him to learn about and care for the environment as something that is special and needs to be taken care of. Greg's role models' demonstration of their appreciation for the environment deeply impacted him and transferred into his own thinking and behaviour.

The majority of environmental education in Greg's life came from his daily experiences with his family, rather than through school, where he says teaching was very basic, such as don't litter, plant a tree, and clean up after yourself. Notably, there was one field trip to an outdoor education centre near the end of elementary school that he considers to be important to his environmental education. At this centre, Greg learned many things through games, and also got to do what scientists do when they collected insects at a pond. From his many experiences, Greg is a great believer in first-hand experience with nature as the best way to learn about and appreciate the environment.

Being really busy with sports, and having never considered being involved in environmental action, Greg only joined the EcoAction when Ms. Baker encouraged him to go and check it out. He has been a member ever since. Greg enjoys working with the other club

members and helping them with their ideas, but if there is an issue that he really wants to address—such as getting recycling bins put in the hallways of the school—he will work on his own if the club cannot fit it into their schedule. Membership in EcoAction makes Greg feel good, because, as he sees it, at least he is doing something for the environment. He cannot expect others to act if he just sits back and does nothing.

Heather (Grade 12): motivated to maintain environments for participation in sports.

Throughout her life, Heather has participated in outdoor sports that utilize the natural environment, such as cross-country skiing. Her love for these sports is a big motivating factor for her to maintain the natural environment in order to preserve her ability to continue participating in these activities throughout her life. Additionally, she believes that learning about the environment through news sources and the media creates an emotional response to environmental issues and gives her information about environmental problems and how to deal with them. Furthermore, she learns in the environment through her everyday life and recreational activities, such as camping, by observing her surroundings—e.g., by checking the weather and also noting yearly differences in the seasons.

Heather believes that her first peak into environmental education in school occurred in her Grade 10 science class where she learned about ecosystems, pesticides, and other environment-related topics. This learning was reinforced during a summer job working with children in an environmental program at a local park. During this summer, she realized the applicability of what she learned in science class. Additionally, Heather had an experience as part of a group that presented speeches to David Suzuki. The celebrity status that David Suzuki has and the fact that he listened and responded to each person's speech really stuck with Heather and has become an important component of her environmental education.

Two years ago, after encouragement from two friends who were members of EcoAction, and hearing that they wanted to create a school garden, Heather joined the club. There, Heather began to learn for the environment through brainstorming and discussions with teachers and peers. One event, the environmental film festival, had a memorable impact on her learning. She loves watching films about environmental issues where she can view the perspectives of others and also see a big showcase around the event. The films spark an emotional response, which she now considers to be the basis of her environmental learning.

Being a member of EcoAction gives Heather a venue for environmental action and also teacher mentors (some of the most environmentally passionate people Heather knows). As she says, "it's difficult to begin something as a high school student", so she enjoys the option of assisting with something that has already been successfully established. As a member, Heather now is proud to work the most in the planning and organizing stages of the events that the club runs, such as the environmental film festival and the environmental youth conference. The latter has gained much recognition from the school and community.

Heather believes that her feelings of responsibility toward the environment combined with her big dreams of motivating people in the future is going to maintain her environmental activism for life.

Isabelle (Grade 12): realized her career path after joining EcoAction.

Isabelle has lived in North Gate for her entire life. Throughout her life, she had science teachers that focused on environmental issues. Over time, she also noticed the increasing media coverage of environmental topics and issues. Having not cared much about the environmental topics through elementary school, Isabelle became interested in them while in high school. Being a science-oriented person, Isabelle loves facts. She used to watch shows such as *Popular*

Mechanics for Kids and could easily memorize the facts presented in them. She loves to learn how things work, and learning about the environment is a big part of learning about how the world works. Her desire for facts had her choosing environmental topics for projects in classes where there were choices. Researching environmental topics on the internet spills over into her free time as well and also has her teaching her family about her findings. Now, she notices that the environment is mentioned in most classes and sees that the environment is tied in with everything. Through courses such as science, Isabelle notes that many lessons occurred outside. For instance, they took soil samples outside or went to the river for other tests. These teaching strategies stuck with Isabelle, as she enjoys being outside rather than inside and makes stronger connections with the environment rather than when reading about it in books. She also states that outdoor learning brings things closer to home.

Isabelle had been searching for some way to become involved in the school community. She was not entirely sure what she wanted to do, however, she liked the idea of participating in EcoAction. Joining EcoAction two years ago has extended Isabelle's environmental learning opportunities and also allowed her to re-discover her passion for the environment. This club introduces issues that Isabelle feels are missed through regular class learning. Additionally, the club allows her to meet community members and learn different kinds of skills. Isabelle's membership makes her feel good to be doing positive things for the environment and helping to educate and motivate other people to change their behaviour to help the environment. Furthermore, Isabelle likes to take a leadership role in the actions that the club carries out, whether it is in the planning stages or the action stages. Isabelle is very proud when she can witness the positive impact that the club's actions have on the school and community, such as reducing the use of disposable cups, and she knows that she played a large role in the projects. Isabelle's involvement in EcoAction is supported by her mother, her friends, and teachers. The

members of EcoAction, many of them being her friends, become a support group for each other. Outside of the club, when they are participating in other activities, they maintain their environmental consciousness through discussing the environment. While there are obstacles to environmental action, such as people who refuse to listen to the impacts that people have on the environment, Isabelle defeats the discouragement that is created by working harder to get through to them, or by focusing more on the people who have an open mind.

EcoAction spills over into Isabelle's daily life, as she demonstrates pro-environmental behaviour at home with her family. She is proud to integrate these behaviours into her life, and also to inform others about these simple actions. Her passion for the environment, which was discovered through her membership in this club has fuelled her decision for a career in environmental science. Isabelle is determined to gain more knowledge about the environment and work for the rest of her life to help people understand environmental issues and learn how to integrate pro-environmental behaviours into their lives.

Laura (Grade 12): loves to camp all summer.

Laura has spent her whole life in North Gate, living on a large forested property. She attributes most of her knowledge about nature to her dad, who works in the environmental sector as a forester. She grew up with a family who kept her and her brother engaged in nature. Every day after school, growing up, Laura and her brother would go for walks with their grandfather and look at the natural surroundings. Additionally, Laura's whole family would go for walks in the woods and her parents would teach her how to identify trees. Practical survival tips were also taught, and have stayed with Laura throughout her life, such as what to do if you get lost in the forest. Laura's dad is very influential in developing her passion for the environment. He has taught her to treasure the environment, and to do what you think is good for the environment, and

to avoid what you believe to be harmful. For the past several years, Laura and her family have spent two months of each summer camping without the luxuries of running water or electricity. This is something that she loves to do because of how her dad shared his passion for the environment with her.

Within elementary school, Laura had many opportunities to learn about the environment. The public school where she attended has a large forested property containing some streams. Laura's teachers would take their classes outside year-round to study ponds, small plots of land, and make other observations about the surroundings. Indoors, Laura's classrooms were full of science books, including some from *The Magic School Bus* series. Laura gravitated toward these books because she found them cool and also because she learned about science at the same time.

Laura believes that the fact that she lives in North Gate plays a large part in her learning about the environment. Living here, she has easy access to the natural areas that surround her and she can go into the bush and find things related to her lessons. Similar to her elementary school experiences, Laura's Grade 9 and 10 classes would travel outside the school to conduct science lessons. One Grade 9 science lesson that has stuck with Laura for a few years is when she dissected a flower. Hands-on lessons such as the flower example and other group projects made Laura more interested in the subjects she was learning. Now, when Laura wants to learn additional information about the environment she can search the internet or turn the wealth of knowledge in her school and community—this wealth of knowledge is present in her environmentally literate teachers. Often, she will approach different teachers and ask their opinion on environmental issues or products, such as what kind of plastic is safe to use for a water bottle.

Topics related to the environment pop up throughout Laura's high school courses, often becoming a main focus of the unit or course. For instance, some books chosen to be studied in

her English courses address Native issues and views of the environment. From these studies the students ponder how the issues discussed in the book can be related to their own lives. Furthermore, discussions about claims of products being environmentally friendly come up in politics courses. Sometimes, the environment is used as a motivating factor for students by teachers—if certain tasks are accomplished, their next lesson will take place outdoors as a reward. Laura believes this negotiation happens because of the area she lives in; teachers and students see natural areas just by looking out the window and are often distracted by it, wishing to be outside rather than stuck in the classroom.

Laura became involved with EcoAction through her relationship with her teacher Dawn Baker. As a helpful student, Laura was assisting Ms. Baker with different tasks. When the environmental youth conference was being organized, Dawn Baker recruited Laura to assist. From that point, Laura realized that she needed to be a part of the club. As a team player, Laura works with the other members and takes on whatever tasks need to be done, at whatever stages of the project (brainstorming, planning, execution, etc.).

Along with taking action on environmental issues at school, Laura tries to carry out pro-environmental behaviours in her daily life. She is proud of her family's commitment to using reusable containers. In addition, she believes that these types of behaviours and actions—such as joining campaigns outside of the club—help her to avoid taking things for granted, such as having disposable plastic bags to use (although she tries hard to never get new ones when shopping). Laura truly treasures the experiences that she had growing up and hopes to be able to give her own children the same opportunities in the future, a hope that depends on the state of the environment and peoples' actions now and in the future. Caring for the environment for Laura is not just a way of thinking, it is a lifestyle that has been instilled in her, and one that she knows is important for the future.

Liam (Grade 12): driven by facts.

Liam is a fact-driven person. While the ocean always fascinated him, there was one instance that occurred when he was a kid that stuck with him his whole life: he heard a fact that more was known about the moon than the oceans we have right here on earth. This fact shocked him, but he does not know why, and has encouraged him to learn what he can about oceans. Liam believes that his environmental education truly began when he reached high school. Environmental issues were not discussed during his elementary school years. However, attending the high school—which to Liam was a public space where larger numbers of people could share their own perspectives and knowledge—was Liam's first real look into the facts of environmental issues which were generally shared by fellow students, and not through courses. Knowing the actual facts, the hard numbers of environmental impacts is more important to Liam than merely knowing that the problems exist. Hearing facts about what is happening to the ocean and the ozone layer, and how much forested area is lost each year, among others, hit Liam emotionally and inspired him to do something to help the environment.

Throughout Liam's high school courses, he asks his teachers if he can connect his projects in some way to the environment. Liam finds that this connection makes the material easier to learn. Liam's learning about the environment really occurred in his Grade 11 environmental science class. During this class he learned facts about the environment. Liam learns and is inspired the most through discussions about the environment. Discussions that start in class with Ms. Baker, for example, spark Liam's desire to research the topics further on his own.

Even though Liam only joined EcoAction as a full member this year, he had been involved last year. While in Ms. Baker's class, Liam became involved in helping with the environmental youth conference. This conference became an excellent networking opportunity

where Liam discovered the wealth of environmentally minded people and initiatives within North Gate and the surrounding area—one particularly noteworthy example is of a man who builds many of his possessions with things he finds laying around his property. At that point, he decided that EcoAction was something that he should be involved in. Having always been interested in the environment and science subjects, Liam realized that he should really be involved in a club about these topics.

Joining EcoAction has slowly and subtly changed Liam's life. His membership in the club has become an environmental consciousness that helps him to monitor his behaviour in relation to the environment—for instance, he is constantly reminded by this consciousness to take short showers, using as little hot water as possible. His change in mindset and pro-environmental behaviour makes him feel good that he is doing something to help the environment. As a member of EcoAction, while Liam gives input during the planning stages of events, he prefers to be on the front lines, carrying out the tasks than working behind the scenes organizing the project. While Liam has support from his family and friends for his involvement in the environmental club, they are not the reason that he participates. He feels that something inside of him is saying "this is something I like, I'm staying here."

Liam's main obstacles to his environmental activism are people who just do not want to listen or change their behaviour, such as a friend from his school bus route. However, Liam overcomes these obstacles by trying harder to get through to each person, even going so far as forcing people to attend EcoAction meetings. Liam's determination to help the environment will continue throughout his life because of the importance he attributes to the issue. Gathering knowledge through his future science degree and personal research will help to put Liam in a position to encourage people to tackle environmental issues throughout his life.

Madison (Grade 12): from a "had to" course to activism.

Madison grew up camping with her family, and also lived in an area with many Aboriginal people and reserves. She remembers that the Aboriginal people in her community would discuss how the spirits interacted with the environment. At the time, she paid little attention to these teachings; having a different outlook and interest in the environment now, Madison wishes that she had listened more to her neighbours.

Part way through her high school education, Madison's family moved to North Gate. With limited courses fitting into her schedule, Madison decided that she would take environmental science to fill her course load. Surprisingly, Madison ended up enjoying the course, which became her main source of environmental education. The course was set up perfectly for Madison's learning style—a course setting where students can ask questions, and there is visual learning, reading, displays, projects, lectures, and individual tasks which all tie together and then the students have the chance to apply their learning to the real world.

Madison's interest in the environment, developed through the environmental science class, inspired her to search for potential environmental careers. Madison is finding that some courses now revolve around sustainability. For instance, in her tech. design course, they focused on sustainable buildings and what that includes. Additionally, certain books studied in English, such as *Halfway Man*, focus on the environment and therefore, discussions of the book deconstruct the meanings and application of ideas to current society. For instance, they discussed how traditional people treated their land, and considered what the environment would be like today if all people lived like the Aboriginal people did. In terms of environmental education in general, Madison finds field trips to be the most memorable teaching strategies. For example, her environmental science class took a trip to a nearby provincial park to learn about wolves and discuss issues with habitats (wolf population decline, loss of environment, current initiatives to

protect wolf habitat). Along with what was learned about nature during field trips such as this, Madison notes that field trips are an important way to expose students like her to what jobs are available. More specifically, she is unsure about what opportunities are available in the environmental sector, so seeing people first-hand working at the park demonstrates an option for many students.

After hearing about EcoAction at different points from Ms. Baker, and enjoying her environmental course, Madison decided the club would be a good fit for her and she joined it this year. Madison's participation in the environmental club is supported by her mom who is passionate about the environment and reads about the environment. The only obstacle to her activism is time as she is a very busy high school student with many commitments. Madison is involved in the planning stages of environmental projects and assists in the collection of the materials that are needed to carry them out. In addition to helping the environment through the club, Madison and her family have changed their behaviour reduce their impact on the environment. These behaviours and actions help Madison to be more responsible and to think of the future generations and the future of the planet.

Samantha (Grade 12): learning in the environment.

Samantha grew up in North Gate. She learned about the environment through being in the environment. This included playing outside and also attending a camp for several years. Samantha spent one month for eight summers living in Algonquin Park. Electricity and running water were not part of this camp. Samantha believes that these experiences are what contributed greatly to her appreciation of nature. Her lifelong memories are those of having fun outside, biking, or going for a canoe, or just talking about the surroundings. By spending time in nature,

Samantha developed a deep connection to the world and gained an understanding that the environment is not separate from herself and thus she wants to do what she can to protect it.

Samantha's elementary school experience was unique. She attended a private school where class sizes were kept small. Environmental education began early in elementary school. Learning about ecosystems and current issues such as climate change were part of the curriculum at her school. During Grades 7 and 8, the school had an outdoor education program. This meant that every Friday was dedicated to outdoor education. On Fridays, Samantha's class would go on fieldtrips involving hiking or kayaking, tree sampling, or other activities in the forest or in other natural areas. As indicated here, the teaching strategy most memorable for Samantha is the use of hands-on learning.

Three years ago, Dawn Baker recognized that Samantha liked the environment—possibly because Samantha is one of those kids who will yell at people who throw recyclable materials into the garbage can or because she's all about saving water and using reusable drinking containers. Whatever the reason, Dawn Baker told Samantha that she should join EcoAction. Samantha felt obliged and soon realized that the club was made up of a pretty cool group of students and teachers. Because EcoAction was just in its infancy, Samantha was more determined to stick with it to ensure it did not die out; it was a good program. Joining EcoAction was an important factor in Samantha's learning for the environment. Through the club, the students have to teach others in the school and community about protecting the environment. Teaching others about the environment is an important way that Samantha herself learns. The preparation for workshops that Samantha does requires background research and brainstorming to allow her to teach others well.

Samantha finds that environmental education plays a small role in the courses she is and has been taking through high school. She believes that there is a bit of an incorporation of

environmental education into subjects because the environment is a current issue in society. However, most of the environmental issues are learned about through EcoAction. Samantha's membership in the club has increased her awareness of her surroundings. In addition, she is also more confident to stand up for the environment and share information with her friends about pro-environmental behaviours. Furthermore, she has been given reassurance that change can happen, that there is hope for the earth as we know it.

As a member of EcoAction, Samantha's main role is during the promotion stage of events—designing and hanging posters, and making announcements at the beginning of the school day to share information about events. Samantha is also involved in events such as the environmental youth conference, where she puts on workshops with other members for elementary school students. Having a supportive teacher running the club is an important aspect for Samantha that has not go unnoticed. Dawn tries to keep the members motivated by inviting them to watch presentations or films about the environment whenever she hears about them. This gesture helps Samantha to feel like a real member of a real club, which makes her feel great.

At home, Samantha and her family do many small things to reduce their environmental footprint: replacing old toilets with low-flow, turning off lights, unplugging electronics, among others. These daily behaviours are becoming second-nature for Samantha and her family. By forming these habits, she is keeping the environment in mind. She knows that to be a happy person you need to keep your environment happy—keep it healthy and clean.

An obstacle to environmental action or environmentally friendly behaviour in our society is convenience. People will do what is convenient, rather than what Samantha views as the right thing to do. However, this obstacle is actually a support for Samantha. For instance, she says that rather than feeling good about recycling because it is easy, she feels good because it is not easy. She becomes proud of things that she has to work for. Similarly, she feels like she has

become more passionate about the environment because not many people are, and it is not always easy to take action. The obstacles are good because she now has a stronger connection with taking action for the environment.

Sarah (Grade 12): leadership in combination with environmental activism.

For as long as Sarah can remember, her family vacations were camping trips to provincial parks all over Canada. Sarah's family has always been involved in the environment, making it a big part of family life. Much of Sarah's knowledge about and interest in the environment came from her many years at a wilderness summer camp. These experiences demonstrated for Sarah the fun that can be had in the environment and also what a shame it would be to lose this privilege.

After attending a North Gate public school, Sarah switched to a private school for Grades 6 through 8. Attending this private school was a very influential factor in developing her interest in the environment. The environment is a noticeable aspect of the curriculum at the private school, which can be afforded because of its location—the school is situated on a large forested property with a large expanse of waterfront on a large lake. At least once a week Sarah experienced outdoor education. In addition, every physical education class took place outdoors. These experiences, along with many opportunities to go snowshoeing, canoeing, and to go on multi-day canoe trips are seen by Sarah as the biggest benefits to this private school. Sarah claims that these experiences are the ones that let you develop that relationship with the environment and learn how "awesome" it really is.

In high school, Sarah took an environmental science class which gave her the scientific piece of the environmental education. She continued her involvement with this subject as a co-op student, which solidified her knowledge further. This course was extremely beneficial for Sarah

in that she now has some solid knowledge which allows her to back up theories with facts, and have people take her more seriously. Environmental activism has become an important aspect of a couple of Sarah's English courses. Books about Aboriginal peoples' rights leads to bigger discussions about the environment. Once-in-a-while, discussions of environmental topics have appeared in a politics class. In terms of learning about the environment now, Sarah believes that school is her best option, along with personal research on the internet. Unfortunately, there is no Grade 12 academic level environmental science course; however, Sarah does have some environmental mentors, such as Dawn Baker. Sarah finds the most education for the environment during her high school experience comes from EcoAction and the environmental science class. This is where people learn to be activists for the environment. Sarah also had several opportunities to learn in the environment throughout high school, such as going snow-shoeing with her co-op class, going on a winter hike, and going on a fieldtrip to a near-by provincial park. Along with these off property field trips, Sarah's classes took quite a few trips outside to natural areas around the school to identify trees and take soil samples, among other activities. While she understands the importance of books, Sarah believes that just being in nature has a huge impact on how much you care about what you are learning—it makes it real. Sarah claims that lessons occurring outside are definitely the most memorable for how she learned about the environment.

Due to her involvement with the environment through family life and camp, Sarah knew how important the environment is; because of this, she wanted to be involved in environmental activism. Therefore, she wanted to be involved in EcoAction as soon as it began. However, one motivating factor that also sparked her interest in joining was the opportunity to present a speech to David Suzuki. As part of a special event, the environmental club members had the opportunity to present a speech to David Suzuki, a speech that was a call-to-action for the Canadian

government. David Suzuki made a speech in response to the students' speeches, and then spoke with them for a short time. This was an amazing experience for Sarah. Sarah's membership in EcoAction makes her feel good knowing that she can have a positive impact on the school and to affect the students. Additionally, she attributes her summer job working at a local park running nature programs for children to her involvement with the environmental club. The opportunity to work at this park gave Sarah another learning experience, as she really needed to understand the material about nature to be able to teach it. Sarah also had a unique opportunity to attend a leadership camp in the United States last summer. This experience resulted in a valuable network of mentors. Sarah's leadership or activism through the club plays out in the planning and organizing stages of the events and campaigns.

