Environmental Education Through a Culturally Responsive and Relevant Pedagogy Lens

By Tatiana Fernanda Lopez

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Abstract

This study explores how culturally responsive teachers are using students’ culture to support environmental learning specifically in urban schools in Toronto, Ontario. Three semi-structured interviews were conducted with elementary school teachers who implemented EE in their teaching programs to highlight how their culturally responsive and relevant teaching techniques and strategies were impacting students’ environmental learning experience. In addition, the study highlights the benefits and challenges the practices of EE through a CRRP lens may present, and suggests where there could be more areas of academic research to promote its improvement for successful teaching and learning.

Key words: Environmental Education, Culturally Responsive and Relevant Pedagogy, elementary schools, and urban schools
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Table of Contents

Chapter | Page
---|---
Abstract | 2
Acknowledgements | 3
Table of Contents | 4
Chapter 1: Introduction | 6
  Introduction | 6
  Background of Researcher | 9
  Overview of the Study | 11
Chapter 2: Literature Review | 12
  The importance of teaching EE | 12
  The importance of CRRP in the classroom | 12
  Issues of cultural under-representation and the problem with EE misconceptions in classrooms | 19
Chapter 3: Methodology | 22
  Procedure | 22
  Participants | 23
  Participant Identification | 23
  Data Collection | 24
  Ethical Review Procedures | 24
  Data Analysis | 25
  Limitations of the Study | 26
Chapter 4: Findings | 28
  Case Study 1: Anne | 28
    Participant Background | 28
    School Background | 29
    Environmental Education | 30
    Working with EE through CRRP | 32
  Case Study 2: Evelyn | 33
    Participant Background | 33
    School Background | 34
    Environmental Education | 35
    Working with EE through CRRP | 38
  Case Study three: Lisa | 40
    Participant Background | 40
    School Background | 40
    Environmental Education | 41
    Working with EE through CRRP | 43
Chapter 5: Discussion | 45
  Connections to the Literature Review | 48
  Implications | 51
  Limitations | 52
  Recommendations | 52
  Conclusion | 52
References .................................................................................................................. 54
Appendices ................................................................................................................... 58
Appendix A: Interview Questions ................................................................................. 58
Appendix B: Sample Letter of Consent and Consent Form ........................................ 61
Chapter 1: Introduction

There have been increasing and significant changes in the Earth’s weather and its natural systems over the past decade (McCarthy, Canziani, Leary, Dokken, & White, 2001). Human activity has been the primary cause of the increasing concentration of carbon dioxide in the atmosphere, because of industrial activities, irresponsible consumption, agriculture and electricity generation (Desonie, 2008). Consequently, communities around the world have taken urgent concern about this matter. For example, children in schools are being taught to be more environmentally consciousness because motivated and determined teachers value the importance of Environmental Education (EE), and believe in the importance of moving their students towards living more sustainably. What is missing in this growing movement, however, is a sensitivity of teachers doing EE with awareness of how issues of culture and race affect this work.

The report, *Shaping Our Schools, Shaping Our Future*, by the Working Group on Environmental Education (2007) was a significant step to develop an EE policy in Ontario schools. The report examined EE policies, programs, and practices in Ontario, Canada, and around the world and included detailed recommendations for the key elements of a policy in EE. As a response, the Ontario Ministry of Education (OME) created *Acting Today, Shaping Tomorrow: A Policy Framework for Environmental Education in Ontario Schools* (OME, 2009a), “to assist teachers in bringing environmental education into the classroom in each subject area in Grades 1 to 8 and Grades 9 to 12” (p.3). The curriculum documents *Environmental Education: Scope and sequence* (OME, 2009b, 2011) were also created for as a resource guide for EE teaching support.

However, in order to build an EE curriculum that aims to create environmentally
conscious students, teachers working in schools with diverse student populations need to understand the implications of race and culture in influencing environmental perceptions, attitudes and behaviours (Agyeman, 2003). The problem arises when educators do not include students’ cultural values, beliefs, and cultural processes in their critical thinking model, and only resort to a more generic EE thinking model. Traditional models of EE not only run the risk of presenting a one-way perspective that clash with students’ diverse cultural identities, but also lead to EE not meeting its objectives (Agyeman, 2003). For example, when teachers implement the concept of the three R’s (reduce, reuse, and recycle) without putting this idea in to students’ cultural and personal perspectives; students learn that it is better to practice the three R’s because the teacher says so, not because they truly understand the benefits to their personal lives or connect the three R’s to a relevant big idea.