Sarah is making changes in her daily life apart from school as well. The commitment Sarah is most proud of is dedication to eating local and organic food, which is something that she is continuously working at improving. Beyond daily actions, Sarah is also a member of another environmental action group outside of school. The actions that Sarah takes everyday impacts every aspect of her life, however, she finds that these behaviours and actions are not difficult to carry out.

Sarah has big goals for the future to help communities around the world become economically and environmentally sustainable. Additionally, she hopes to encourage more countries to integrate environmental education into their school curricula.

Coding the Transcripts

The transcripts of students and teachers participating in this study contained references to many experiences—such as spending time in nature with family, learning about the environment in many different ways in the classroom, hands-on learning outdoors in the natural environment,

and joining the environmental action club, among many others. As noted previously, the school-related experiences that influenced teacher and student engagement with environmental activism were broken down into three main dimensions inspired by narrative inquiry: interaction, situation, and continuity. Within these dimensions, groups of experiences (see Appendix C for code definitions) exist that indicate what school-related factors have been influential in fostering and maintaining participants' work as responsible stewards of the earth (see Figures 6 and 7).

Teachers

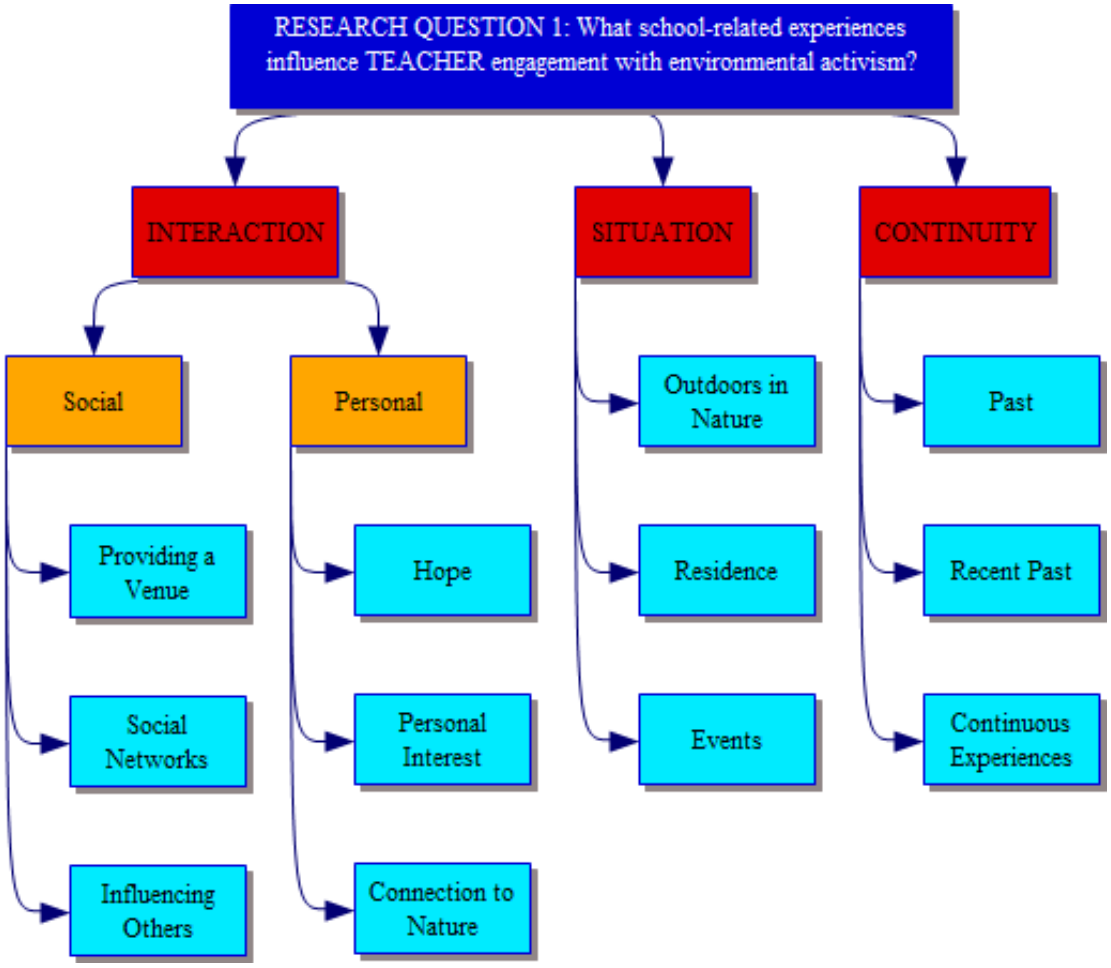

Figure 6. Three dimensional narrative inquiry space for teachers. This figure illustrates the breakdown of codes and sub-codes addressing research question one for teachers.

Examples of quotes coded within each code/sub-code illustrated in the above figure are displayed in Appendix D and are shared below.

Interaction.

Areas of the transcripts were coded within *Interaction* if they contained mentions[14] of engaging with internal or external conditions (see Appendix C for code definitions). More specifically, quotes were coded as the *Social* aspect of *Interaction* if they were mentions of engaging with external conditions (i.e., others or the environment); or coded as the *Personal* aspect of *Interaction* if they were mentions of engaging with internal conditions (i.e., "feelings, hopes, aesthetic reactions, and moral dispositions" (Clandinin & Connelly, 2000, p. 50)). Each of these codes contained three sub-codes. First, for *Interaction/Social*, the sub-codes are: providing a venue, social networks, and influencing others. Providing a venue represents any mentions of personally providing opportunities for learning and acting occurring through an organized group. An example is shared in the following quote:

> Just that I think you know clubs like this, you know they're small but important, I think um, you know the kids need an opportunity to be able to be activists and to be a voice on behalf of the environment, and I really hope that you know one of the other important things is what they do with their futures. (Rachel)

Social networks are mentions of developing beneficial connections with others, as Dawn demonstrates:

> It's like any other club in a building if there's a passion and there's an interest by a student, it gives them a place to belong. And you know we, I know that we have kids in our in [EcoAction] that aren't really involved in anything else. They're not involved in

[14] "Mentions" refer to aspects of participants' narratives.

> athletics, they're not involved in other groups around the school, and so this gives them a place to belong and it's a way to make connections with other like-minded people. Uh, so I think that's a really important piece that they do take away from it you know it's like a home for them. A safe place for them to be and hang out.

Influencing others are instances where teachers mention experiences where others become involved in environmental action or projects due to their personal involvement or initiatives. Dawn's quote is an example:

> I mean of the [Environmental] Summit of course is the big one because that's the one where you get to see the most kids and you're inspiring the most number of people and you know to have my, my colleagues at some of the elementary schools to come back to me and say you know 'our kids were just so moved, and they were just so fired up when they came back to school they couldn't wait to start these eco projects in our building. And it's changed our building mentality and the kids will only recycle stuff now' I mean those kinds of messages are huge for us.

Second, for *Interaction/Personal*, the sub-codes are hope, personal interest, and connection to nature. Hope was coded when there were mentions of a belief in positive outcomes in the future: "our goal and our hope is you know one of our big things is that we would really like to be the host for a provincial-wide environmental conference for youth" (Dawn). Additionally, personal interest is any mention of affinity for certain topics or ideas: "the reason we started it was because we both had an interest in environmental education, and also youth activism" (Rachel). Also, connection to nature included any mentions of an emotional tie to the natural environment: "I lived away from [North Gate] for a long time and gained a really deep understanding of and gratefulness for where I came from" (Dawn).

Situation.

Situation means place, and "attends to the specific concrete physical and topological boundaries of inquiry landscapes" (Clandinin & Connelly, 2000, p. 51). Three sub-codes also emerged within this code from the teachers' transcripts: outdoors in nature, residence, and events. First, outdoors in nature was coded for mentions of experiences occurring outside, in the natural environment. For example, Rachel mentioned that "I've worked in outdoor-based programs with an environmental focus". Second, residence covers references to the town or greater area of where the participant lives or where the experience occurred, such as Dawn's quote, "Well, I grew up in the area, and the environment is a really big, important piece of my life". Third, events refers to mentions of experiences occurring at a gathering planned for a specific purpose. This sub-code is demonstrated by Rachel, "And the big project for last year um when was that no that was fall of 2009, um there our school board, our school hosts [an] education conference, . . . at [a resort] every year".

Continuity.

Continuity means any mentions pertaining to a temporality, or relating to time. This code also contained three sub-codes: past, recent past, and continuous experiences. For teachers, past refers to mentions of experiences occurring in the past, more specifically, experiences occurring more than three years before present: "But before that, um, I spent about ten years working in environmental education, working at outdoor centres" (Rachel). Likewise, recent past was coded for any mentions of experiences taking place within the last three years. Dawn's story from the past year demonstrates an experience in the recent past:

> We got involved last year with the, there's a local community garden that was created last year at [North Gate] Park downtown. We were right in there. We have a plot, we helped

> to get it all up and running. And you know we've been asked if we would continue to do that every year from now on.

Lastly, continuous experiences included any mentions of experiences and/or ideas repeating over time. Dawn's quote is included in this category: "And the kids came up with those, and they seem to come up with those same goals year after year after year, regardless of who's in the club. Because the passion and vision is, you know, we need to do something bigger".

All codes, and sub-codes within all three dimensions contained quotes from both teachers, except one. The only sub-code discussed by only one teacher, Rachel, was within the situation dimension: outdoors in nature. On another note, while Dawn did not discuss events outdoors in nature, many of the student participants mentioned class field trips that she took them on (to be discussed in the Students section).

After looking at the data as a whole, the general themes for teacher involvement in activism, as demonstrated by the two teacher participants are influenced by their desire to have an impact on students. The codes, providing a venue, and influencing others narrow down to point to students as influencing these teachers' involvement in activism. The social networks that are created also mediate their involvement. These themes emerged from the focus of the teachers' discussion of why they began and run the environmental club (to be discussed further in Chapter 7).

Students

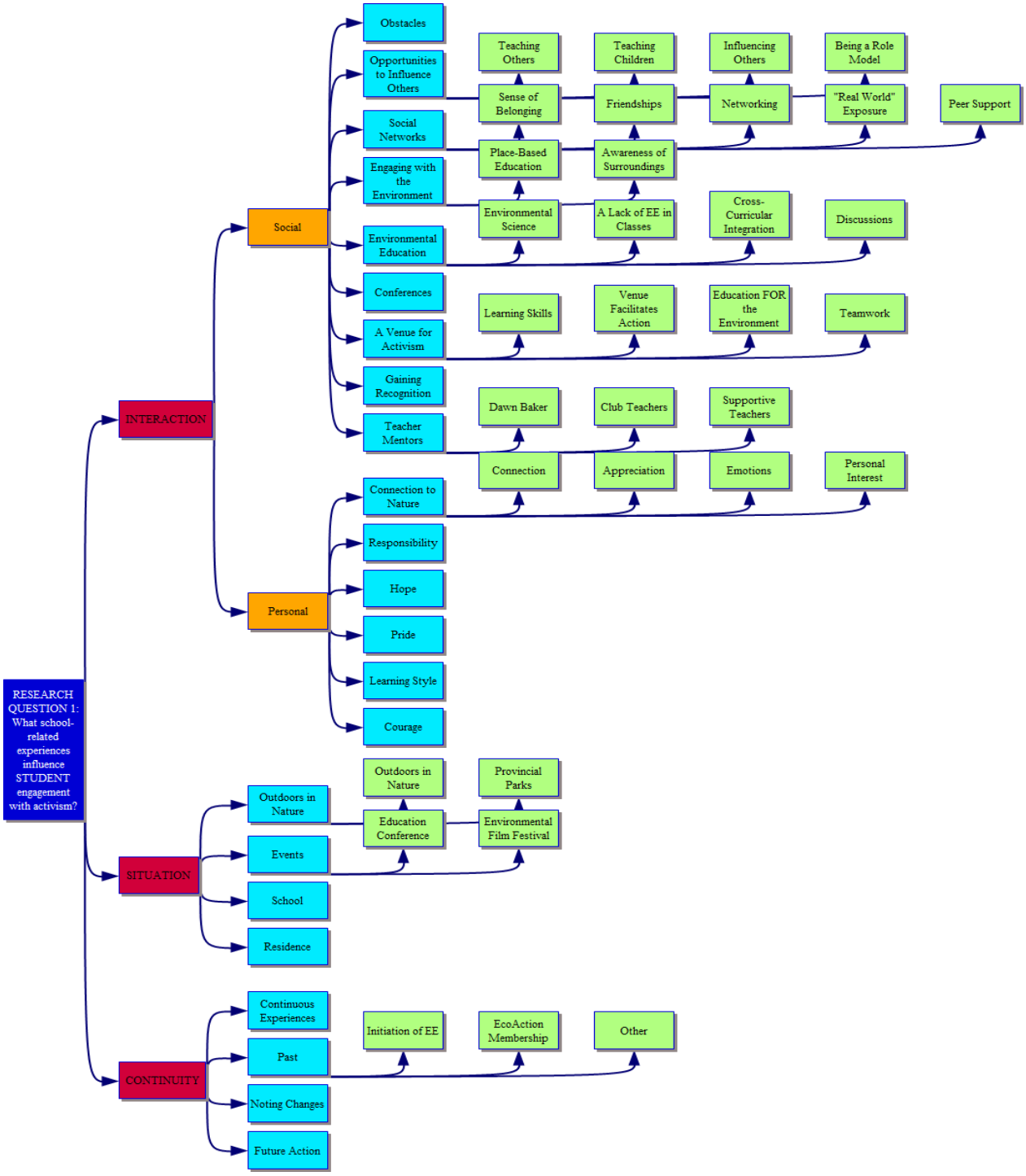

Figure 7. Three dimensional narrative inquiry space for students. This figure illustrates the breakdown of codes and sub-codes addressing research question one for students.

Examples of quotes coded within each code/sub-code illustrated in the above figure are displayed in Appendix D and are shared below. With the increased amount of interviews for students as compared to teachers, and the different interview protocol, a larger number of codes and sub-codes emerged from the data.

Interaction.

The definitions for the main categories, the three dimensions of narrative inquiry are the same for teachers and students. Therefore, only the definitions of the main categories of sub-codes will be shared here. *Interaction/social* contains nine sub-codes, and many of those categories contain their own sub-codes to further demonstrate the ideas contained within the groups (see Figure 7). First, obstacles are mentions of challenges making action difficult. Liam's quote is one example:

> 'Cause, um, like, one of my friends on the bus, he he doesn't wanna listen at all. Every time I like would come on the bus and talk about my day, I'd be like 'oh yeah, I had an [EcoAction] meeting'. He's like 'dude I don't eve, I don't care, I don't wanna know about it.' It just makes me want to try harder. It's like 'I'm gonna get through to you eventually'.

Second, opportunities to influence others are mentions of experiences where students demonstrate pro-environmental behaviour options to others. Quotes within this sub-code are further grouped, and demonstrated below (see Table 3).

Table 3

Quotes Representing Sub-codes of the Opportunities to Influence Others Group

Sub-Code	Participant	Quote
Teaching Others	Isabelle	And it and also when I impact others. Like I teach them things that they didn't know before and um it's a really positive thing as well.
Teaching	Laura	And I think that in order to do well, you have to first act on it and then teach

Children		people, and I think being able to teach younger kids that come to our school, or come to [the Environmental Summit] wherever we are this year, I think that it makes a huge difference that we we are educating younger children who will then educate their children. It's just start a ripple effect.
Influencing Others	Sarah	Um well it's definitely had an impact on on everyone. For example, although it wasn't us that implemented it, the hydration station, downstairs, um, people use that daily to refill their reusable water bottles, instead of buying a new one. Um, our disposable cups, um, you see much less people walking around with the disposable cups 'cause they're educated, and they know what a terrible thing it is for the environment. Um, but you do see people walking around with cool reusable mugs and reusable reusable water bottles, and that's a a positive thing I think to be seen with in the school.
Being a Role Model	Greg	And like, we have to do something. I think, so I think these film festivals, the conferences, are good um ways to teach them to show them that you know, well, high school kids are doing it, you guys can, when you guys come to high school, come do it as well.

Third, social networks are mentions of developing beneficial connections with others. Quotes within this sub-code are broken down into five smaller categories (see Table 4).

Table 4

Quotes Representing Sub-codes of the Social Networks Group

Sub-Code	**Participant**	**Quote**
Sense of Belonging	Isabelle	well I wasn't really involved in anything up until that point, um, like early in our earlier in high school, I wasn't in like *Me-to-We*, or [EcoAction], or student council, or anything like that, I just kind a I didn't really know what I liked I guess, and what I wanted to do and it's not necessarily that I joined [EcoAction] because that's what I want to do with my life. It's just like, I didn't really figure myself out I guess, and I don't think I had like an epiphany or anything I just kind of I figure like 'I'd kind of like to get involved' and I was thinking about all the different clubs that go on at this school and it wasn't like I knew that the environment was something that I was passionate about. I was just kind of like the idea of joining [EcoAction], I was like 'I kinda wanna do that' so I did
Friendships	Isabelle	But yeah, it's just kind of the support group of [EcoAction], like we don't just hang out in [EcoAction], we do other stuff together too, so um, and we're kind of like we all like even when we're doing other stuff we're kind of environmentally conscious,
Networking	Sarah	So just by running our campaign I know that we had an awesome impact um just on the greater environmental impact of the school. So I think that's, it's been a really positive experience, and it's also definitely opened the doors to other experiences that I can have. Like like I said that I was part of the um well part of student council, I'm the Minister of Environment Ashley: Okay. Sarah: now, so that's opened that door. Um, and I've also had the opportunity to work in provincial parks um and I think that's been largely due to my involvement in [EcoAction].

"Real World" Exposure	Madison	Um, I think for the like field trips, I, I don't know what's out there, so going there and seeing all these jobs, like people are telling you about this is what they do for a living, like, I think that's really neat just learning about what they do, and how it affects the environment
Peer Support	Madison	And I guess not a lot of people that I hang out with and talk to are really in [EcoAction] so it's not really something we talk about a lot, but when I do they listen, they say 'oh that's cool' or 'I'll come watch you at the film festival' and stuff. So, they support me, but it's not really their thing.

Fourth, the engaging with the environment sub-code contains mentions of interaction with the natural environment. This sub-code contains two smaller groups (see Table 5).

Table 5

Quotes Representing Sub-codes of the Engaging with the Environment Group

Sub-Code	Participant	Quote
Place-Based Education	Sarah	we went on quite a hike during the winter. So just really being in being in nature I think has a huge impact on how much you care about what you're learning 'cause it, it makes it real. Um as opposed to if you're learning about it inside. In a book. Yeah.
Awareness of Surroundings	Laura	Um, I think it's, well, living in [North Gate], it's something that's obviously, you just have to look outside, and you can see the snow, you can see the the trees blooming. Stuff like that. So it's always prominent, you just look outside a window and you're just like 'ah, I wish the snow would go' or 'ah, I wish the snow would come'. So I think that teachers see that and they want to engage the class so they're like, 'okay guys, if you do this and uh if you could do this well, we'll go outside for a period and I'll teach you outside'.

Fifth, environmental education includes mentions of learning about or for the environment. This group contains four sub-codes (see Table 6).

Table 6

Quotes Representing Sub-codes of the Environmental Education Group

Sub-Code	Participant	Quote
Environmental Science	Sarah	I took an environmental science course last year um in the high school and that was wonderful for really getting a grasp on the the scientific aspect of things.
A Lack of EE in Classes	Liam	It's mostly just, without taking a direct, environmental science class, it's mostly just indirect, like linkages and stuff. So we'll be learning something and be like 'oh yeah, it also incorporates into the environment 'cause this can affect it.' And it's mostly just, they just, it's almost like they just like 'oh yeah, I

		guess it can be incorporated to the environment' somewhat.
Cross-Curricular Integration	Madison	Um, actually, one of the books we read in English class, um, what was it called? *Halfway man*. . . . It talked about how the white people's views on the environment, and the native point of view on the environment. It was kind of biased, just because of the two main characters, 'cause not every white person's like that. But it was just how, traditional peoples treated their land, and environment, and if we had lived like that, how our environment would be like today. It would, be okay. It wouldn't be as destroyed as it as it is now.
Discussion	Liam	Just having a discussion with somebody. Like, having discussions with Ms. [Baker] in class and stuff.

Sixth, the sub-code of conferences includes mentions of unique experiences available at a gathering planned for a specific purpose. Sarah's discussion of an experience at an environmental conference is one example:

> Oh, and also actually what originally sparked my interest was we had a[n] education conference . . . . And one of their speakers that came, um, was David Suzuki**.** So ah, we had the opportunity to make speeches and an address to David Suzuki if we were part of the [EcoAction] club. So I would have joined anyway, but it was a wonderful motivating factor to get involved um so that was really good I know it sparked a lot of people's interest and got them involved with the club to start out with.