By ignoring race and culture in EE, teachers can unknowingly use exclusionary practices that impacts on students’ engagement. Students will not be as concerned or interested in learning about the subject if they cannot personally relate to it. Although cultural responsiveness while teaching EE has only recently been applied to pedagogy, “the role that culture plays in shaping perceptions of issues” (Saul, 2000, p.8), needs to be continually present and addressed in the current content of education as culturally responsive and relevant pedagogy (CRRP).

In view of this, the goal of my research is to learn how culturally responsive teachers are using students’ culture to support environmental learning. As a result, this study aims to bring forward how their culturally responsive and relevant teaching techniques and strategies are impacting students’ environmental learning experience.

My central question for this research study is: How are elementary teachers who teach EE responding to students’ diverse cultural identities? The following subsidiary questions have
EE THROUGH A CRRP LENS

guided this research: What instructional methods and strategies are teachers using in their EE lessons to meet the needs of students’ diverse cultural identities? What instructional methods and strategies do teachers consider to be effective when teaching EE lessons through a CRRP lens? What are teachers’ impressions of their students’ responses to EE lessons taught through a CRRP lens? And, What benefits and challenges does this work present from teachers’ perspectives?

EE not only plays an important role in protecting and caring for the earth, but by implementing it into the current school curriculum; “students will acquire knowledge, skills, and perspectives that [will] foster understanding of their fundamental connections to each other, to the world around them, and to all living things” (OME, 2009a, p.11)

With the creation of this policy, the OME began to create a range of initiatives that had been introduced into the curriculum to ensure that all Ontario students are prepared to take part in the making of responsible, knowledgeable and sustainable environmental solutions.

Part of providing students with opportunities to learn to be responsible global citizens means fostering their environmental identity. Creating more experiences outside of the classroom may help to shape children’s values concerning the environment and develop an environmental consciousness and identity. Scholar Ashley Parsons (2011) argues, “direct experiences are most important for childhood exploration of natural elements. Environmental identities have the ability to shape the way that children respond to protection of the environment” (Parson, 2011, p.2). Environmental identity, Parsons (2011) argues, is defined by personal experience; can be religiously, familial, social, cultural, or academically based. Moral decisions and values developed through experiences in the environment have the ability to define numerous stances including a conservative environmental standpoint, or a moral standpoint of indifference. The experiences (or lack of experiences) of the individual create that moral
Environmental identity has an important role to play in educating students for environmental awareness and preparing them to take part in developing global environmental solutions. Environmental Education Ontario (EEON), a non-profit organization that advocates for improving the status of EE across the province of Ontario, works to reach all pre-school-12 grade teachers and students in the formal education sector, including Aboriginal Peoples, families, and new Canadians, as well as other groups in the informal education sector. The question is, how can such a diverse cultural assortment of students living in a multicultural city such as Toronto, find and develop their environmental identities that will push them to become active towards the same goal? This question is directly linked my reflexive positioning in this research study.

**Background of the Researcher**

I am a 25-year-old Ecuadorian/Canadian woman attending the Masters of Teaching program at OISE. I was eight years old and in fourth grade when I immigrated to urban Toronto. My mother had married my Canadian/Scottish stepfather six years prior, and as a family of five we came to Canada in 1997 to meet my stepfather’s family, and hopefully improve our education and future. I attended an inner city school and identified with most of my peers, as many of them also had recently immigrated from different parts of the world. Having been introduced to Canadian culture back in Ecuador through my stepfather’s stories, I was excited to be able to play in the snow, go out for hikes in parks, and get my clothes dirty and wet on rainy days in mud puddles.