Seventh, a venue for activism contains mentions of opportunities for learning and acting occurring through an organized group. This category also contains four smaller groups (see Table 7).

Table 7

Quotes Representing Sub-codes of the Venue for Activism Group

Sub-Code	Participant	Quote
Learning Skills	Sarah	so you kind of learn to be a an activist for the environment.
Venue Facilitates Action	Heather	it's hard to get something, like as a high school student, it's hard to get something um going by yourself so it's it's nice to be able to join a group and say 'okay well, I'm going to assist you with this and this and this.' Um as opposed to like just you know hopping up one day and trying to start your own

		movement. So. It's nice. I think it's a it's a good incorporation of like lots of people's ideas from the high school.
Education FOR the Environment	Isabelle	Probably as a part of [EcoAction]. Um, like like you learn about it in class and stuff but definitely through extracurricular activities it's like it's partly a learning opportunity especially with an environmental group because we we we just kind of we're introduced to things that we wouldn't necessarily be introduced to in classes. And we just kind of like the Environmental Film Festival, and stuff like that we just um like we meet people from the community, and like we just learn different kinds of stuff I guess.
Teamwork	Madison	I don't know, just like all our projects, you all contribute equally.

Eighth, gaining recognition contains mentions of receiving praise or having actions noticed by others:

> The cup campaign I'm definitely really proud of, 'cause it was really um, I think I was talking to some of my friends that obviously aren't in [EcoAction] and it's not like they don't care about the environment, it's just they're not really, like they're not as into it as I am and then um, like they were talking to their friends and they were talking to their friends and um it just kind of created a lot of buzz around the school and just the facts that we introduced, like, um, they really had an impact on like a lot of people and they were like 'wow, we really need to stop this'. (Isabelle)

Ninth, teacher mentors refers to mentions of influential teachers. Three groups of teacher mentors were discussed by participants (see Table 8).

Table 8

Quotes Representing Sub-codes of the Teacher Mentors Group

Sub-Code	Participant	Quote
Dawn Baker	Samantha	Well [Dawn Baker], the leader of [EcoAction], she's definitely been a mentor for me because she's *so* passionate about the environment and she really just gets the whole [EcoAction club] pumped up about things, and gets us out in the community uh doing things to help and educating us on what we can do and what's already been done for the environment. So, she's definitely been ah helping me along my path . . . to becoming a tree-hugger.
Club Teachers	Heather	obviously like the teachers in [EcoAction] are likely some of the most

		environmentally motivated people that I know in terms of teachers and mentors. Yep.
Supportive Teachers	Sarah	So they're always there for us, um support-wise. Um, the administration in our school is also wonderful at helping us carrying out campaigns. Um, they're very supportive and they give us advice, um and a lot of guidance in that. So that's wonderful.

Interaction/personal contains six sub-codes, and one of those categories contains their own sub-codes to further demonstrate the ideas contained within that group (see Figure 7). Connection to nature is a code that contains mentions of an emotional tie to the natural environment. This group is broken down into four smaller categories (see Table 9).

Table 9

Quotes Representing Sub-codes of the Connection to Nature Group

Sub-Code	Participant	Quote
Connection	Samantha	I suppose that um, just being in the environment is kind of in a way it's like leading by example. It's just um, first-hand experience with it and um you really start to build a connection with the environment and realize that it's not separate from yourself. And um, so the more you embrace the environment, the more it embraces you, the stronger the connection is and the more you want to do to help it.
Appreciation	Greg	Being out in the environment, I think is, you can you can put up a picture of a tree, but unless you actually like see it and feel the tree, you don't, I don't think you have a greater appreciation for it until you've actually been there. So I think lots of field trips, lots of um, and the field trips, like they they can be through games and, but it's also fun to be out and plant trees, like it's also a fun thing to do as long as you're with friends and you know grabbing garbage isn't that bad.
Emotions	Liam	I'm not actually sure, just, they just kind of hit me in the right way. Like, you know how, just you hear something and it just hits you just right and it makes you want to do something. That's just kind of what happened.
Personal Interest	Liam	I've always um liked the environment and biological studies and everything like that. It's really interesting so, just, there's a club about it, so I should go to the club!

The sub-code of responsibility includes any mention of accepting the duty to protect and improve the environment. This group is demonstrated by Isabelle's quote:

> and we're we're kind of charged ourselves with that responsibility. And we do take on like a lot of responsibility and I like, personally I'm a kind of person that feels responsible for like the actions of people and the effects that we have on the environment. I feel like it's our like my responsibility to protect the environment and where we live, so yeah.

Furthermore, hope includes mentions of a belief in positive outcomes in the future. This is demonstrated by Laura: "I just wanna be able to take my kids out and show them the same thing that my parents did. And I really hope that there's still a chance for me to. . . . So I hope that people clean up their acts. Figure out that something is happening!" Moving on, pride contains mentions of positive feelings about taking action for the environment. One example for this code is as follows: "you've heard a lot about it but the disposable cups campaign! Definitely the most proud of that. Um, I was also very ecstatic to have the opportunity to talk to David Suzuki. Um, and I make that speech. I was really proud of that as well" (Sarah). Another sub-code, learning styles, covers mentions of personally beneficial teaching strategies. This is represented by Laura's quote: "there's a lot more people in my generation that need to see things. . . . But I, I have to see things, and so Grade 9, I dissected a plant, which was really cool for me to be able to like 'oh, this is how, like pollen comes into the flower,' all that sort of stuff." Finally, courage covers any mentions of confronting others' negative environmental behaviour. This quote from Greg demonstrates courage: "yeah because I'm not afraid to stand up and say what I think and do something about it. So, yeah. And uh walk my talk."

Situation.

The *Situation* dimension contains four sub-codes. Outdoors in nature covers mentions of experiences occurring outside, in the natural environment. This sub-code is further divided into outdoors in nature and provincial parks (see Table 10).

Table 10

Quotes Representing sub-codes of the Outdoors in Nature Group

Sub-Code	Participant	Quote
Outdoors in Nature	Sarah	Um, well at [Algonquin Institute] it's off of course in a beautiful setting, it's a huge camp, um, with a lake and mountains and everything you could ever want to do, it's such a wonderful place. Um, you have outdoor education, at least once a week. Um, all of your gym classes are outside. So I think you just really develop a respect for the environment, because you have such a positive relationship with it. Um, you just get so many opportunities to go snowshoeing, and to spend time outside to go canoeing, to go on out trips, where you're on a canoe trip for a couple of days,
Provincial Parks	Sarah	also last year I remember we took a fieldtrip to [a Provincial Park].

Events are mentions of experiences occurring at a gathering planned for a specific purpose: "I think the environmental film festival last year was really good" (Heather). The school sub-code covers mentions of experiences occurring at school. For instance during the interview, Laura mentioned her elementary school, "I think that uh, going to [North Gate Elementary]. . ." Additionally, residence includes references to the town or greater area of where the participant lives or where the experience occurred. An example of this code is again demonstrated by Laura, "I think it's impacting the community a lot because, living in [this region]. . ."

Continuity.

The *Continuity* dimension is broken down into four sub-codes. The continuous experiences group is defined as mentions of experiences occurring regularly over time. For example, Samantha stated, "I would say I started learning about the environment like at a young age". Moreover, the code, past, includes mentions of experiences occurring in the past, as Heather demonstrated, "well I guess, like I haven't taken an environmental science class unfortunately, um but I know that Grade 10 science was kind of like the first uh peak into environmental stuff uh that I've really had in terms of the class". In addition, noting changes

covers mentions of changes over time. This notion was discussed a couple of times by Liam: "And now like even when I came to Grade 9, I heard something about it and then up to about Grade 10 and 11 is when it started, like, they started bringing it up a lot more often." Alternately, future action consists of mentions of participating in environmental activism in the future, such as Sarah's quote:

> something that I would really love to do is eventually be able to implement strategies for communities abroad, um that are both like sustainable economically but also environmentally, so I'd really like to see environmentalism play a huge role in how that works in my career. Um, personally, I I would really like to keep striving towards being a local organic food consumer, and I would like I said, really love to have my own garden so I can be self-sustaining.

The majority of quotes (73%) were coded within the interaction dimension (see Figure 8), where social interactions being more prominent than personal thoughts and feelings (see Figure 9).

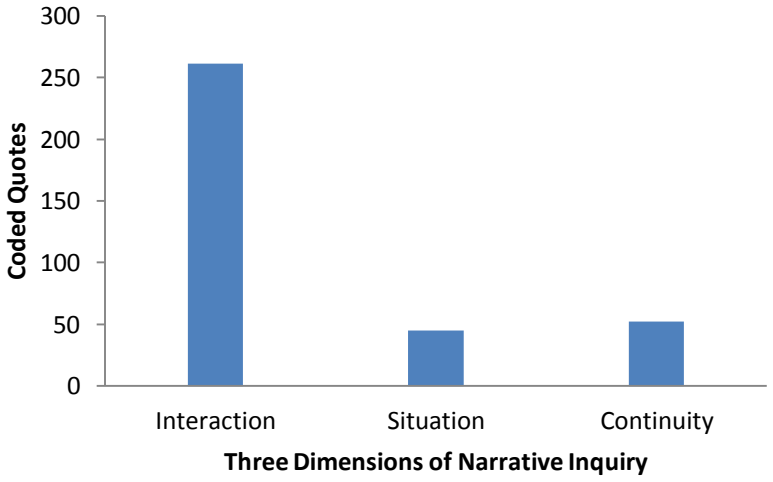

Figure 8. The distribution of student participant quotes among the three dimensions of narrative inquiry.

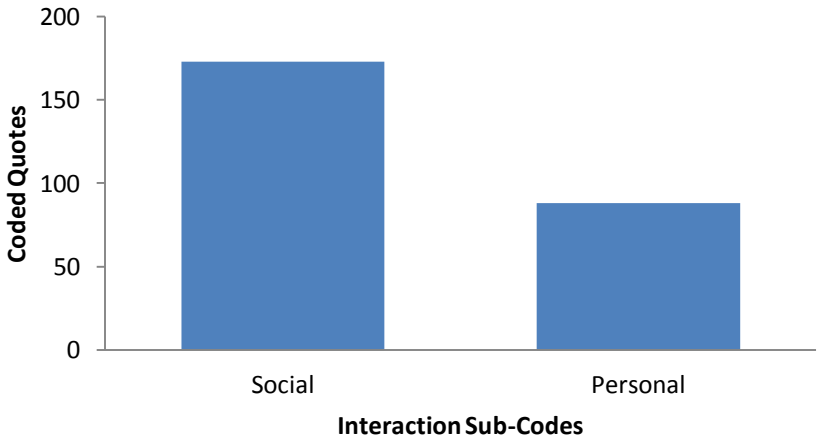

Figure 9. The distribution of student participants quotes among social and personal interaction codes.

In discussing these interactions, some were explained in relation to situation (a place) and continuity (past, present, future). There are five groups that are the most prominent within the social interaction dimension: opportunities to influence others; social networks; environmental education; a venue for activism; and teacher mentors (see Figure 10).

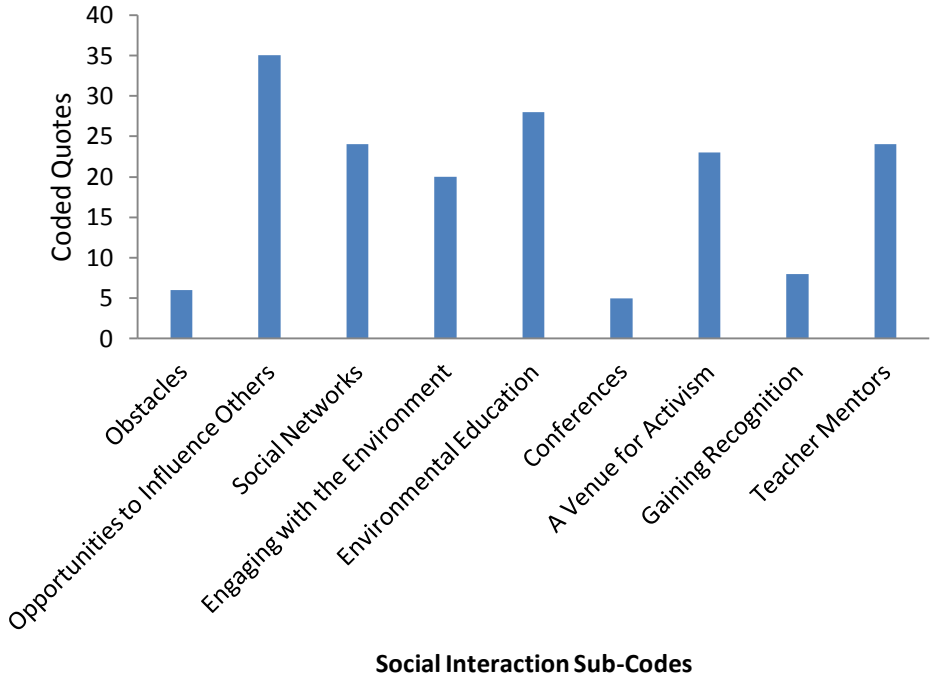

Figure 10. The distribution of student participant quotes among social interaction sub-codes.

Similarly, quotes within these codes were representative of all student participants (see Figure 11).

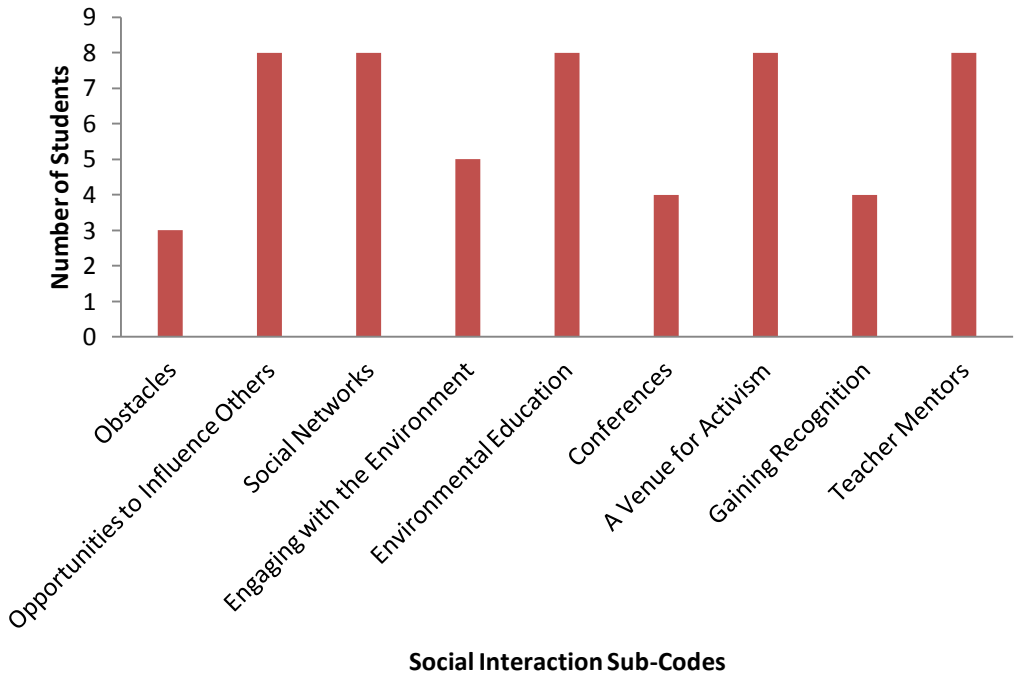

Figure 11. The distribution of students among social interaction sub-codes.

Within the personal interaction dimension, the category touched upon most was connection to nature (see Figure 12).

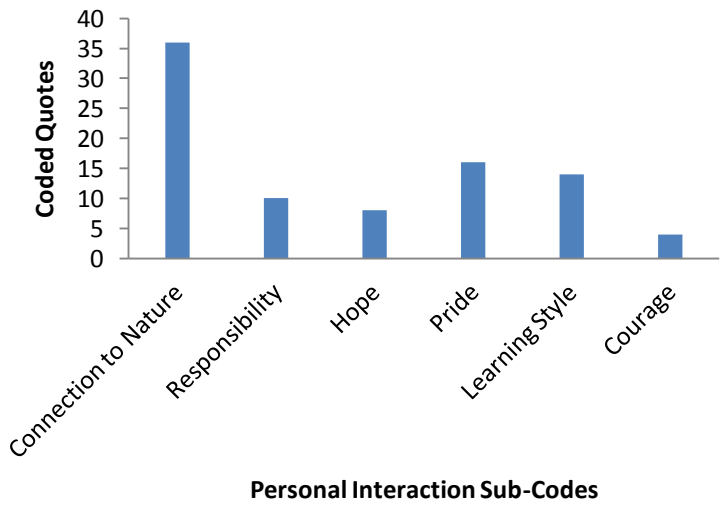

Figure 12. The distribution of student participant quotes among personal interaction sub-codes.

Notably this code had representation from all student participants (see Figure 13). Most of the students also discussed learning style preferences, and also taking pride in their environmental actions.

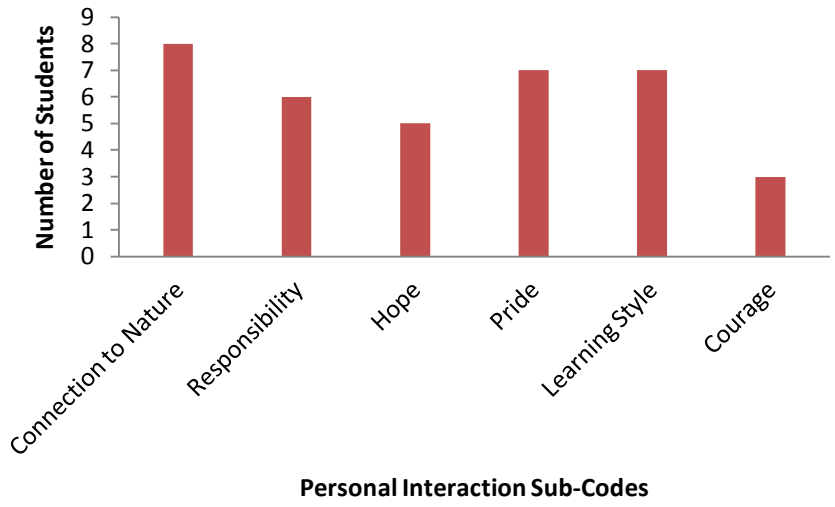

Figure 13. The distribution of student participants among personal interaction sub-codes.

Overwhelmingly, for the situation dimension, all students, except one discussed many experiences occurring outdoors in natural settings (see Figures 14 and 15).

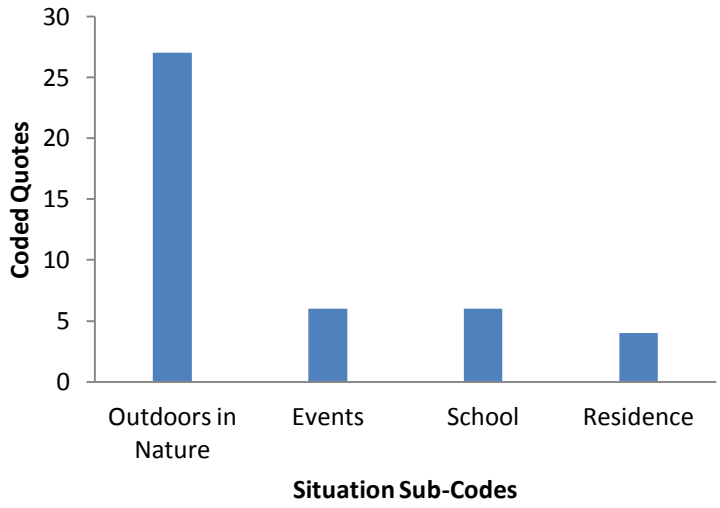

Figure 14. The distribution of student participant quotes among situation sub-codes.

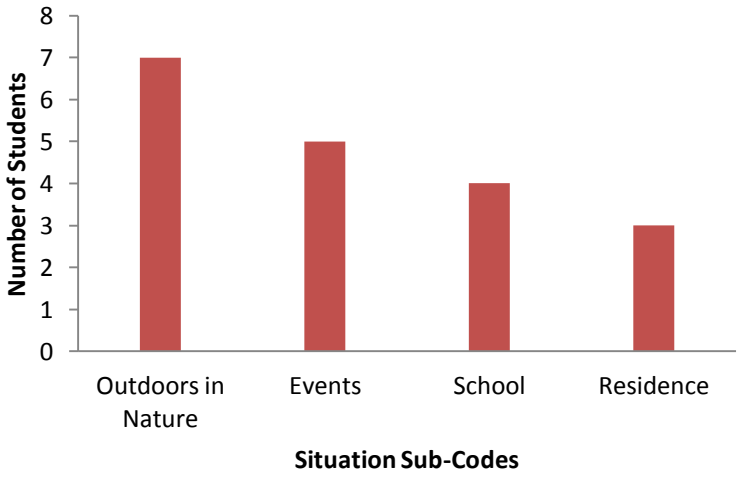

Figure 15. The distribution of student participants among situation sub-codes.