However, many of my immigrant peers weren’t allowed to, or did not want to, engage in
outdoor educational activities because of their religion or cultural background, and I became curious to know if it was because they did not care for their surrounding spaces or their environment, or if it was attributable to another factor. Perhaps for immigrant parents who have struggled to arrive to Canada and start a new life here, school was a place to get ready academically, and outdoors/environmental activities were seen as useless when the recently immigrated child is supposed to be learning English. For example, the parents of one classmate who had just recently migrated from Pakistan, would not be interested in her daughter attending an outdoor trip if in their point of view it did not serve the purpose of learning correct English grammar. Moreover, Latino classmates seemed not to be interested in the outdoors as much as I was. For instance, while hiking in High Park as part of our Science unit, they wondered what was the purpose of walking so much. They would focus and complain excessively about their feet hurting, instead of enjoying being outside of the classroom. On the contrary, I not only gained much more love and appreciation for the natural world on these trips, but I benefitted from using a wider range of learning intelligences. I am a naturalist learner, but I also touched upon kinesthetic, visual/spatial, logic, interpersonal, and intrapersonal multiple intelligences.

My reflexive positioning will definitely impact my research, as my childhood experience and my experience in the M.T. program have made me more aware of how significant it is to teach EE in the school system. What interests me is finding out how teachers deal with such issues when they want to teach a class that has such diverse students with a variety of cultural backgrounds. Moreover, how do teachers deal with students of different socio-economic status who have different views on the environment? It is my hope to become an elementary classroom teacher one day, and I want to create an EE program that will take into consideration different types of cultural connections that students have to the environment. With this, I aim to be able to
achieve a program that can meet each student’s individual cultural needs, while sparking environmental consciousness and addressing serious environmental problems that we all face.

**Overview of the study:**

To respond to these research questions, I have conducted a qualitative research study and interviewed three teachers about their instructional strategies when teaching EE in a culturally responsive and relevant manner. In chapter two, I reviewed the literature in a number of fields that impact on these questions including the importance of EE and CRRP, and the issues of cultural under-representation and the problem with EE misconceptions in classrooms. In chapter three, I elaborated on the research design describing the procedure, instruments of data collection, participants, data collection and analysis, ethical review protocol and the limitations of the study in more detail. In chapter four I reported my research findings and its overarching themes such as: EE, school background and working with EE through CRRP. In chapter five, I discussed four major findings that have emerged from the data I collected such as the challenges teachers face while implementing EE through a CRRP lens, the different strategies the participants used, the different perspectives of what CRRP meant to the participants, and the participants’ impressions of student responses on the EE lessons. I have also addressed the significance of these themes in relation to the literature, and the implications for my own practice as a beginning teacher.
Chapter 2: Literature Review

This study aims to develop insights into how teachers implement EE while being culturally responsive and relevant in their lessons. The literature review looks at various scholarly articles, books, and journals written by exemplary scholars in the field. The information of interest in this study covers the importance of CRRP, the importance of teaching EE, issues of cultural under-representation and the problem with EE misconceptions in classrooms. To start, we will look at the importance of EE.

The importance of teaching EE:

While children are in their formative years, affecting their environmental knowledge base and awareness has a decisive impact on the outcome of the next generation. While there is apprehension teaching EE, “there is a universally shared recognition that solutions are possible but can only be achieved by committed action on a global, national, regional and individual scales” (Working Group on Environmental Education, 2007 p.6).

EE is mandated as a required program to be taught in all Ontario elementary and secondary school classrooms. EEON’s mission is to “promote environmental literacy and elicit sectors of society to commit to, and act towards a healthy, sustainable environment” (EEON, 2003, p.8). Both EEON and the OME have worked to create significant documents and strategies to support and develop environmental literacy in Ontarians; for example, Acting Today, Shaping tomorrow: A policy framework for Environmental Education in Ontario Schools (OME, 2009).

EE, as the policy framework defines it, is:

…education about the environment, for the environment, and in the environment that promotes an understanding of, rich and active experience in, and an appreciation for the dynamic interactions of:
• the Earth’s physical and biological systems
• the dependency of our social and economic systems on these natural systems
• the scientific and human dimensions of environmental issues
• the positive and negative consequences, both intended and unintended, of the interactions between human-created and natural systems (OME, 2009a, p.4).

This policy “seeks to move beyond a focus on symptoms – air and water pollution, for example – to encompass the underlying causes of environmental stresses, which are rooted in personal and social values and in organizational structures.” (OME, 2009a, p.4). In addition, it provides a directive for teachers to creatively apply EE across the curriculum. This way, not only will EE be found in Science, Technology, History and Geography curricula, but it will also be found in subjects that are less traditionally related to the environment, such as Math, Literacy and Visual Arts etc. Applying EE to all subjects will “promote changes in our personal behaviour and organizational practices that will allow us to minimize our ecological footprint, while also fostering greater community engagement in meeting that goal,” (OME, 2009a, p.5). Setting students up in this way will enable them to consciously connect their EE to their everyday actions. The aim is for students to become on-going, active members of the community in terms of environmental responsibility beyond the classroom and school life.