Additionally, events, such as education conferences and environmental film festivals, were greatly influential in their engagement with environmental activism.

The continuity dimension contained the fewest quotes. However, out of the four sub-codes, discussions of experiences from the past and intent for future activism were prominent, and also mentioned by all eight student participants (see Figures 16 and 17).

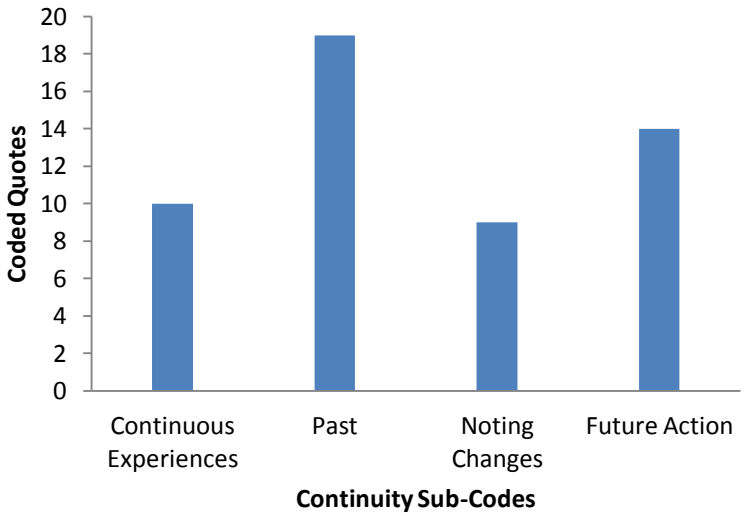

Figure 16. The distribution of student participant quotes among continuity sub-codes.

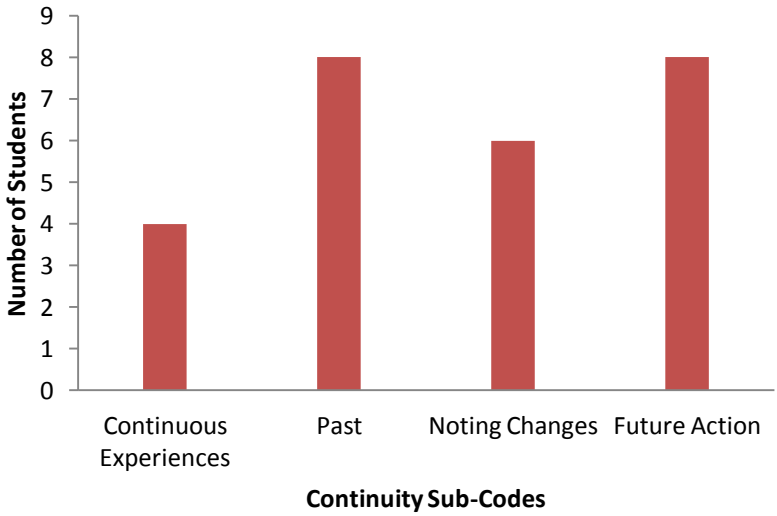

Figure 17. The distribution of student participants among continuity sub-codes.

Several of the students also mentioned changes with respect to the environment that they have noticed occurring over time. For instance, these changes focus around environmental education, and behaviours of others. More specifically, Liam mentioned how the topic of the environment has moved into the classroom, whereas when his older sister was in secondary school four years

before, he mentioned that the same discussions were never present. Similarly, Greg explained that in elementary school the focus on the environment centred around the basics of not littering, and he explained that the emphasis is beginning to change, however, he did not go into detail about this change. Additionally, Madison found that while the environment was a big component of her courses last semester, it has taken a back seat in her current courses. In terms of the behaviours of others, Isabelle explained that actions within the school were successful because negative behaviours such as using disposable coffee cups have decreased after the club's education campaign.

After looking at the data as a whole, the prevalent themes for student involvement in activism, as demonstrated by the eight student participants are *teacher mentors*, *learning about/in the environment*, and *a venue for activism*. While codes were distinct categories created for this analysis, narratives include the three dimensions woven together. Thus, the themes surfaced from viewing the narratives more holistically, which took different codes into account (particularly, the most frequently mentioned and ones discussed by most/all students). For instance, *learning about/in the environment* emerged out of the combinations of several codes: learning style (Interaction/personal), environmental education (Interaction/social), outdoors in nature (Situation), and connection to nature (Interaction/personal). In addition, the theme, a venue for activism, while a code in itself, also emerged out of a several social interaction codes sub-codes: social networks, the opportunities to influence others, obstacles, and a venue for activism. Furthermore, these themes also emerged from the frequency of coded quotes within the codes, along with the codes having representation by all student participants.

While they had different interview protocols and foci, the teachers and students shared some similarities among their themes. Both groups demonstrated the importance of influential people—students were influential for teachers, and teachers were influential for students.

Additionally, social networks are important for mediating environmental action for both groups. As such, the teachers were determined to provide a venue for students who demonstrated a need for such a thing. Both groups were also keen on influencing others. For teachers, their involvement in activism came out of their desire to impact students. Similarly, the students in this study showed a keen interest to influence others, especially those younger than them to whom they could be role models. The results from this section will be discussed further in Chapter 7.

Chapter 7: Discussion

Responsible Stewards of the Earth

> [EcoAction is] a student action group that started here at [North Gate Secondary School] about three years ago by myself and my colleague [Rachel Smith]. Um, so it's a group of students that fluctuates from semester to semester and from beginning to end of year, but we have about 20 kids who are involved all the time and we are the eco club in the building. So we are responsible for recycling, we are responsible for all the eco initiatives that happen here, all the awareness that goes on. It all kind of funnels through that student action group. So each year we try to pick or target a few um small goals that we can accomplish in a school year and then we also work towards one or two larger goals. And the kids identify what those will be, and then we, over the course of the calendar school year we will go through and try to work towards accomplishing those goals. (Dawn Baker)

According to Dawn Baker's description of EcoAction, the environmental club at North Gate Secondary School, the students and teachers involved with the club fit the definition of responsible stewards of the earth, reassuring the appropriateness of this club as venue for this

research. When asked if participants believed that they are responsible stewards of the earth, one student, Isabelle, responded:

> I guess kind of 'cause we're trying to preserve the environment, and protect it so, and we're we're kind of charged ourselves with that responsibility. And we do take on like a lot of responsibility and I like, personally I'm a kind of person that feels responsible for like the actions of people and the effects that we have on the environment. I feel like it's our like my responsibility to protect the environment and where we live, so yeah.

Other students believed that they are always working toward responsible stewardship, but there were little things in their daily lives that they knew they could improve upon, such as reducing their consumption of resources. From my observations of three club meetings which each lasted one hour, and also interviews with the students and teachers, I found out that the EcoAction club operates as a team. The responsibility is generally shared between the students and teachers who are involved in collaborative projects. The many experiences the students have had, and the actions that they have carried out influence their engagement with environmental activism. First, research question one will be discussed with respect to the modified experiential learning theory to assist in making sense out of how the influential factors are acted upon and are taken up as learning (see Figure 18).

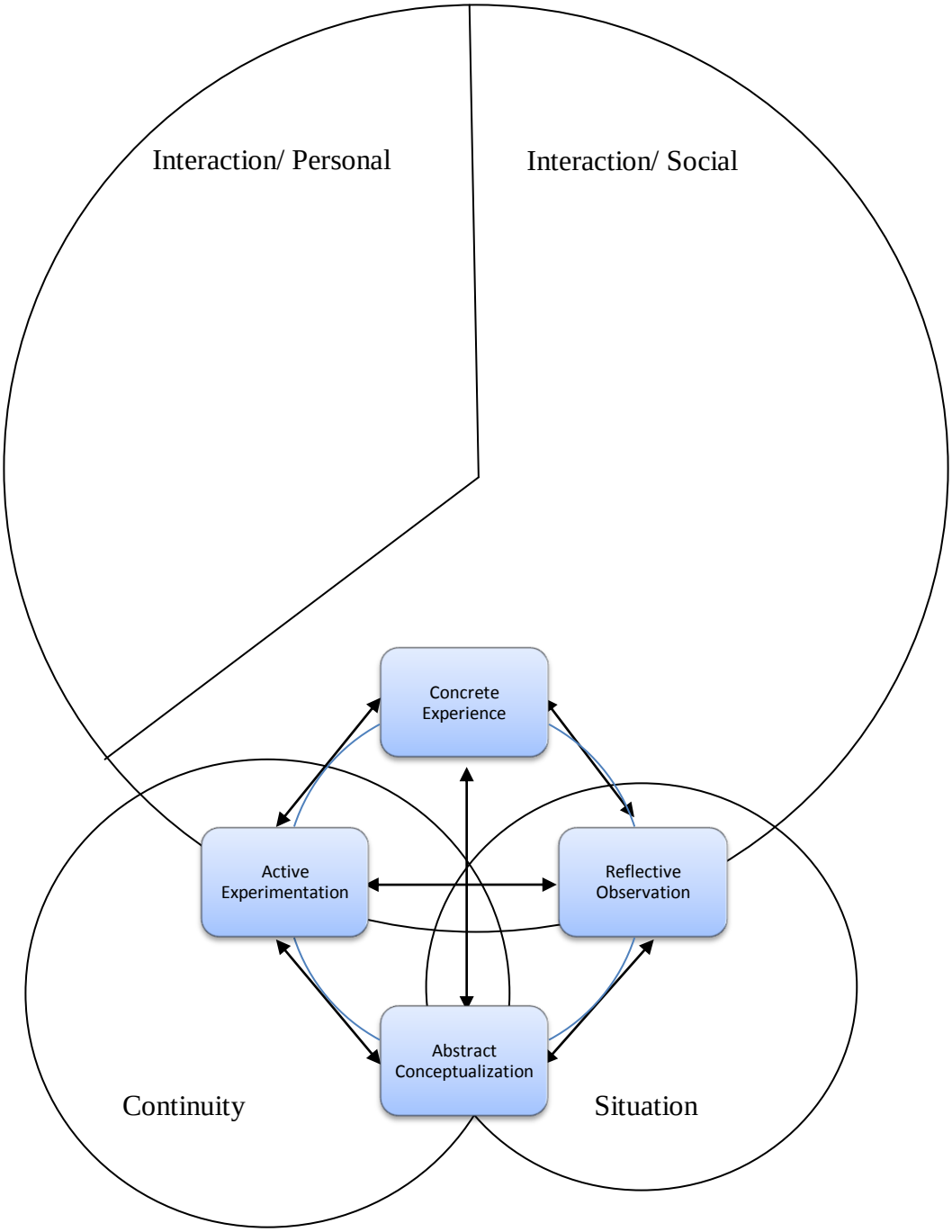

Figure 18. A modified experiential learning process. Kolb and Kolb's (2009) experiential learning cycle, and Jarvis's (2009) transformation through learning diagram have been merged and adapted to demonstrate experiential learning within the three-dimensional narrative inquiry space.

As Figure 18 demonstrates, the experiential learning cycle has been nested within the three dimensional narrative inquiry space. Jarvis's (2009) idea of reciprocal connections between

stages has been adopted, thus indicating that rather than a cycle, experiential learning is a multi-directional process. In other words, by adopting Fenwick's (2003) critique of Kolb for creating a division between the concrete experience and reflection, the reciprocal arrows demonstrate constant movement throughout the elements. Similarly, interaction, situation, and continuity cannot be separated, as these are three dimensions which occur together within experiences. Therefore, the figure attempts to demonstrate the combined factors interacting during the learning process. Furthermore, the journey to becoming engaged with environmental activism could be viewed in a similar light. As participants indicated, within the modified experiential learning process, learning to become a responsible steward of the earth is influenced by the interaction, location, and temporality of experiences:

> I think that uh, going to [North Gate Elementary], we had a a plot across the road of where we could go. And we did um, like pond studies, we did certain stuff like that. Like plots of land we . . .would cr, map it out, each each, we'd go across, maybe once a month and just write down stuff we noticed and we'd go across in the winter. So we'd snowshoe up and we'd write down stuff we noticed. . . . So I think that plays a huge part. Just being able, just being in Northern Ontario. Plays a huge part, but uh I think that my experience has been uh, like part of making me who I am 'cause I go across the road, and whatever, I just find certain things. Like even Grade 9 and 10 we'd go up to the field, and we'd just look up stuff for science, and stuff like that. (Laura)

This narrative of experience contains all three dimensions of narrative inquiry. For instance, Laura's story is grounded in an experience that occurred outside on a plot of land[15] adjacent to her school, North Gate Elementary—a school located in what she classes as Northern Ontario

[15] From personal experience, this plot of land is considered to be a natural environment. The plot has a meadow, a mixed forest, and a couple of streams.

(Situation). Additionally, the story is one about past learning, more specifically, learning experiences during elementary school. It also contains a section about learning in high school and during regular excursions (Continuity). This story, grounded within situation and continuity dimensions contains interaction with the environment and with people. Though not explicit, Laura's use of the word "we" indicates that these excursions took place in a context with others, likely her teacher and fellow classmates (Interaction). Laura explains that these experiences played a large role in shaping her into the person she is now, thus supporting the notion that learning to be a responsible steward of the earth is influenced by all three dimensions of narrative inquiry (interaction, situation, continuity).

Returning to the modified experiential learning process, the three dimensions of narrative inquiry come into play for all four elements of the process, rather than being limited to the Concrete Experience element—the three elements are present in each "experience" thus the assumption could be made that they only exist in this stage of Kolb's cycle. For instance, half of the students shared a fondness for gaining recognition from their actions. Gaining recognition could be incorporated into the Reflective Observation element of the process. This social aspect can influence youths' evaluation of the effectiveness of their actions.

> I like the hydration stations, where, we only have one right now, but our plan is to get a second one, and all the students really like it. I don't know it's most, I like the success of the school, like when people, other people like it, then you get compliments on it and people comment on it. If it's something that nobody else notices, then it goes unnoticed sort of thing. (Madison)

However, gaining recognition is not the only code that might be incorporated into this component of the process; for instance, social networks, teacher mentors, and a venue for activism, among others could also be incorporated into Reflective Observation because of the teamwork, decision

making, and skill development encouraging thinking and reflection that occurs with experiences present in these categories.

Furthermore, *Abstract Conceptualization* can occur as a social interaction, and is situated in place and time. As Heather demonstrates, thinking about future action for influencing the school population can be a group task:

> I think at the beginning of the year we had a nice big brainstorming session with all of the like members of it who came out to the first meeting and we discussed like all of our ideas for the year and kind of planned it out.

Finally, *Active Experimentation* can be likened to the actions that the youth carry out. Experimentation can be done individually, however, it can also occur as an act of teamwork. As Laura states, "And I think that it's all a group effort. But if someone sees something that they want done, then we'll, we'll get it done, as a group."

I have attempted to demonstrate here that Kolb's experiential learning cycle, and the three dimensional narrative inquiry space are always interconnected and that this modified experiential learning process demonstrates the components of youth's learning on their journey to becoming responsible stewards of the earth. Supporting previous research discussed in the literature review (e.g., Arnold et al., 2009; Chawla & Cushing, 2007; Gruenewald, 2003a), the participants demonstrated that multiple factors interact and mediate their involvement with environmental activism. The contribution of this study, however, is that it focuses mostly on school factors (see below), whereas past studies have found factors present throughout life in general. The discussion addressing research question one will now be broken down by the three dimensions—interaction, situation, and continuity—to demonstrate the factors influencing responsible stewardship in an organized format similar to Chapter 6.

Addressing Research Question 1

What school-related experiences influence student and teacher engagement with environmental activism?

Interaction.

Teachers.

The teachers in this study seem to have a genuine desire to impact students, and encourage youth environmental activism, which appears to be the main factor for their involvement with environmental activism through school. Rachel Smith explains:

> I think um, you know the kids need an opportunity to be able to be activists and to be a voice on behalf of the environment.

With her interest in youth activism, Rachel wanted to be involved with students from the club:

> Well, and one of the reasons that I um. So [Dawn] had the idea to run a club and I came on board right away and one of the big reason is because in special education, um which I've worked in for the last several years, um, the type of students I teach aren't really the activists, they're not really the club joiners and um they're just not at that self-actualized space in their life to be able to be those kind of kids.

Additionally, as Dawn Baker explains, "our goal, when [Rachel] and I started [EcoAction] was to to be the vehicle to connect our kids to wherever they wanted to go." These two teachers are demonstrating their ability to influence students' attitudes. The importance of environmental literacy and positive environmental attitudes of teachers is also demonstrated by students who speak of the influence these teachers have on their activism. With their desire to impact students, an opportunity arose when students gave Dawn an idea:

> So when I came back here to work three years ago, I really saw a need for an eco club because there was nothing in the building what-so-ever. Um and a lot of kids were expressing through the courses that I was teaching the interest in wanting to start something like that so I just ran with it.

These students—influential school-related factors—touched on Dawn and Rachel's desire to have an impact on students and were the catalyst for the creation of EcoAction.

Another factor which mediates these two teachers' involvement with environmental activism is the social networks that they create. As Dawn and Rachel mentioned throughout their interviews, social networks are essential to carrying out environmental actions, growing the club, and strengthening the impact that they have on students:

> We've had tremendous successes both with the kids and just across the board. Like we've, the support that we have from our director and our and you know admin team here, it it's huge, so it's it's good for the kids and I think it's just good for us and it's good for our community and it was a need, so that was something that I sort of put out there. (Dawn)

Their influence is further discussed by the students in the section below.

Students.

Table 11

School-Related Experiences Influencing Responsible Stewardship

Factors Influencing Responsible Stewardship from the Literature Review	**Similar Factors as Demonstrated by Student Participants**
Influential people (Arnold et al., 2009)	Interaction/ Social/ Teacher Mentors
Influential experiences (Gruenewald, 2003a)	Interaction/ Social/ • Obstacles • Opportunities to influence others • Conferences
Education (Chawla & Cushing, 2007)	Interaction/ Social/ Environmental Education
Social networks (Chawla & Cushing, 2007)	Interaction/ Social/ Social Networks

Creating safe spaces; building relationships (Schusler & Krasny, 2010)	
Experiencing success (Chawla & Cushing, 2007) Belief in capacity (Blanchet-Cohen, 2008)	Interaction/ Social/ Gaining Recognition
Dialogue (Chawla & Cushing, 2007)	Interaction/ Social/ Environmental Education/ Discussions
Involvement with organizations (Chawla & Cushing, 2007) Connecting youth with their community; providing opportunities for meaningful contribution (Schusler & Krasny, 2010)	Interaction/ Social/ A Venue for Activism
Regular everyday experiences (Chawla & Cushing, 2007) Engaging with the environment (Blanchet-Cohen, 2008)	Interaction/ Social/ Engaging with the Environment/ Place-Based Education
Attributing personal significance to experiences and information (Chawla & Cushing, 2007) Connectedness (Blanchet-Cohen, 2008)	Interaction/ Personal/ • Pride • Connection to Nature/ Personal Interest
Development of action skills (Chawla & Cushing, 2007) Supporting youth (Schusler & Krasny, 2010)	Interaction/ Social/ A Venue for Activism/ Learning Skills

As indicated in Table 11, many findings from this study support the factors highlighted in the literature review from Arnold et al. (2009), Blanchet-Cohen (2008), Gruenewald (20003a), Chawla and Cushing (2007), and Schusler and Krasny (2010). Notably, the factors presented on the left side of the table (from the literature review) represent general factors throughout life, whereas the ones on the right side (from this study) represent factors specifically related to school. The student participants in this study have demonstrated that school-related factors play a large role in their involvement with environmental activism—however, factors from their home life also contribute, which will be discussed in answering research question two. The most prominent codes, as indicated in the results section will be discussed next.

Influential people within the school play a large role with the student participants, and is thus one of the main themes (*teacher mentors*). Generally, students mentioned that the school was full of supportive teachers, including the administration and teachers with whom they have had courses. More specifically, the teachers involved with the EcoAction club are viewed as mentors and aids to environmental action, as demonstrated by Heather: “and obviously like the

teachers in [EcoAction] are likely some of the most environmentally motivated people that I know in terms of teachers and mentors. Yep." However, overwhelmingly, the biggest impact on involvement with environmental action came down to one teacher—Dawn Baker, the creator and leader of EcoAction. Seven of the eight students mentioned Dawn Baker specifically. She is not only a mentor and source of information for the students ("I go talk to Ms. [Baker]! . . . She's my number one resource right now"; Liam) she has also been a catalyst for many students' involvement with activism:

- Um, I think [Dawn] was really encouraging me to get into it because she knew that um, I don't know I guess she knew I liked the environment somehow. (Samantha)
- Um, I really wasn't even that interested in it but, Ms. [Baker] said you know, 'just come out and check out some meetings' and I was really busy with sports and different groups. Um, and I thought 'yeah, okay, if I've got the time I'll check it out' and I'm glad I did. (Greg)

Interestingly, Dawn Baker's influence appears to be similar to what Rachel Carson (1998) recommends in her book *The Sense of Wonder*—the necessity of at least one adult who can help to keep alive children and youths' interest, and excitement with the environment.

The students also described influential experiences, such as those categorized as obstacles, opportunities to influence others, and conferences. All of the students are keen to influence others, which is their form of strategic action (Blanchet-Cohen, 2008):

> And I think that in order to do well, you have to first act on it and then teach people, and I think being able to teach younger kids that come to our school, or come to [the Environmental Summit] wherever we are this year, I think that it makes a huge difference

> that we we are educating younger children who will then educate their children. It's just start a ripple effect. (Laura)

The obstacles to their activism are unrelated to things hindering their involvement; rather, they appear as obstacles to sharing information with others:

> Um, I guess it's the people that aren't very supportive of the whole idea. Um, I don't know, like there's obstacles with everything you get involved in, but I think that's probably the main thing with people that just don't really care. Like, you can tell them something and they're just like 'yeah, whatever, who cares?' And it's just kind of um, kinda trying to get through to those people or like get past it, kind of. Like, you want to make them care, but sometimes you just can't, and um, I don't know. It's, that's pretty much the main thing I think. Like there's, we don't have a whole lot of obstacles other than that. (Isabelle)

Fortunately, this obstacle is viewed in a positive light by the students, and encourages extra effort: "It just makes me want to try harder. It's like 'I'm gonna get through to you eventually'" (Liam).

Some students had the opportunity to attend a large education conference. Students involved in the conference wrote speeches to Prime Minister Harper, urging him to take more action on environmental issues. These speeches were then presented to David Suzuki, recorded, and sent to the government. The presentation to, and discussion with David Suzuki clearly had an impact on the students:

> Well I know like the uh, the big thing that they had last year like the [education] conference and then the environmental conference out at [the resort], and I know like everyone was so excited when David Suzuki showed up. So I think that um like having the publicity that he has and kind of the star power behind it, that's a, that's another big

> thing. Like if if you have enough celebrity behind the environment, the people are going to pay attention and I think that's a that's another way of like kind of getting it out there, and and learning from. (Heather)

Social networks play an important and varied role in mediating environmental activism for these youth. For some, environmental action becomes something that they can belong to—which ended up steering Isabelle to pursue an environmental career:

> Well I wasn't really involved in anything up until that point, um, like early in our earlier in high school, I wasn't in like *Me-to-We*, or [EcoAction], or student council, or anything like that, I just kind a I didn't really know what I liked I guess, and what I wanted to do and it's not necessarily that I joined [EcoAction] because that's what I want to do with my life. It's just like, I didn't really figure myself out I guess, and I don't think I had like an epiphany or anything I just kind of I figure like 'I'd kind of like to get involved' and I was thinking about all the different clubs that go on at this school and it wasn't like I knew that the environment was something that I was passionate about. I was just kind of like the idea of joining [EcoAction], I was like 'I kinda wanna do that' so I did.

For others environmental action is something that they do with friends, which strengthens their friendships. Sometimes, involvement in EcoAction helps develop networks inside and outside the school, such as those Sarah describes:

> So I think that's, it's been a really positive experience, and it's also definitely opened the doors to other experiences that I can have. Like like I said that I was part of the um well part of student council, I'm the Minister of Environment . . . now, so that's opened that door. Um, and I've also had the opportunity to work in provincial parks um and I think that's been largely due to my involvement in [EcoAction].

Social networking experiences involving real-world exposure demonstrates to students what their possibilities are, helping to reveal potential careers in the environmental field:

> I think for the like field trips, I, I don't know what's out there, so going there and seeing all these jobs, like people are telling you about this is what they do for a living, like, I think that's really neat just learning about what they do, and how it affects the environment. (Madison)

EE through school is another influence for students, and a category contributing to the theme of *learning about/in the environment*. Having an environmental science class, cross-curricular integration, and discussions about environmental topics within classes helped these youth to recognize what issues are present in the world, understand the interconnectedness of what they are learning with the environment, and learn facts to back up their opinions and theories. While some students found that EE is really a part of everything they are learning, others, such as Liam, noted that in non-science courses it appears to them that EE is merely an add-on:

> It's mostly just, without taking a direct, environmental science class, it's mostly just indirect, like linkages and stuff. So we'll be learning something and be like 'oh yeah, it also incorporates into the environment 'cause this can affect it.' And it's mostly just, they just, it's almost like they just like 'oh yeah, I guess it can be incorporated to the environment' somewhat.

As Chawla and Cushing (2007) discuss, involvement in organizations influences involvement with environmental action. As demonstrated by the student participants, an organization, such as their EcoAction club is actually the venue that makes their involvement in activism possible, and is a component of one of themes for answering research question one (*a venue for activism*). Through such a venue, they learn the skills for action, and work together as a team to accomplish tasks. As demonstrated by Heather, even if youth want to be environmental

activists, it is almost impossible to do so without a group or some organization to provide the foundation:

> It's hard to get something, like as a high school student, it's hard to get something um going by yourself so it's it's nice to be able to join a group and say 'okay well, I'm going to assist you with this and this and this.' Um as opposed to like just you know hopping up one day and trying to start your own movement. So. It's nice. I think it's a it's a good incorporation of like lots of people's ideas from the high school.

As argued by Blanchet-Cohen (2008), and several other researchers presented throughout the literature review, connection with nature is an essential element in fostering responsible stewardship. Not surprisingly then, all youth participants discussed a connection with nature which was developed through exposure to natural areas both with families and through school. They also hinted at the influence of this connection on their environmental activism, which is represented in the theme *learning about/in the environment*:

> I suppose that um, just being in the environment is kind of in a way it's like leading by example. It's just um, first-hand experience with it and um you really start to build a connection with the environment and realize that it's not separate from yourself. And um, so the more you embrace the environment, the more it embraces you, the stronger the connection is and the more you want to do to help it. (Samantha)

Similar to Samantha's quote above, most of the youth discussed learning style preferences, and some of these references demonstrated learning that ties into developing connections with nature:

> I think oh, there's a lot more people in my generation that need to see things. Whereas previous generations would just like write things out and memorize them. But I, I have to see things, and so Grade 9, I dissected a plant, which was really cool for me to be able to like 'oh, this is how, like pollen comes into the flower,' all that sort of stuff. (Laura)

Many of the learning style preferences explained things done in the classroom—watching documentaries, discussions, reading children's books in elementary school, and learning facts. Notably though, when asked about teaching strategies that where the most memorable for them and their environmental learning, all students except one stressed hands-on learning in the environment, or "Out out in the environment", as Samantha put it. The situation element will be discussed in greater detail in the following section.

Finally, most students discussed taking pride in actions. This act of attributing personal significance to actions is a factor supported by Chawla and Cushing (2007) for influencing responsible stewardship. As Sarah mentioned during her interview, a couple of events and experiences top her list of actions to be proud of, demonstrating an emotional connection to her environmental activism:

> you've heard a lot about it but the disposable cups campaign! Definitely the most proud of that. Um, I was also very ecstatic to have the opportunity to talk to David Suzuki. Um, and I ma[d]e that speech. I was really proud of that as well.

Situation.

Teachers.

Stories from both teachers addressed the location of where they teach, the town of North Gate. Not only do most experiences with their EcoAction students occur in this town, they both have an attachment to the area—Dawn through growing up, and Rachel through teaching at outdoor education centres. Dawn "lived away from [North Gate] for a long time and gained a really deep understanding of and gratefulness for where [she] came from." These experiences have made the environment a big part of their lives.

Students.

As an element contributing to the theme of *learning about/in the environment*, many stories about environmental learning included emphases on being outdoors in nature, both through school, and for family life. A few students discussed their elementary school experience where they were taught through place-based education. The local, natural environment surrounding the school was where many lessons regularly occurred. Sarah is one such student:

> Well at [Algonquin Institute] it's off of course in a beautiful setting, it's a huge camp, um, with a lake and mountains and everything you could ever want to do, it's such a wonderful place. Um, you have outdoor education, at least once a week. Um, all of your gym classes are outside. So I think you just really develop a respect for the environment, because you have such a positive relationship with it. Um, you just get so many opportunities to go snowshoeing, and to spend time outside to go canoeing, to go on outtrips, where you're on a canoe trip for a couple of days,

Sarah claims that Algonquin Institute was one of the main parts of her life where she learned about/for/in the environment and developed her interest in the environment. These authentic learning experiences, grounded in the local context and related to daily life, tie into Carrier's (2009) and Ernst's (2007) push for teachers to teach an integrated curriculum in and based upon the local natural environment. Increasing engagement and learning for students through these teaching strategies was present in Greg's narrative:

> Being out in the environment, I think is, you can you can put up a picture of a tree, but unless you actually like see it and feel the tree, you don't, I don't think you have a greater appreciation for it until you've actually been there. So I think lots of field trips, lots of um, and the field trips, like they they can be through games and, but it's also fun to be out

> and plant trees, like it's also a fun thing to do as long as you're with friends and you know grabbing garbage isn't that bad.

Moreover, experiences within near-by provincial parks were fondly discussed by a few of the youth. These field trips, though occurring less frequently than excursions outdoors around the school were valued by the students because, as Madison demonstrated earlier, they were able to see what is available in the local community, and also to apply their classroom learning to the real world. These experiences are important components of place-based education (Gruenewald, 2003b; Knapp, 2008).

Continuity.

Teachers.

Many of the experiences that the teachers discussed were grounded in the past three years, since they started teaching at North Gate Secondary School. Rachel demonstrates how the desire to have an impact on students fits within continuity: "but really the reason for working in a school is the long-term impact on students." By working at a high school, she knows that she can work with students in some way for approximately four years, and be able to witness some of the impacts that she has on them over time. Additionally, Dawn discussed some continuity with the goals of the club within her interview:

> But I'd love to see, like their goal, their dream. I'd love to see a solar panel on our roof. I'd love to see you know alternative energy being pumped through this building instead. And a deeper connection between the classes that are all using something together. So, you know, those are good goals. And the kids came up with those, and they seem to come up with those same goals year after year after year, regardless of who's in the club. Because the passion and vision is, you know, we need to do something bigger.

Students.

The majority of youth in this study discussed environmental learning, either with their family or through school, beginning early in life and continuing to present. However, a few students note the initiation of EE in high school, such as Heather and Liam respectively:

- Yeah. Um, well I guess, like I haven't taken an environmental science class unfortunately, um but I know that Grade 10 science was kind of like the first uh peak into environmental stuff uh that I've really had in terms of the class. (Heather)
- Probably started when I got to high school and the issues started actually like coming out. 'Cause when I was in public school, we didn't hear a lot about them. (Liam)

Moreover, the students' involvement with environmental activism only began in the past few years, when they joined EcoAction.

> It's kind of always, you know, plant a tree, clean up your after yourself, don't litter, very basic things really, until, the [EcoAction] was really where we started to do things. (Greg)

In support of my choice of research participants, all of the youth discussed their intent for being involved in environmental action for the rest of their lives. While this fact cannot be guaranteed at this point, the continuation of action from adolescence throughout life is supported by the Minsitry (2009a) and several researchers (Flanagan & Levine, 2010; Jennings & Stoker, 2004, as cited in Hooghe & Wilkenfeld, 2008).

Addressing Research Question 2

How might the participants' stories of learning about/for/in the environment assist in the interpretation and implementation of *Acting Today, Shaping Tomorrow*?

Along with school factors, influential people and experiences from home are a large component of the influences shaping children and youth to become responsible stewards of the earth (Gruenewald, 2003a). Therefore, it is important to also address these factors when looking for ways to live up to *Acting Today, Shaping Tomorrow.* Parents are noted by six of the eight students as being mentors in their lives. While some students stressed that their parents were instrumental in teaching them to value the environment—"I just think that he's taught me a lot throughout my life that to, to um, treasure the environment, sort of just to make sure that you what goes around comes around" (Laura)—others, such as Isabelle, discussed parents who support their initiatives even if they do not directly teach, and/or are not the reason for the students becoming involved in environmental action:

> my mom. She's really supportive, and like every time I tell her something that we do in [EcoAction] or something that I learned today, she's like 'oh, okay' she gets really into it. And she's really supportive of pretty much everything. Especially, um, environmental stuff, 'cause I think it kind of you know we're related, so we kind of think the same way.

Experiences with family can also assist in making pro-environmental behaviour, and environmental action a way of life:

> So I think that's something that's really cool. And uh, any time that um, we use like reusable anything in our house it's pretty it's a pretty big accomplishment for us. And it's a big accomplishment if my mom gets the reusable thing back. But, . . .Yeah. It's huge. She's like, 'Yay! I've missed it!' Uh, but I think it's it's a really good thing for just our family to be a part of. We're we're really proud of composting, 'cause at our old house we had composting, but now we have like a really nice compost thing that we made. My broth my brother and I made it so we're really happy. Yeah. It's really cool. (Laura)

As Duvall and Zint (2007) highlight, some groups claim that greater involvement in schooling by parents is related to higher school achievement by students. Therefore, Duvall and Zint (2007) and the participants in this study both discuss the importance of parental involvement in EE. If the education system is to incorporate the influential factors for developing responsible stewards of the earth, involving parents (e.g., through homework tasks or other school-based projects and events) appears to be an important avenue to include in teaching, even at the secondary school level, as these students have demonstrated.

Before discussing what the students' narratives about school-related experiences teach us about *Acting Today, Shaping Tomorrow*, it is important to address what students from this study specifically suggested for the future of EE:

> I think, well, being a science student, I guess, um, like just kind of knowing how um things work I guess, and I wish like even though a lot of the scientific stuff I learn is like really complicated and I kind of wish that everybody could like, stuff about, you know, what you eat, and like your health, and how um, like how human products impact the environment when we litter and like exactly what happens and it's just kind of I think being a science student it makes it, it makes me a lot more passionate about issues when I know exactly what happens like even on a molecular level. Like on a scientific basis but so um, I kind of wish that we could educate people on that front more, even though it's kind of hard to do 'cause it's so complicated. . . . education really, I guess. That's kind of the basis of everything, like if if all of this kind of stuff was in . . . if all of this kind of stuff was like in the curriculum, then, um and not rather, like in the mandatory curriculum like there's you know of course like science classes that you have the option to take, but like Grade 9 and 10 science that you have to take like you learn a lot I think it would be better if there was a lot more environmental stuff in the mandatory curriculum, that like

> everybody learned, and I think everybody would just kind of be more conscious of . . . the environment. (Isabelle)

Isabelle is pointing out the necessity of educating everyone about environmental impacts. As she states, much of what she has experienced for EE has occurred in her optional higher level science classes. These classes only reach a portion of the high school population. Isabelle's wish relates to Jurin, Roush, and Danter's (2010) argument that many youth around the world know very little of the causes of environmental issues, which paints a bleak picture for the future of solving environmental problems. However, Heather shares a more practical look at how to implement environmental education:

> I think it would be nicer if they kind of started it off as like 'so here's your general understanding of what is currently happening to us and like this is how everything um coincides and works together in order to create this outcome' and then have people, based on the outcome, it's obviously going to be negative, then they're gonna I think to have more motivation to um think for themselves and find ideas that can help to rectify the issues.

Heather's suggestion hints at place-based education. She demonstrates a desire for students to be given the opportunity to be creative, and solve problems, an important component of place-based education (Knapp, 2008).

While not necessarily directly related to schooling, seven of the eight students mentioned learning about the environment through media sources. Sometimes these references were about experiences in school, however, many were experiences during the students' free time. Sources of media were broken down into media in general, documentaries, and the internet. For instance, Isabelle mentioned learning the most about the environment through media:

> I guess not really friends and family, but more, almost the media. I guess. . . . It just kinda started focusing more and more like the stuff I watched anyway, was focusing on like environmental stuff. So I kind of got interested that way.

Similarly, Heather mentioned the media as playing a big role in her learning about the environment: "and you know school obviously contributes like a bit of the factual information but I think in terms of an emotional response, probably news. News stories and just media." Additionally, some of the students, such as Sarah, enjoyed watching documentaries, and learning about the environment through this medium:

> Also, um we've watched a number of documentaries. For example in my co-op class we just finished watching *An Inconvenient Truth.* Um, *Food Matters*, that kind, that kind of documentary I think is really good at captivating the students' attention. Um, and and just explaining the issues in a way that's both entertaining, um but also understandable.

Finally, seven students also cited the internet as their main source of information for learning about the environment now. They understand that the Internet is a resource that they can use to explore any topics that interest them. In their chapter, Jurin et al. (2010) discuss the Program for International Student Assessment, which tests several things, including environmental knowledge of fifteen-year-olds around the globe. These students in my study site sources of information that are in line with the high-performing students discussed by Jurin et al. (2010), which potentially demonstrates additional support for sampling and learning from these students. With many students in this study discussing the prominent role that various forms of media play in their lives, this could be an important resource for teachers to incorporate into their teaching of EE. Notably, the use of nature documentaries with children has been found by Barbas, Paraskevopoulos, and Stamou (2009) to increase environmental sensitivity compared to students who did not view the film. Furthermore, Nolan (2010) assessed whether watching *An*

Inconvenient Truth increased knowledge of global warming, and action for the environment. She found that adults in the community, and college students had an increase in environmental knowledge, concerns about global warming, and intent to change behaviour. However, the intent to change behaviour which was stated following the viewing of the film was not generally acted upon after one month had passed (Nolan, 2010). Both of these authors note that documentaries need to be used in conjunction with other teaching strategies occurring regularly over time as well as exposure to real natural areas in order to move people from intention to make changes to real action and behaviour change.

To expand the conversation from answering the first research question, I will now further address how the narratives from the participants can inform implementation of *Acting Today, Shaping Tomorrow*, especially in addressing the vague components. Firstly, within the vision of EE, a vague component is the statement of learning in the community. As demonstrated by the participants within this study, learning within the community needs to include an emphasis on learning in natural settings in the local environment, as opposed to only using urban, built environments. The local environment can include natural areas around or close to the school, as well as nearby parkland or provincial parks. Sarah emphasizes the importance of nature within her interview: "well, I I think above all else, all else, um, being in nature has the greatest impact 'cause you realize what you're working to study, what you're working to save." Similarly, learning within the community needs to utilize the unique local landscapes, such as lakes and rivers which are present in North Gate. Taking advantage of the easy-access to the lakes and rivers by going canoeing as part of school played an important role in developing a connection to the environment for some of the student participants, such as Samantha:

> Out out in the environment. Definitely. Yeah. Yeah. 'Cause, I mean I've sat through some really really fascinating videos, or presentations about the environment, and those do stick

> with you for a while, but I think, they're not life-long memories. I think the life-long memories come from like, having fun outside like biking or um, going for a canoe and just talking about what's around you while you're outside.

Additionally, other aspects of learning in the community as demonstrated through this study include networking with community members. This networking occurred in large part through the Environmental Summit created and hosted by EcoAction, as Liam demonstrates:

> Probably say the [Environmental] um Fair last year. 'Cause we brought in *everybody* from all over, so we had people from [Keeton] and [Riverville] and everything, and it just like showed everybody how many people we have that deal with the environment every day. Like I was talking to one guy last year at the fair, he lives in [Cedarton] with me, and I didn't even know he lived in [Cedarton], but he pretty much makes everything he owns out of stuff he finds in the woods in [Cedarton] . . . and I didn't even know he lived in [Cedarton], so, that's probably my favourite thing 'cause there was just so full of education and everything. And we educated all the public schools and everything.

Therefore, these students demonstrated the necessity of networking with community members to learn about what exists in their community. This is not unlike the need to learn about the cultural commons as explored by Bowers (2009) and the passing on of traditional ecological knowledge by elders in the community (Reis & Ng-A-Fook, 2010) in order to develop a connection to the community and sense of place, and to assist with taking action for an environment for which the youth truly care.

Another vague statement in the policy document refers to the Ministry sharing resources to assist teachers in planning activities in the local environment (Ministry, 2009a). From the student interviews, important resources from the Ministry could include funding for fieldtrips to provincial parks and outdoor education centres. Moreover, a current resource guide with

research-supported pedagogy for EE—not merely a list of curriculum expectations—could be helpful for sharing examples with teachers of all subjects to integrate EE, and also to use the local environment in their teaching. As students demonstrated, their stories of learning *in* the environment, especially in high school, mostly discussed lessons in science class.

Similarly, the policy document states that schools will enhance the regular learning by supplementing with outdoor activities. Firstly, as some students shared, learning outdoors is not *supplemental*, it is the most memorable and effective method for their learning: "I think absolutely the times where we went outside, and were in the environment" (Sarah). Furthermore, learning outdoors in natural settings is an essential element to developing a connection with nature (Blanchet-Cohen, 2008), a connection that was discussed by all students, demonstrated by Greg's example:

> Being out in the environment, I think is, you can you can put up a picture of a tree, but unless you actually like see it and feel the tree, you don't, I don't think you have a greater appreciation for it until you've actually been there.