In order to do so, as stated by the OME (2009a), EE should be implemented in all Ontario Elementary and Secondary Schools and classrooms in a way that is “locally relevant, is culturally appropriate, and enhances understanding that local issues often have provincial, national, and global consequences”(p.4). Thus, with quality resources and support, schools can be prepared to play a vital role in preparing “young people to position themselves on this planet as informed, engaged, and empowered citizens who will be pivotal in shaping the future of our communities, our province, our country, and our global environment”(p.6).

EE becomes most important in urban places like urban Toronto where it can be harder for
students to connect to other natural living beings on a regular basis. This does not mean, however, that urban elementary school students are connected to their natural environment in a limited way. EE in the urban classroom does not mean having to take students out on field trips outside of the city to connect with nature; it can be implemented indoors or outdoors in their own neighbourhoods so they can connect with their local spaces, and learn to appreciate and respect where they are first and foremost. As Parsons (2011) states:

…early childhood anthropomorphic connections to the natural world and middle childhood biocentric connections to the natural world work hand-in-hand in the creation of a child’s environmental identity and environmental consciousness. The environmental identity developed by children in early-middle childhood is “an emotional affinity towards a specific aspect of nature” which has been strengthened by “providing positive experiences with nature on a regular basis” (p.17).

This quote influenced my thinking that nature can be anything around the community that is alive. Education should be centered on life (Orr, 1992; Lewis, & James, 1995; Saul, 2000), especially when EE is involved. A simple patch of grass in the schoolyard, plants in a classroom or bird and squirrel watching are all examples of exposure to nature on a regular basis. This can take place in any school despite its demographics; life exists anywhere (Orr, 1992).

McKeon (2012) highlights the benefits of EE in the education system:

Making, identifying and addressing connections small as they may be to human impact and their surroundings, particularly within this era of global climate change, unrelenting ecological degradation, and unrestrained consumption of finite resources, there is a growing understanding that the health of the environment worldwide will be a defining factor in all aspects of global society (p.132).

This suggests that EE is a big step towards understanding our environmental responsibility in the world. However, another study identifies the drawbacks on implementing EE in the school system (Cutter-Mackenzie & Smith, 2003). For example, many schools have had trouble
implementing EE across the curriculum and in effect, they might just focus on teaching it through science and social studies. Other issues, such as a lack of time, a fear of teaching EE ‘incorrectly’ by not having adequate skills and knowledge, and teachers lacking passion for the subject, are reasons why EE in primary schools does not generally achieve the outcomes communicated in the province’s policy documents (Cutter-Mackenzie & Smith, 2003).

In addition, studies like that of Sauvé (1996), criticize EE programs saying that some:

…focus too narrowly on the protection of natural environments (for their ecological, economic or aesthetic values), without taking into account the needs and rights of human populations associated with these same environments, as an integral part of the ecosystem (p.8).

To be part of the solution Sauvé (1996) suggests updating EE to be a subject that not only includes nature, outdoors studies, or outdoor sustainability, but should also include peace education, Aboriginal Studies, human rights education, intercultural, population, international development, and media education. In other words, everything that lives depends on its relationship to a whole network of relationships that makes life possible (Martusewicz, Edmundson & Lupinacci, 2011). Although the concept of interdependence in nature is based on the relationships of biodiversity, it spurred my thinking that this can also be related to social justice education. EE can connect to different social justice issues, for example water scarcity causing conflict in the Middle East and Africa, which in turn links to the geography of that area of the world and global climate change and desertification. This juxtaposes the environmental issues being faced in dramatic and conflict-stricken parts of the world to the fossil fuel emissions and deforestation in our part of the world that are major contributors to changes in the Earth’s climate; everything is inter-related in some sort of way. This form of critical thinking “would give EE a much richer ultimate goal than environmental education only for sustainable
development does” (Sauvé, 1996, p.29), leaving me to wonder how dedicated EE teachers practice this type of critical thinking in their classes.