Secondly, Sarah and Samantha shared some unique and memorable learning experiences which were supported by their private/independent elementary schools: regular outdoor learning of several subjects, excursions including canoeing and kayaking in the local lakes and rivers, and physical education classes taking place outside. Further, Madison mentioned the importance of trips to provincial parks not only for learning subject matter, but to see what is available in the real world in terms of future jobs in the environmental sector. On that note, North Gate Elementary School, as reported by Isabelle and Laura, built an outdoor classroom to allow some of the regular classroom-structure learning to occur outside. The school board also owns a plot of forested land across the road from North Gate Elementary, which provides a location for teachers to teach in the local, natural environment. On another note, to enhance outdoor learning right on

the school grounds, the EcoAction members want a rooftop garden at North Gate Secondary School. However, the school, school board, and Ministry would need to work together to assist the schools in realizing this goal. Rachel Smith explains:

> the kids are always coming up with these amazing ideas, and um the barrier is always the politics and the red tape around 'okay, well if we're gonna do that, say we want to make a a rooftop garden well we have to call in the architect, and call in the' so just the logistics, and the red tape around some of those big ideas are kind of, I find very frustrating because I would love to see us have an actual green school and to have the go-ahead, to to not have so many barriers in place.

Another action of the Ministry (2009a) within the policy document is to address teacher knowledge and practices at the pre-service level (p. 13). In line with Desjean-Perotta et al. (2008) and Ernst (2007), the students in this study recognized the presence of environmentally literate teachers within North Gate Secondary School: "So there's a wealth of knowledge in our school," (Laura). However, some of the students also noted how the integration of EE into classes outside of science courses appeared to be a chore or an add-on:

> so I think they bring it in more as like I don't wanna say a chore but it's like 'oh well you know as a member of society you need to do this in order to be successful'. So. As opposed to I think um just like educating and then getting a response based on that. Which might be something that they [teachers] could look to do in the future. (Heather)

From this quote, and others, students within this study are indicating that learning how to successfully integrate EE across the curriculum needs greater emphasis in teacher training.

Likewise, resources for in-service teachers provided by the Ministry could be interpreted in-line with the above action. In-service teachers could also receive professional development on

the integration of EE through the curriculum, beyond science-based courses, a necessity demonstrated by Liam:

> It's mostly just, without taking a direct, environmental science class, it's mostly just indirect, like linkages and stuff. So we'll be learning something and [the teacher will] be like 'oh yeah, it also incorporates into the environment 'cause this can affect it.' And it's mostly just, they just, it's almost like they just like 'oh yeah, I guess it can be incorporated to the environment' somewhat.

In addition, "resources" could be funding to allow teachers to take their students to outdoor education centres and provincial parks to extend their learning experiences.

A seemingly self-explanatory action for the Ministry—ensuring all subjects contain learning of EE skills and knowledge—can also take ideas from the students in this study. In support of this action, as Isabelle demonstrated above, EE needs to be present in mandatory courses, in addition to secondary school electives. Learning of EE skills and knowledge is more enjoyable, memorable, and influential if occurring through hands-on activities in the natural environment, as demonstrated by most of these students and also literature presented in Chapter 2 (Arnold et al., 2009; Farmer et al., 2007; Morrone et al., 2001; Sobel, 2008). The majority of students in this study emphasized the importance of hands-on learning in the local environment. As these students are considered to be responsible stewards of the earth, this pedagogy is potentially a useful one in meeting the Ministry's goals for EE. In terms of skills, Samantha explained that she is learning to be an activist through EcoAction and her environmental science course. Both the club and the course are electives, indicating that only participant students would learn these skills. This point highlights the importance of learning the skills for action throughout mandatory course to which all students are exposed.

Lastly, the policy document explains that opportunities should be available to assist students in building their capacity for activism. As found during this study, influential opportunities included participating at large environmental conferences where the students presented to a famous environmental guru, David Suzuki; and also having the opportunities to teach others about the environment and encourage pro-environmental behaviour. To carry out this idea, schools should develop partnerships to have older students interacting with and teaching younger students, for the benefit of all. The biggest opportunity in assisting students with environmental action however, is the availability of a venue for activism, that is, the environmental action club—EcoAction. Likewise, student action clubs need to be supported at all levels (school, school board, Ministry), especially by the administration and other staff in the school.

Summary of the Main Findings

Research question 1.

What school-related experiences influence student and teacher engagement with environmental activism?

As demonstrated in the previous part of this discussion section the school-related experiences that influence Dawn and Rachel's involvement with environmental activism is their desire to have an impact on students. Students, as well as social networks which support their action, mediate these teachers' involvement with environmental action.

In terms of the student participants, the overall school-related experiences influencing their engagement with environmental activism include *teacher mentors, learning about/in the environment*, and having *a venue for activism*. These themes are integrations of multiple coding categories (see Figures 19, 20, and 21). The figures below are adaptations from Figure 6 and

represent the coding categories contributing to the three themes of school-related experiences that influence student engagement with environmental activism.

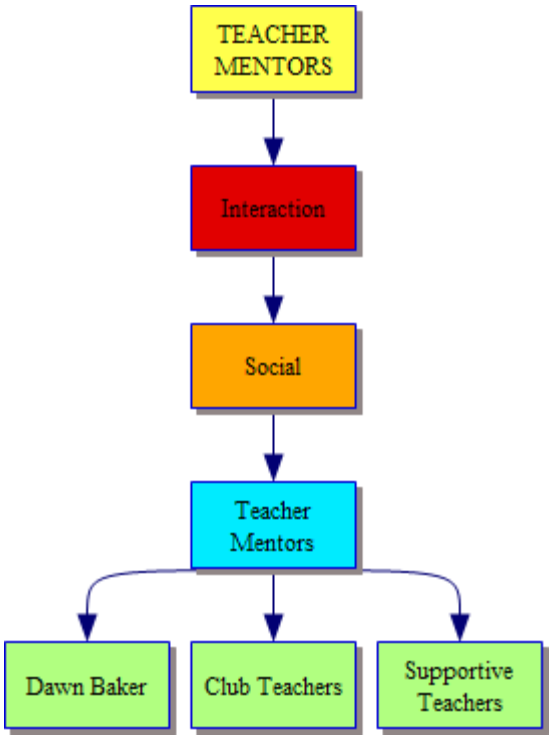

Figure 19. This figure represents the codes contributing to the theme of *teacher mentors.*

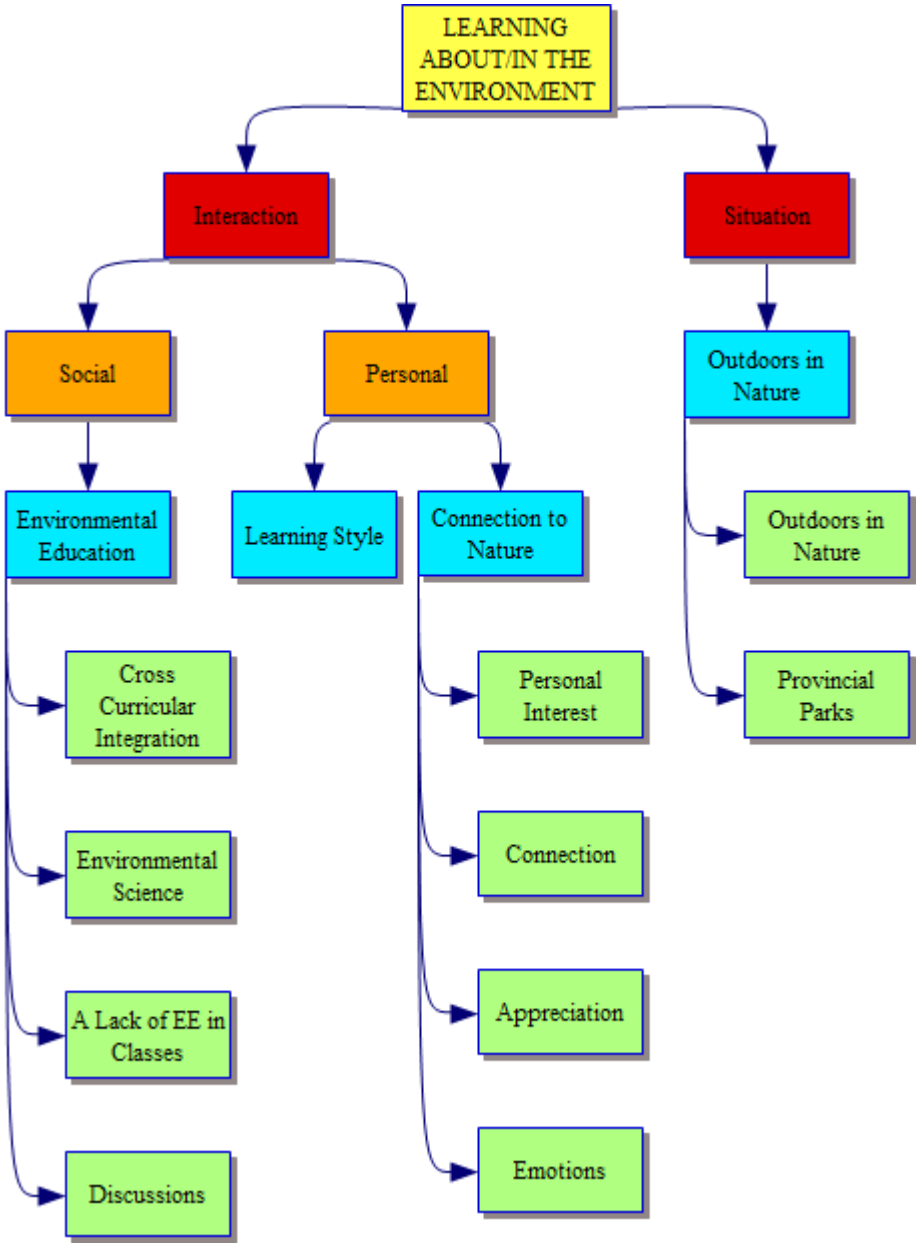

Figure 20. This figure represents the codes contributing to the theme of *learning about/in the environment.*

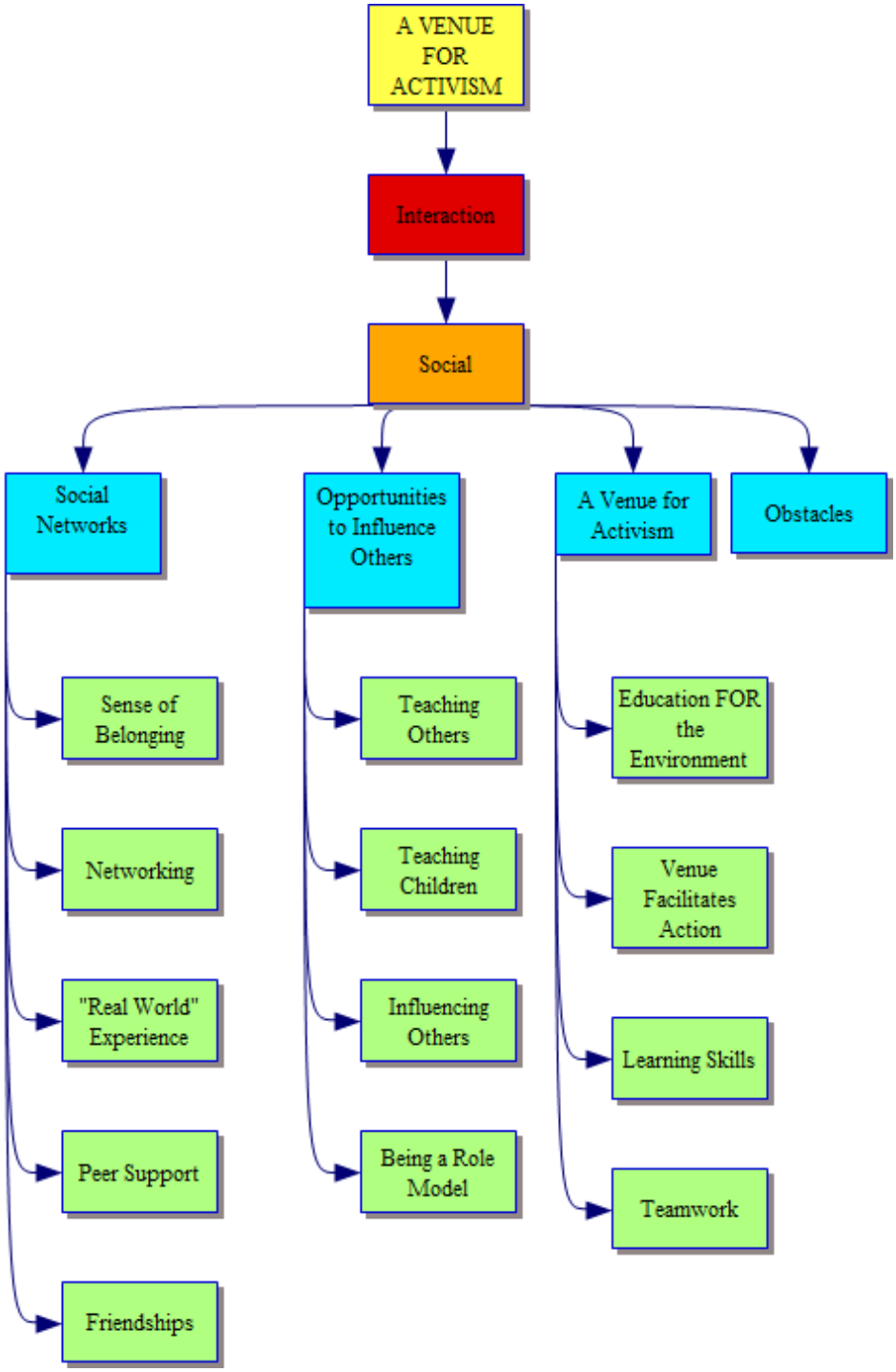

Figure 21. This figure represents the codes contributing to the theme of *a venue for activism.*

Figure 22 was developed from my results for a visual of the school-based factors that mediate student involvement with action. This model shares ideas with teachers and other

stakeholders in the education system to keep in mind when interpreting and implementing *Acting Today, Shaping Tomorrow.* The circles represent the components of the themes of school-based experiences and are incorporated with the three-dimensional narrative inquiry space to help demonstrate that all of the elements are integrated within experiences that students have, and the narratives that they create.

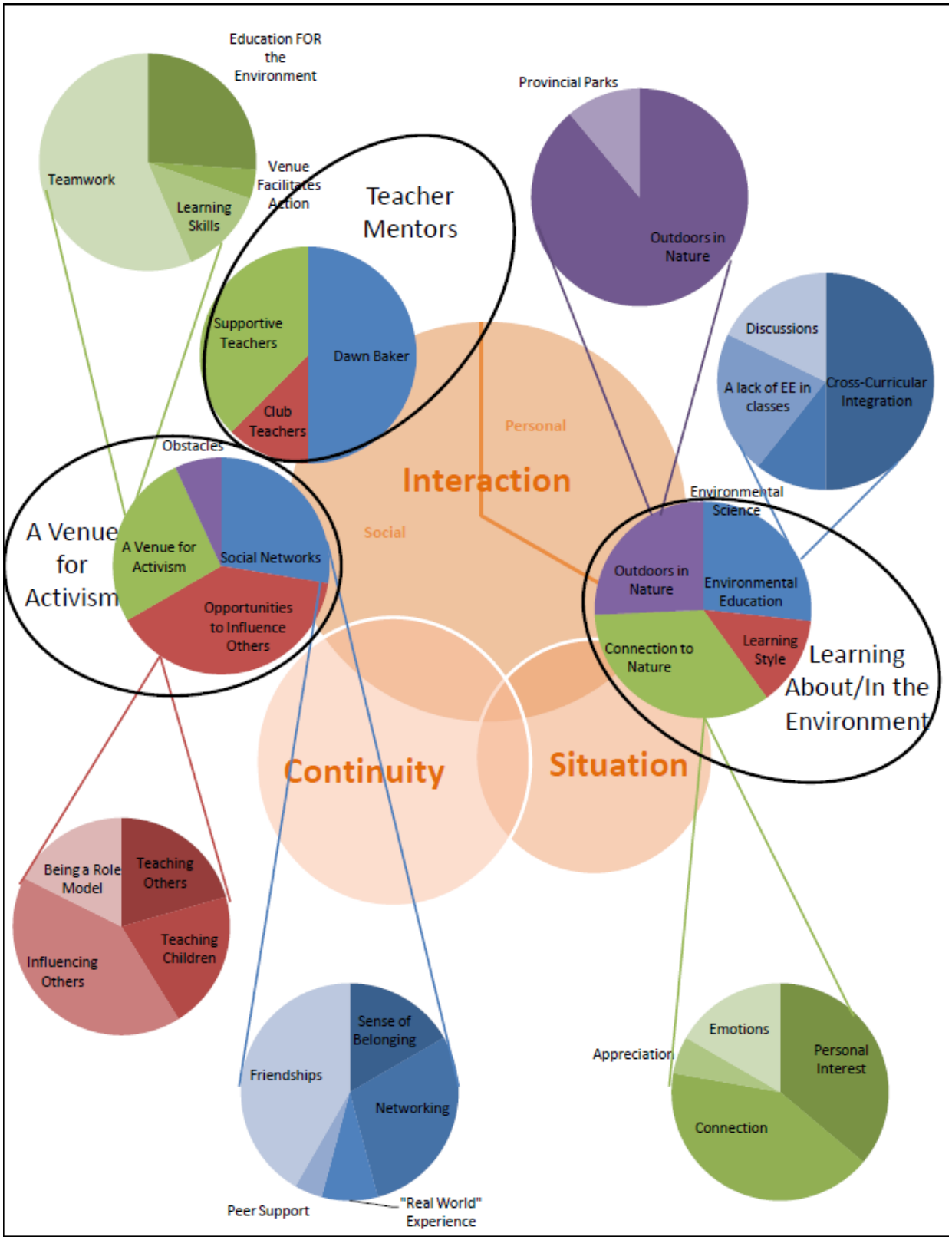

Figure 22. School-based experiences influencing student engagement in environmental activism.

Research question 2.

How might the participants' stories of learning about/for/in the environment assist in the interpretation and implementation of *Acting Today, Shaping Tomorrow*?

The findings addressing research question two overlap with the ones addressing research question one. From this study, there are several ideas that can be utilized in interpreting the vague actions within *Acting Today, Shaping Tomorrow*. Nevertheless, there are still useful ideas for reaching the goals of EE even when the results do not exactly address vague components of the document. The main themes of factors influencing these students to become responsible stewards of the earth are *teacher mentors*, *learning about/in the environment*, and having *a venue for activism*. Therefore, one could say that in order to live up to the policy document, and help to foster involvement in environmental action, schools should be seeking to have at least one environmentally literate, determined teacher who wants to provide students with a venue for environmental action, such as starting an environmental action club. While it is important for all teachers to be environmentally literate and be successful with the integration of EE for student learning, the students demonstrated that the initiation and maintenance of their *involvement in environmental activism* was the result of one teacher. Also to assist the teacher and students with activism, there needs to be a supportive administration. To teach EE in ways to promote responsible stewardship now or in the future, there are a few other ideas collected from the students' narratives: make connections with administration and other staff in your school to support the students' initiatives; provide opportunities for students to work with real issues within the community and ensure that there are many visits to the outdoor environments which are impacted by these issues; and help students to become leaders through teaching skills for action, and giving them chances to work with and teach younger children. Also teachers could keep in mind several other ideas developed from the students' narratives: include parents; teach EE

through mandatory subjects; utilize the media in teaching; and regularly offer hands-on learning opportunities in the local, natural environment.

Chapter 8: Conclusion

There have been drastic changes caused by humans to the earth's ecological systems including global warming, shrinking and contaminated water sources, melting ice caps, disappearing natural resources, and other environmental issues. In response to these changes, the world has seen an urgent call for EE initiatives within the formal school system (e.g., UNESCO, 2009). In Ontario the Ministry recently developed their first EE curriculum policy framework: *Acting Today, Shaping Tomorrow* (Ministry, 2009a), which emphasizes that one of the goals of EE is to "increase student engagement by fostering active participation in environmental projects and building links between schools and communities" (p. 14). This is aligned with the recommended student outcome for EE from *Shaping Our Schools, Shaping Our Future*, which states that "students will acquire the knowledge, skills, perspectives, and practices they need to participate as responsible citizens at the local, national, and global level, caring for each other and all living things" (Ministry, 2007b, p. 4). Overall, the vision and goals of EE from the Ministry's perspective is to encourage participation in environmental action, or to instil the idea of environmental activism into students' lives. These activists would display their environmental commitments through their actions to create a society that exists in harmony with earth's natural systems. However, how can teachers promote the achievement of this vision? More specifically, what current school-related experiences are influencing student engagement with environmental activism?

To answer that question, through this research, I turned to a group of youth and their teachers who are involved in a secondary school environmental action club titled *EcoAction*. The

members of the club consider themselves to be responsible stewards of the earth, thus, suggesting that they meet the Ministry's goals for EE: "Yes, I think [I am a responsible steward of the earth]. I think anyone who kind of has some sort of motivation, and has shown that they are able to do um or engage in activities that help protect the environment, sure, environmental stewardship" (Heather). While some of the members of the club believe that they are responsible stewards, others believe that they could be classed as stewards now, but also believe that responsible stewardship is something that they are always working toward. For instance, Sarah reflected on whether she is a responsible steward of the earth and stated:

> I think I'm always trying to be, um, I know that there's definitely aspects of my life that can be more environmentally friendly, um, for example taking longer show, like I could take shorter showers in the morning, I know that. Um, but I think it's always something that we'll be working towards and it's always, every step counts. Um, so you can't always do everything, but you can always try and do as much as you can. Yeah.

Madison also answered in a similar light: "I think partially. 'Cause everyone does pollute, everyone does leave a footprint. Everyone does do the negative, but I think if you realize that you have and you try to correct it, then I think you are."

According to the participants' stories, the EcoAction club at North Gate Secondary School is the most relevant form of school-related experience that mediate their involvement with environmental activism. For instance, Greg, a student, explained: "It's kind of always, you know, plant a tree, clean up after yourself, don't litter, very basic things really, until, [EcoAction] was really where we started doing things." Therefore, as an organization, the environmental club is the venue which provides the foundation for participants to learn action skills and work as a team which facilitates students' involvement in action. In addition, school ecoclubs, have the potential to increase students motivation to carry out environmental projects. This may boost

their self-image as catalysts for change (Carlsson & Sanders, 2008) and can contribute to the benefits of education in changing practice (e.g., Boyes & Stanisstreet, 2011). However, to reap these benefits students need to buy into the philosophy of the club and develop ownership of it from the very beginning stages, and follow through to carry out the actions (Kennelly et al., 2008). In this context, the role of teacher as mentor is fundamental for student involvement. For instance, Dawn Baker, the creator of EcoAction is considered not only a mentor, but also a source of information for the students and a catalyst for their involvement with activism. In the words of Greg:

> I really wasn‘t even that interested in it but, Ms. [Baker] said you know, ‘just come out and check out some meetings’ and I was really busy with sports and different groups. Um, and I thought ‘yeah, okay, if I‘ve got the time I‘ll check it out’ and I‘m glad I did. (Greg)

The findings of this study indicate that teachers’ mediation of student involvement in environmental activism through the creation of a venue for activism can be very powerful, rewarding and beneficial for students.

Some teachers might be discouraged from attempts to involve students in environmental action due to their own actual or perceived lack of environmental literacy. In this case, we need to look again at some of the main elements that mediate involvement in environmental action: social networks and a venue for activism. As Dawn Baker indicates, it is not the teacher’s job to be the expert, but rather help students to become activists: “Because, really, our goal, when [Rachel] and I started it was to to be the vehicle to connect our kids to wherever they wanted to go.” She further explains that the initiatives that the club tackles are student driven. The teachers are there to help teach the skills and build the social networks that the students need to carry out their actions. This indicates that teachers who are not entirely confident with their level of

environmental literacy could still play a role as a teacher mentor by providing students with a venue for activism where they can learn transferable *skills* for social or environmental action, and become members of the social networks that develop over time. The important action skills that teachers help students to develop will be essential for students when carrying out the action projects that they have decided upon to tackle environmental issues that are personally important (Barton & Tan, 2010; Kennelly et al., 2008). When people become involved in social networks related to environmental action, they can tap into the vast amount of information held by the group, and thus potentially become more environmentally literate:

> there's a wealth of knowledge in our school. Like we just know people that if we're like 'hey, is this safe for me to use?' they'll be like 'well if it's this type of plastic, it's probably not the best idea.' So there's stuff like that, that you can just go to random teachers . . . and be like 'what do you think about this?' So there's a wealth of knowledge in our school, and there's also stuff around the community as well. So we have green spaces in the town and lots of stuff in town. (Laura)

The journey to becoming and environmental activist who is environmentally literate takes time—and this fact can be the same for teachers as it is for students. Each person comes to experiences with different narratives that impact how they work through the experiential learning cycle, and build their knowledge. Becoming involved in a social network and a venue for activism can have beneficial effects for developing responsible stewardship in both students and teachers.

This thesis is meant to be a sharing of ideas in hopes that teachers become inspired to take the first steps in influencing students on their journey to become responsible stewards of the earth. I recognize the fact that some—if not all—of the factors shared here might not be present in each specific situation, and that future research is needed for exploring how the school-based factors discovered through this study impact one another.

Limitations of the Study

The fact that this is a Master's thesis automatically means that lack of time is a main limitation to this study. The time constraint forced me to complete only one interview per participant, which means that any additional information that could be generated with subsequent in-depth interviews and observations through reflection and surfacing of memories after the initial interview will remain unexplored at this point. Ideally, I would have liked to interview the student participants after one year of post-secondary education. This could allow students to reflect on the impact that their participation in my research had on their activism. On another note, the future interviews could also allow me to see any changes in what experiences they see as influential and why. Similarly, memories of other EE experiences may have surfaced with the students after completing the first interview. Finally, during the interviews, I asked the students about their future involvement in environmental action. With future interviews, the students could share if they were in fact still involved in action. If they were, it would provide some support for the notion that youth activism tends to carry over into adulthood (Flanagan & Levine, 2010; Jennings & Stoker, 2004, as cited in Hooghe & Wilkenfeld, 2008; Ministry, 2009a). Furthermore, the design of the study leaves me dependent on the participant accounts and answers to questions. Their accounts are based on memories which may not always be accurate (Locke & Edwards, 2003). Additionally, the participants may not have fully answered the questions asked in the interviews.

As a new researcher, my lack of experience with interviewing may have influenced the interviews over time, as I believe that my interviewing skills improved with each interview. It may have been beneficial to pilot test the interview questions before conducting the actual study (Creswell, 2007). This pilot testing would have first allowed me to practice interview skills in a real-life situation, and second to refine the wording of my research questions and/or add prompts

onto the official interview protocol. This pilot testing failed to occur due to my lack of access to youth responsible stewards of the earth before ethics approval was granted. Again, once ethics was granted, there were tight time constraints for the completion of this Master's research. While not specifically a limitation of mine, according North Gate Secondary School's school board policy, researchers are restricted from asking any questions not approved on the interview protocol. Therefore, from pilot testing, I may have discovered some areas that students focus on in interviews, and prompts could have been developed to explore areas that my questions did not specifically target. Additionally, over the course of the ten interviews, I believe I became more comfortable as an interviewer, which potentially could have impacted the interviewee. However, any difference may also be attributed to the differences between interviewees (i.e., comfort in talking to a new person and telling stories of their lives). For instance, some participants talked and shared many examples to answer the questions, whereas others needed prompting to expand upon their answers.

In terms of the research questions, participant answers are dependent upon their interpretations of the questions I asked. For example, some students may have had the same experiences as others but chose not to share it because they did not believe it to be relevant to the question. However, this study focuses on what influences students and teachers perceive to be important to their activism, which demonstrates that what the participants choose to report is of interest to this study.

In hindsight, questions for the teacher participants should have had a bigger focus on what factors influenced them to become environmental activists and also on what school-related factors mediate their current involvement. While there is some data about this, richer explanations from these teachers could have been valuable, leading to a greater understanding and ideas to share with other stakeholders in the education system.

Main Contributions of the Study

My research has provided an Ontario context within the field of EE. Due to provincial control of education, curriculum and policy may vary throughout Canada. With this in mind, there may have been unique experiences reported by my participants that are specifically related to their Ontario school experience. Policy makers and teachers are a large audience for this research. The continual addition to the research in the field of EE will help refine the recommendations and mandates for the teaching of EE through future policy and curriculum document revisions, and publications of teaching resources. The results of this study may illustrate how students can live up to the Ministry expectations and therefore provide teachers and students in general with a description of a program that has contributed to the development of EE in one school. As Martina, Hursh, and Markowitz (2009) discuss, using EE for the end gain of higher academic achievement throughout all subjects undercuts the benefit of EE in and of itself. In an assessment of high stakes testing in the United States, for example, the National Research Council urges for a move away from strictly quantitative assessment, and toward qualitatively assessing "what students know and how they learn and then use that information as a foundation to build on new knowledge as they progress from novice to" activists (Martina et al., 2009, p. 280). Therefore, through my investigation of how the youth in my study became and continue to be environmental activists, this study will contribute to broaden our understanding of how students learn in order to help build a foundation for a more adequate pedagogy for and assessment of learning about/for/in the environment in our schools. Ideally, my results and discussions in answering my research questions will be used by the Ministry and school boards when refining their EE policies. The many examples shared in answering research question two can help highlight areas of vagueness within policy and provide examples for resources to be shared and pedagogy to be promoted.

There is not an expectation that the findings of this study "replicate, but rather migrate, as educators, parents, and community activists are inspired by them to seek [pedagogy] that . . . [apply] in their own situations" (Barlow & Stone, 2005, p. 6). Teachers could be inspired to try new ways of teaching based on the youth's narratives of the influences in their lives that could ultimately lead to engagement in learning and teaching EE for both students and teachers. Additionally, the participants can benefit from their role in the study through reflection on their past and present experiences and actions. This reflection could assist in their environmental actions, as they may discover deeper meanings of and intention for their actions. Further, the fact that the youth were being studied may demonstrate the importance of this group to other students and teachers, potentially encouraging increased membership in environmental clubs, participation in environmental activities, and/or respect for the actions of the youth.

Reflections on the Research

I began this study with many personal EE learning experiences shaping my opinions and topic choice, the most notable of these experiences being informal. With a childhood immersed in the natural environment, how could I believe that there were other ways besides having a place like The Cottage to promote responsible stewardship? As I have discovered through this process, the world community (e.g., UNESCO, 2009) is pushing the idea of formal education as an essential way to ensure that the world's people can learn to live sustainably. Being a teacher, I am obliged to work with this belief, and follow *Acting Today, Shaping Tomorrow.* My research has helped me to broaden my view and see myself as a catalyst, and also a facilitator in helping students to become responsible stewards of the earth.

Beyond learning which factors mediate these students' and teachers' involvement in environmental action, the research process has also modelled for me how some of these

influential factors play out. In particular, the importance of teacher mentors, and the venue for action created by these teachers were notable throughout my fieldwork.

After the principal granted me access to the school, I met with Dawn Baker to sort out the details of my research—recruitment and observation times, and details about interviews. Her friendly and inviting tone, and her obvious desire to be involved and assist with the research helped to dispel some of the anxiety that I felt. Dawn Baker was instrumental in my ability to conduct my data collection with her group of students, booking rooms in the school for us to use, and organizing a supervising teacher. She was committed to my project and was excited to be involved. This type of contact positively impacted the research process. Her assistance with my project seems to be a metaphor for the mentor role she holds with her students and for how she provides a venue for action—or in my case, research.

I arrived at the club's first meeting of the semester, to discover that Dawn had mentioned my project to many of the students. The students were already interested in receiving information packages about my research. Including the first meeting where I recruited students, I attended three club meetings as an observer. These events allowed me to witness how club meetings run, the delegation of responsibilities, and the participation and leadership of the students. Furthermore, as a participant-observer, I attended the club's large event—an environmental film festival attended by elementary school students from the region, and other students from the secondary school. During the evening, the event was open to the public. This time, I attended as an observer, and brought my family along to the show to support their initiatives. My participation in this way hopefully demonstrated my support of their

environmental club and actions, as well as allowed me to develop a relationship with the students beyond the label of "the researcher[16]".

Through the observations and the interviews, I was excited by participants' enthusiasm with environmental action. They not only discussed fond memories of learning outdoors, but spoke excitedly about how they became involved in the club. Their actions through the club also bring them pride. Their passion for carrying out action projects as members of this club make me eager for the day that I can become a mentor to students and provide them with a venue where they can learn and become activists. From interacting with my participants, I now have a greater understanding of how I, as a teacher in a school, can work with students to encourage their development into responsible stewards of the earth.

Future Directions

Early in this thesis I highlighted the need for a practical resource guide for teachers to use for teaching EE. This resource should share research-supported pedagogy for EE to provide teachers with a foundation from which they can make informed decisions for how to integrate EE into their teaching. My research shares some ideas which can be used in the creation of this guide. Here, I will share some preliminary ideas for the development of such a resource in hopes that they will be taken up in a future project, either by myself, or other groups. In Chapter 1, I emphasized the fact that there are several actions within *Acting Today, Shaping Tomorrow* that include vagueness. These are the types of contents that should be addressed in the resource guide. For instance, the resource guide could take the form of an extended policy framework document. The entire policy document should be included in the document. Any actions or areas

[16] This label was mentioned to me by a student participant when I introduced myself to some members that night who had been absent during the first two club meetings that I attended. After the introduction, Greg stated, "Oh! You're the researcher."

of vagueness should contain a "suggestions/examples" section below which explains current research-supported interpretations of that action, with references to allow teachers to seek out these articles or resources. In Chapter 7, I began this idea by sharing the vague actions and ideas developed from my research that would help interpret the wording. The explanation for the vague actions suggested for this resource guide would be on a larger scale than the discussion in this thesis. Not only could the results from this study be used, but a review of EE research and other sources of supported pedagogy should be summarized into this "suggestions/examples" section. As the Ministry (2009b; 2009c) has compiled a list of curriculum expectations that are related to EE in their version of a resource document, this source should also be tapped. Where there are curriculum expectations that relate directly to elements in the policy document, they should be referred to in conjunction with the specific goals, strategies, and actions in which they relate. Ideas for this guide were partially inspired by the fact that there are guides for effective instruction for several areas of teaching which are put out by the Ministry. For example, *A Guide to Effective Instruction in Reading* (Ministry, 2003) is one guide, among others. Within this guide, many samples and suggestions are provided to assist teachers in creating a strong reading program. The creation of *Acting Today, Shaping Tomorrow* indicates the Ministry's acknowledgement of the importance of EE and helping students to achieve the goals. Therefore, a similar type of resource guide should be a priority to assist teachers in living up to the Ministry's vision for EE along with that of the international community.

Shaping Our Schools, Shaping Our Future, was intended to be the research background providing information on what was important for EE in the public school system (Ministry, 2007b). Similarly, my study has uncovered ideas for the interpretation and implementation of *Acting Today, Shaping Tomorrow.* A future direction for my research would be to compare my results with *Shaping Our Schools, Shaping Our Future* to assess if and how they align.

Subsequently, the new policy document would be explored to uncover if there were recommendations from *Shaping Our Schools, Shaping Our Future* that are supported by my results, yet left out of the policy framework. These findings could be helpful for policy and curriculum revision, and in a more practical sense, for interpretation and implementation of *Acting Today, Shaping Tomorrow*, by teachers, schools, and school boards.

This research has shared insights into the lives of youth environmental activists through the narratives that they shared. In terms of the modified experiential learning process, these stories are included in the background knowledge that these youth will bring to future experiences, helping them to make sense of and reflect on new experiences. The use of stories or narratives in teaching EE can be an excellent way to engage students with the learning process (Reis & Harrison, 2011). All of my participants shared stories of their lives to assist in my understanding of what experiences were fundamental in their path to becoming responsible stewards. Interestingly, these stories could also play a role in how these students have learned EE (Gudmundsdottir, 1995). To expand upon this study, exploration into the role of narratives in the EE of youth environmental activists could provide insight for pedagogy (Reis & Ng-A-Fook, 2010). More specifically it could be important to investigate a few questions: What role could narratives play in EE action initiatives? How can teachers support or challenge student narratives, and what effect would this have on the teaching and learning of EE? How can teachers create a narratives space for students?

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Appendix A: Interview Protocol

Interview Protocol (Students): Youth Environmental Activism

Date:
Time of Interview:
Place/Location:
Interviewee:
Schooling Background (i.e., schools attended throughout education—location, Public, Catholic, Private, etc.):

Brief Description of the Project: My particular focus for this research is to explore what factors, as perceived by you have influenced, or currently influence, your engagement and learning about/for/in the environment.

Definitions:
For the purpose of this study, **responsible stewards of the earth** are people who display their pro-environmental behaviour through actions to protect and sustain the health and vitality of nature and their community.

Questions:

1) How would you say that you learned the most about the environment throughout your life? (e.g., everyday experiences, school, mentor, etc.)
    a. Why do you believe that these are noteworthy?
2) If you want to learn about the environment now, how do you do it? (books, media, internet, mentor, experience, etc.)
3) Environmental education includes education about, for, and in the environment. Can you discuss this in relation to your school experiences?
4) What teaching strategies are the most memorable for how you learned about the environment? (e.g., enthusiasm, props, hands-on, local/real-life/relevant issues, outdoor learning, etc.)
    a. Why do these strategies stand out?
5) How have you, and are you, experiencing environmental education in high school?
    a. What subjects do you see environmental education appearing?
    b. How are the topics taught/learned?
6) How long have you been a member of [EcoAction]? When did you join?
7) What made you decide to join [EcoAction]?
    a. How does being a member of [EcoAction] make you feel or impact your life?
    b. What are some actions that you, as a member of [EcoAction] have carried out?
        i. What was your role in these projects?
        ii. Do you see yourself as carrying out actions that you want to do, or participating in activities that others have planned?
        iii. What actions carried out through [EcoAction] are you most proud of?
        iv. Are there other actions that you have taken within your own life, aside from [EcoAction]?
            1. What are/were these actions?

2. What are you most proud of?
3. How do these actions impact your life?

c. Do you have any problems with what you are doing as a member of the [EcoAction]?
    i. What would you change?
d. What actions/issues would you like to take/address either on your own, or together with the Eco Tribe?
    i. What are you not doing? Why?
    ii. What would it take to do what you want to do?

8) How do you view your actions as impacting your school, community, country, or the world?
9) What supports do you have that maintain your interest/participation in [EcoAction]? (From family, friends, classmates, etc)
10) What obstacles are there, or have there been to your environmental activism?
    a. How do these obstacles impact you?
    b. How do you overcome them, or do you?
11) How do you see your activism in the future (in the remaining years of high school/after high school)?
    a. Will you still participate?
        i. Why/why not?
    b. What kinds of action do you see yourself carrying out/engaging in?
        i. Where?
12) What are your plans for after high school?
    a. What kind of job would you like to have in the future?

13) Do you consider yourself to be a responsible steward of the earth? (For the purpose of this study, **responsible stewards of the earth** are people who display their pro-environmental behaviour through actions to protect and sustain the health and vitality of nature and their community) Why? Why not?

Thank you for your participation in this study.

Interview Protocol (Teachers): Youth Environmental Activism

Date:
Time of Interview:
Place/Location:
Interviewee:

Brief Description of the Project: My particular focus for this research is to explore what factors, as perceived by you have influenced, or currently influence youth engagement in environmental activism. I am particularly interested in developing a better understanding of the background and workings of the Eco Tribe.

Definitions:
For the purpose of this study, **responsible stewards of the earth** are people who display their pro-environmental behaviour through actions to protect and sustain the health and vitality of nature and their community.

Questions:

1) Tell me about [EcoAction].
    a. What made you decide to design/create the program?
    b. How does being the creator/supervisor of [EcoAction] make you feel or impact your life?
    c. What are some actions that you have spearheaded through [EcoAction]?
2) How do you believe [EcoAction] impacts the students, both members and non-members?
3) How do you believe [EcoAction] impacts other teachers in the school?
4) How do you view the actions of [EcoAction] as impacting your school, community, country, or the world?
5) Is there anything not being done through [EcoAction] that you would really like to accomplish?
    a. Why?
    b. What is preventing you/[EcoAction] from taking on this challenge?
6) Is there any other information about [EcoAction] that you feel is important to share?

Thank you for your participation in this study.

Appendix B: University of Ottawa Research Ethics Board Approval

File Number: 10-10-04 **Date (mm/dd/yyyy):** 01/17/2011

Université d'Ottawa University of Ottawa
Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

Ethics Approval Notice

Social Science and Humanities REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
Giuliano	Reis	Education / Education	Supervisor
Ashley	Lima	Education / Education	Student Researcher

File Number: 10-10-04

Type of Project: Master's Thesis

Title: Responsible Stewards of the Earth: Narratives, Learning and Activism

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
01/04/2011	01/03/2012	Ia

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:
N/A

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http://www.research.uottawa.ca/ethics/index.html
http://www.recherche.uottawa.ca/deontologie/index.html

File Number: 10-10-04 **Date (mm/dd/yyyy):** 01/17/2011

Université d'Ottawa University of Ottawa
Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

This is to confirm that the University of Ottawa Research Ethics Board identified above, which operates in accordance with the Tri-Council Policy Statement and other applicable laws and regulations in Ontario, has examined and approved the application for ethical approval for the above named research project as of the Ethics Approval Date indicated for the period above and subject to the conditions listed the section above entitled "Special Conditions / Comments".

During the course of the study the protocol may not be modified without prior written approval from the REB except when necessary to remove subjects from immediate endangerment or when the modification(s) pertain to only administrative or logistical components of the study (e.g. change of telephone number). Investigators must also promptly alert the REB of any changes which increase the risk to participant(s), any changes which considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project and safety of the participant(s). Modifications to the project, information/consent documentation, and/or recruitment documentation, should be submitted to this office for approval using the "Modification to research project" form available at: http://www.rges.uottawa.ca/ethics/application_dwn.asp

Please submit an annual status report to the Protocol Officer 4 weeks before the above-referenced expiry date to either close the file or request a renewal of ethics approval. This document can be found at: http://www.rges.uottawa.ca/ethics/application_dwn.asp

If you have any questions, please do not hesitate to contact the Ethics Office at extension 5841 or by e-mail at: ethics@uOttawa.ca.

Signature:

Leslie-Anne Barber
Protocol Officer for Ethics in Research
For Barbara Graves, Chair of the Social Sciences and Humanities REB

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Appendix C: Coding Definitions

*mentions refers to aspects of participants' narratives

Code	Definition
Interaction	Mentions of engaging with internal or external conditions.
Social Interaction	Mentions of engaging with external conditions (i.e., others or the environment).
Obstacles	Mentions of challenges making action difficult.
Opportunities to Influence Others	Mentions of experiences where students demonstrate pro-environmental behaviour options to others.
Social Networks	Mentions of developing beneficial connections with others.
Engaging with the Environment	Mentions of interaction with the natural environment.
Environmental Education	Mentions of learning about or for the environment.
Conferences	Mentions of unique experiences available at a gathering planned for a specific purpose.
A Venue for Activism	Mentions of opportunities for learning and acting occurring through an organized group.
Gaining Recognition	Mentions of receiving praise or having actions noticed by others.
Teacher Mentors	Mentions of influential teachers.
Personal Interaction	Mentions of engaging with internal conditions (i.e., "feelings, hopes, aesthetic reactions, and moral dispositions" (Clandinin & Connelly, 2000, p. 50))
Connection to Nature	Mentions of an emotional tie to the natural environment.
Responsibility	Mentions of accepting the duty to protect and improve the environment.
Hope	Mentions of a belief in positive outcomes in the future.
Pride	Mentions of positive feelings about taking action for the environment.
Learning Style	Mentions of personally beneficial teaching strategies.
Courage	Mentions of confronting others' negative environmental behaviour.
Situation	Place. "Attends to the specific concrete physical and topological boundaries of inquiry landscapes" (Clandinin & Connelly, 2000, p. 51).
Outdoors in Nature	Mentions of experiences occurring outside, in the natural environment.
Events	Mentions of experiences occurring at a gathering planned for a specific purpose.
School	Mentions of experiences occurring at school.
Residence	Reference to the town or greater area of where the participant lives or where the experience occurred.
Continuity	Mentions pertaining to a temporality.
Continuous Experiences	Mentions of experiences occurring regularly over time.
Past	Mentions of experiences occurring in the past.
Noting Changes	Mentions of changes over time.
Future Actions	Mentions of participating in environmental activism in the future.
Providing a Venue	Mentions of personally providing opportunities for learning and acting occurring through an organized group.
Influencing Others	(teachers) Mentions of experiences where others became involved in environmental action due to personal involvement and/or initiatives.
Personal Interest	Mentions of affinity for certain topics or ideas.
Recent Past	Mentions of experiences taking place within the last three years.
Continuous Experiences	Mentions of experiences and/or ideas repeating over time.

Appendix D: Code Examples

Demonstration of Teacher Quotes within Codes

Dimension/Code/ Sub-Code	Participant	Quote
Interaction/Social/ Providing a Venue	Rachel	Rachel: Um, just that I think you know clubs like this, you know they're small but important, **I think um, you know the kids need an opportunity to be able to be activists and to be a voice on behalf of the environment, and I really hope that you know one of the other important things is what they do with their futures.**
Interaction/Social/ Social Networks	Dawn	Dawn: Well, I mean it's **it's like any other club in a building if there's a passion and there's an interest by a student, it gives them a place to belong. And you know we, I know that we have kids in our in [EcoAction] that aren't really involved in anything else. They're not involved in athletics, they're not involved in other groups around the school, and so this gives them a place to belong and it's a way to make connections with other like-minded people. Uh, so I think that's a really important piece that they do take away from it you know it's like a home for them. A safe place for them to be and hang out.**
Interaction/Social/ Influencing Others	Dawn	Dawn: Oh, that's a hard question! They're all, **I mean of the [Environmental] Summit of course is the big one because that's the one where you get to see the most kids and you're inspiring the most number of people and you know to have my, my colleagues at some of the elementary schools to come back to me and say you know 'our kids were just so moved, and they were just so fired up when they came back to school they couldn't wait to start these eco projects in our building. And it's changed our building mentality and the kids will only recycle stuff now' I mean those kinds of messages are huge for us.**
Interaction/Personal/ Hope	Dawn	And our kids are involved right from the very beginning. They're helping plan it and carry it out. They're running workshops. They're doing speaking. They're, like it's a whole package that we are doing together now. Um and **our goal and our hope is you know one of our big things is that we would really like to be the host for a provincial-wide environmental conference for youth.** Because for us it's a great opportunity for them to network and to just be inspired again and reminded to get outside and play and you know all those things that are missing in an average school day and a lot of families that are leading to so many other problems.
Interaction/Personal/ Personal Interest	Rachel	And um **the uh the reason we started it was because we both had a interest in environmental education, and also youth activism.**
Interaction/Personal/ Connection to Nature	Dawn	Um, I lived away from [North Gate] for a long time and **gained a really deep understanding of and gratefulness for where I came from**.
Situation/Outdoors in Nature	Rachel	I've **worked in outdoor-based** programs with an environmental focus
Situation/Residence	Dawn	Ashley: Great. So back to the beginning of the club, what made you decide to create the club? Dawn: mmm. Well, **I grew up in the area,** and the environment is a really big, important piece of my life.
Situation/Events	Rachel	And the big project for last year um when was that no that was fall of 2009, um there our school board, our school hosts [an] **education conference**, . . . at [a resort] every year.

Continuity/Past	Rachel	But **before that, um, I spent about ten years working in environmental education, working at outdoor centres.**
Continuity/Recent Past	Dawn	**We got involved last year with the, there's a local community garden that was created last year at [North Gate] Park downtown. We were right in there. We have a plot, we helped to get it all up and running. And you know we've been asked if we would continue to do that every year from now on.**
Continuity/ Continuous Experiences	Dawn	Dawn: But I'd love to see, like their goal, their dream. I'd love to see a solar panel on our roof. I'd love to see you know alternative energy being pumped through this building instead. And a deeper connection between the classes that are all using something together. So, you know, those are good goals. **And the kids came up with those, and they seem to come up with those same goals year after year after year, regardless of who's in the club. Because the passion and vision is, you know, we need to do something bigger.**

Demonstration of Student Quotes within Codes

Dimension/Code/ Sub-Code	Participant	Quote
Interaction/ Social/ Obstacles	Liam	Liam: 'Cause, um, like, one of my friends on the bus, he he doesn't wanna listen at all. Every time I like would come on the bus and talk about my day, I'd be like 'oh yeah, I had an [EcoAction] meeting'. He's like 'dude I don't eve, I don't care, I don't wanna know about it.' **It just makes me want to try harder. It's like 'I'm gonna get through to you eventually'**. So.
Interaction/ Social/ Opportunities to Influence Others/ Teaching Others	Isabelle	And it and **also when I impact others. Like I teach them things that they didn't know before and um it's a really positive thing as well.**
Interaction/ Social/ Opportunities to Influence Others/ Teaching Children	Laura	And I think that **in order to do well, you have to first act on it and then teach people, and I think being able to teach younger kids that come to our school, or come to [the Environmental Summit] wherever we are this year, I think that it makes a huge difference that we we are educating younger children who will then educate their children. It's just start a ripple effect.**
Interaction/ Social/ Opportunities to Influence Others/ Influencing Others	Sarah	Sarah: Um well it's definitely had an impact on on everyone. For example, although it wasn't us that implemented it, the hydration station, downstairs, um, people use that daily to refill their reusable water bottles, instead of buying a new one. Um, **our disposable cups, um, you see much less people walking around with the disposable cups 'cause they're educated, and they know what a terrible thing it is for the environment. Um, but you do see people walking around with cool reusable mugs and reusable reusable water bottles, and that's a a positive thing I think to be seen with in the school.**
Interaction/ Social/ Opportunities to Influence Others/ Being a Role Model	Greg	And like, we have to do something. I think, so I think these film festivals, the conferences, are good um ways to **teach them to show them that you know, well, high school kids are doing it, you guys can**, when you guys come to high school, come do it as well.
Interaction/ Social/ Social Networks/ Sense of Belonging	Isabelle	Isabelle: Um, **well I wasn't really involved in anything up until that point, um, like early in our earlier in high school, I wasn't in like *Me-to-We*, or [EcoAction], or student council, or anything like that, I just kind a I didn't really know what I liked I guess, and what I wanted to do and it's not necessarily that I joined [EcoAction] because that's what I want to do with my life. It's just like, I didn't really figure myself out I guess, and I don't think I had like an epiphany or anything I just kind of I figure like 'I'd kind of like to get involved' and I was thinking about all the different clubs that go on at this school and it wasn't like I knew that the environment was something that I was passionate about. I was just kind of like the idea of joining [EcoAction], I was like 'I kinda wanna do that' so I did**
Interaction/ Social/ Social Networks/ Friendships	Isabelle	But yeah, **it's just kind of the support group of [EcoAction], like we don't just hang out in [EcoAction], we do other stuff together too, so um, and we're kind of like we all like even when we're doing other stuff we're kind of environmentally conscious,**
Interaction/ Social/ Social Networks/	Sarah	**So just by running our campaign I know that we had an awesome impact um just on the greater environmental impact**

Networking		**of the school. So I think that's, it's been a really positive experience, and it's also definitely opened the doors to other experiences that I can have. Like like I said that I was part of the um well part of student council, I'm the Minister of Environment** Ashley: Okay. Sarah: **now, so that's opened that door. Um, and I've also had the opportunity to work in provincial parks um and I think that's been largely due to my involvement in [EcoAction].**
Interaction/ Social/ Social Networks/ "Real World" Exposure	Madison	Madison: Um, **I think for the like field trips, I, I don't know what's out there, so going there and seeing all these jobs, like people are telling you about this is what they do for a living, like, I think that's really neat just learning about what they do, and how it affects the environment**
Interaction/ Social/ Social Networks/ Peer Support	Madison	And **I guess not a lot of people that I hang out with and talk to are really in [EcoAction] so it's not really something we talk about a lot, but when I do they listen, they say 'oh that's cool' or 'I'll come watch you at the film festival' and stuff. So, they support me, but it's not really their thing.**
Interaction/ Social/ Engaging with the Environment/ Place-Based Education	Sarah	**we went on quite a hike during the winter. So just really being in being in nature I think has a huge impact on how much you care about what you're learning 'cause it, it makes it real. Um as opposed to if you're learning about it inside. In a book.** Yeah.
Interaction/ Social/ Engaging with the Environment/ Awareness of Surroundings	Laura	Laura: Um, I think it's, **well, living in [North Gate], it's something that's obviously, you just have to look outside, and you can see the snow, you can see the the trees blooming. Stuff like that. So it's always prominent, you just look outside a window and you're just like 'ah, I wish the snow would go' or 'ah, I wish the snow would come'. So I think that teachers see that and they want to engage the class so they're like, 'okay guys, if you do this and uh if you could do this well, we'll go outside for a period and I'll teach you outside'.**
Interaction/ Social/ Environmental Education/ Environmental Science	Sarah	Sarah: Absolutely. Um, and also **I took an environmental science course last year um in the high school and that was wonderful for really getting a grasp on the the scientific aspect of things.**
Interaction/ Social/ Environmental Education/ A Lack of EE in Classes	Liam	Liam: **It's mostly just, without taking a direct, environmental science class, it's mostly just indirect, like linkages and stuff. So we'll be learning something and be like 'oh yeah, it also incorporates into the environment 'cause this can affect it.' And it's mostly just, they just, it's almost like they just like 'oh yeah, I guess it can be incorporated to the environment' somewhat.**
Interaction/ Social/ Environmental Education/ Cross-Curricular Integration	Madison	Um, **actually, one of the books we read in English class, um, what was it called? *Halfway man*.** Ashley: Okay. Madison: **It talked about how the white people's views on the environment, and the native point of view on the environment. It was kind of biased, just because of the two main characters, 'cause not every white person's like that. But it was just how, traditional peoples treated their land, and environment, and if we had lived like that, how our environment would be like today. It would, be okay. It wouldn't be as destroyed as it as it is now.**
Interaction/ Social/	Liam	**Just having a discussion with somebody. Like, having**

Environmental Education/ Discussions		**discussions with Ms. [Baker] in class and stuff.**
Interaction/ Social/ Conferences	Sarah	Oh, and also actually what originally sparked my interest was we had a[n] education conference . . . . And one of their speakers that came, um, was **David Suzuki.** So ah, we had the opportunity to make speeches and an address to David Suzuki if we were part of the [EcoAction] club. So I would have joined anyway, but it was a wonderful motivating factor to get involved um so that was really good I know it sparked a lot of people's interest and got them involved with the club to start out with.
Interaction/ Social/ A Venue for Activism/ Learning Skills	Sarah	Um so you **kind of learn to be a an activist for the environment.**
Interaction/ Social/ A Venue for Activism/ Venue Facilitates Action	Heather	it's hard to get something, like as a high school student**, it's hard to get something um going by yourself so it's it's nice to be able to join a group and say 'okay well, I'm going to assist you with this and this and this.' Um as opposed to like just you know hopping up one day and trying to start your own movement. So. It's nice. I think it's a it's a good incorporation of like lots of people's ideas from the high school.**
Interaction/ Social/ A Venue for Activism/ Education FOR the Environment	Isabelle	Isabelle: **Probably as a part of [EcoAction]. Um, like like you learn about it in class and stuff but definitely through extracurricular activities it's like it's partly a learning opportunity especially with an environmental group because we we we just kind of we're introduced to things that we wouldn't necessarily be introduced to in classes. And we just kind of like the Environmental Film Festival, and stuff like that we just um like we meet people from the community, and like we just learn different kinds of stuff I guess.**
Interaction/ Social/ A Venue for Activism/ Teamwork	Madison	**I don't know, just like all our projects, you all contribute equally.**
Interaction/ Social/ Gaining Recognition	Isabelle	Isabelle: **The cup campaign I'm definitely really proud of, 'cause it was really um, I think I was talking to some of my friends that obviously aren't in [EcoAction] and it's not like they don't care about the environment, it's just they're not really, like they're not as into it as I am and then um, like they were talking to their friends and they were talking to their friends and um it just kind of created a lot of buzz around the school** and just the facts that we introduced, like, um, they really had an impact on like a lot of people and they were like 'wow, we really need to stop this'.
Interaction/ Social/ Teacher Mentors/ Dawn Baker	Samantha	Samantha: Um, **I don't know. Well [Dawn Baker], the leader of [EcoAction], she's definitely been a mentor for me because she's *so* passionate about the environment and she really just gets the whole [EcoAction club] pumped up about things, and gets us out in the community uh doing things to help and educating us on what we can do and what's already been done for the environment. So, she's definitely been ah helping me along my path** Ashley: Awesome. Samantha: **to becoming a tree-hugger.**
Interaction/ Social/	Heather	Um, **and obviously like the teachers in [EcoAction] are likely**

Teacher Mentors/ Club Teachers		**some of the most environmentally motivated people that I know in terms of teachers and mentors.** Yep.
Interaction/ Social/ Teacher Mentors/ Supportive Teachers	Sarah	Sarah: So they're always there for us, um support-wise. **Um, the administration in our school is also wonderful at helping us carrying out campaigns. Um, they're very supportive and they give us advice, um and a lot of guidance in that. So that's wonderful.**
Interaction/ Personal/ Connection to Nature/ Connection	Samantha	Samantha: Um, **I suppose that um, just being in the environment is kind of in a way it's like leading by example. It's just um, first-hand experience with it and um you really start to build a connection with the environment and realize that it's not separate from yourself. And um, so the more you embrace the environment, the more it embraces you, the stronger the connection is and the more you want to do to help it.** So.
Interaction/ Personal/ Connection to Nature/ Appreciation	Greg	Greg: Being out in the environment, I think is, you can you can put up a picture of a tree, but unless you actually like see it and feel the tree, you don't, **I don't think you have a greater appreciation for it until you've actually been there**. So I think lots of field trips, lots of um, and the field trips, like they they can be through games and, but it's also fun to be out and plant trees, like it's also a fun thing to do as long as you're with friends and you know grabbing garbage isn't that bad. So, yeah.
Interaction/ Personal/ Connection to Nature/ Emotions	Liam	Liam: **I'm not actually sure, just, they just kind of hit me in the right way. Like, you know how, just you hear something and it just hits you just right and it makes you want to do something. That's just kind of what happened.**
Interaction/ Personal/ Connection to Nature/ Personal Interest	Liam	Liam: **I've always um liked the environment and biological studies and everything like that. It's really interesting so, just, there's a club about it, so I should go to the club!**
Interaction/ Personal/ Responsibility	Isabelle	Isabelle: Um, um, I guess kind of 'cause we're trying to preserve the environment, and protect it so, and we're **we're kind of charged ourselves with that responsibility. And we do take on like a lot of responsibility and I like, personally I'm a kind of person that feels responsible for like the actions of people and the effects that we have on the environment. I feel like it's our like my responsibility to protect the environment and where we live, so yeah.**
Interaction/ Personal/ Hope	Laura	But like **I just wanna be able to take my kids out and show them the same thing that my parents did. And I really hope that there's still a chance for me to.** Ashley: Yeah. Laura: **So I hope that people clean up their acts. Figure out that something is happening!**
Interaction/ Personal/ Pride	Sarah	Sarah: The di**, you've heard a lot about it but the disposable cups campaign! Definitely the most proud of that. Um, I was also very ecstatic to have the opportunity to talk to David Suzuki. Um, and I make that speech. I was really proud of that as well.**
Interaction/ Personal/ Learning Style	Laura	Laura: I think oh, **there's a lot more people in my generation that need to see things. Whereas previous generations would just like write things out and memorize them. But I, I have to see things, and so Grade 9, I dissected a plant, which was really cool for me to be able to like 'oh, this is how, like pollen comes into the flower,' all that sort of stuff.**

Interaction/ Personal/ Courage	Greg	Greg: Um, **yeah because I'm not afraid to stand up and say what I think and do something about it. So, yeah. And uh walk my talk**.
Situation/ Outdoors in Nature/ Outdoors in Nature	Sarah	Sarah: Um, **well at [Algonquin Institute] it's off of course in a beautiful setting, it's a huge camp, um, with a lake and mountains and everything you could ever want to do, it's such a wonderful place. Um, you have outdoor education, at least once a week. Um, all of your gym classes are outside. So I think you just really develop a respect for the environment, because you have such a positive relationship with it. Um, you just get so many opportunities to go snowshoeing, and to spend time outside to go canoeing, to go on outtrips, where you're on a canoe trip for a couple of days,**
Situation/ Outdoors in Nature/ Provincial Parks	Sarah	Um also last year I remember we took a fieldtrip to **[a Provincial Park]**.
Situation/ Events/ Education Conference	Greg	Greg: Um, that was really cool, really successful, um, bringing in all the kids. Um, also we um, we wrote up a speech, um, and we presented it to at the **[...] education [conference]**
Situation/ Events/ Environmental Film Festival	Heather	Heather: Um, I think the **environmental film festival** last year was really good
Situation/ School	Laura	Laura: Yeah. For sure. Um, I think that uh, going to **[North Gate Elementary]**,
Situation/ Residence	Laura	Laura: Um, I think it's impacting the community a lot because, **living in [this region]**
Continuity/ Continuous Experiences	Samantha	Ashley: Can you talk about these in relation to your school experiences? Samantha: Uh, yeah. Um, **I would say I started learning about the environment like at a young age.**
Continuity/ Past/ Initiation of EE	Heather	Heather: Yeah. Um, well I guess, like I haven't taken an environmental science class unfortunately, um but I know that Grade 10 science was kind of like the **first uh peak into environmental** stuff uh that I've really had in terms of the class
Continuity/ Past/ EcoAction Membership	Sarah	Sarah: Well the Eco Tribes started when I was in Grade 11, so last year at the beginning of the year. I think so anyways, I was in I was on exchange the year before so I'm not sure if they had it happening that year. **But I've been a part since the beginning of Grade 11 so the beginning of last year.**
Continuity/ Past/ Other	Greg	Greg: Um, a nice thing that we did um, I believe in **Grade 7 or 8** um, all of the local elementary schools do is we go to [an outdoor education centre].
Continuity/ Noting Changes	Liam	Liam: and she hardly heard anything about it. **And now like even when I came to Grade 9, I heard something about it and then up to about Grade 10 and 11 is when it started, like, they started bringing it up a lot more often.**
Continuity/ Future Actions	Sarah	Sarah: Um, and **something that I would really love to do is eventually be able to implement strategies for communities abroad, um that are both like sustainable economically but also environmentally, so I'd really like to see environmentalism play a huge role in how that works in my career. Um, personally, I I would really like to keep striving towards being a local organic food consumer, and I would like I said, really love to have my own garden so I can be self-sustaining. That aspect.**