There are studies focusing on different kinds of approaches of teaching EE, and each assesses how the mainstream way of teaching using EE may not be sufficient for students to make meaningful connections to the issues. McKeon (2012) suggests that EE needs to go beyond its historical roots within the western worldview to include the diversity of Indigenous cultures for new insights and directions. Significant connections in story telling of the interconnectedness and interdependence of all things can make us once again re-think how we sustain ourselves, as Indigenous people have done for centuries (McKeon, 2012). From this I understand that studying Indigenous cultures, traditions and storytelling can go hand-in-hand with EE. They promote alternate pathways and ancient wisdom of how to live in the planet, and because of this, Indigenous cultures can offer valued lessons to an increasingly unsustainable modern world. (Martusewicz, Edmundson & Lupinacci, 2011). Likewise, scholars Milner (2011), Saul (2000) and Thompson and Horvarth (2007) agree that this is extremely important in EE curriculum. These scholars also argue that it will be most beneficial for the students to also connect it with CRRP lessons and activities.

**The importance of CRRP in the classroom:**

The City of Toronto Census shows that Canada and most significantly Toronto is an abundantly rich, diverse city “with higher shares of immigrants than the rest of the Greater Toronto Area and Hamilton … and Canada overall” (Statistics Canada, 2013). Furthermore, the Toronto demographic census states that “over half (51%) of those living in Toronto in 2011 were born outside of Canada … 49% of those living in Toronto (1,264,395 people) identified as a
visible minority” (Statistics Canada, 2005). This highlights how significantly the demographics of our classrooms are changing. Diversity is increasing so rapidly that “by the year 2017, more than half of Toronto’s population will be people of colour;” (Statistics Canada, 2005). Therefore, Gloria Landson-Billings (1995a), the scholar responsible for conceptualizing the term of “culturally relevant and responsive pedagogy” (p.159), and scholars Milner (2011) and Hong and Anderson, (2006), suggest that it is crucial for teachers to develop cultural competence to maximize learning opportunities in within diverse classrooms.

There is a pressing necessity for preparing teachers to teach students of diverse ethnicity, race, culture, social status and language backgrounds that will be present for some time to come (Villegas, 2002). Therefore, building global skills and interconnecting different languages and cultures should be completely mandatory, not only in an extracurricular sense, but across the curriculum to prepare culturally responsive teachers. All classroom teachers should receive training in the preparation for diversity issues in the classroom, (Villegas, 2002).

Milner (2011) writes that CRRP, as defined by Gloria Landson-Billings (1992):

…serves to empower students to the point where they will be able to examine critically educational content and process and ask what its role is in creating a truly democratic and multicultural society. It uses the students’ culture to help them create meaning and understand the world. (p. 110)

In effect, the CRRP approach engages a more diverse population, sustains a meaningful and authentic relationship between the teacher and the students, and develops cultural competence not only between students but also between teachers (Hong & Anderson, 2006; Milner, 2011). Exemplary teachers that apply CRRP make sure that students balance their cultural integrity with academics by fusing them both together for more relevance and connection with their own identity (Landson- Billings, 1995a). However, not all scholars have the same opinion about this
educational methodology.

Ngo (2010) argues that there is a great danger in multicultural approaches to education. While culture makes a difference in the teaching and learning process, (Landson-Billings, 1995b), “culture is simultaneously reified and exoticized” (Ngo, 2010, p.476). The “exoticization” of people, food, music, clothes, customs, among other things, continues to sustain power hierarchies and boundaries between “Us” and “Them” (Ngo, 2010, p.476). Multicultural education focuses on specific cultural topics, whether it is Black History Month, or Asian New Year week, or Latin America history month. Ngo’s (2010) study relates to teaching CRRP in the classroom for everyday lessons; there are always “multicultural conditions that heightens the salience of racial, ethnic, national, class, gender, religious, and linguistic differences” (p.474).

Looking at CRRP within this lens in mind, Ngo’s study (2010) influenced my thinking to realize that it is possible to come into conflict with these issues if teachers are not careful about their pedagogical approach. It can definitely be an inadequate solution for student engagement if students are in fact focusing on their ethnic differences rather than on their cultural learning style. Teachers have to be extremely careful of what Ngo (2010) states, that is that many teachers have difficulty in “translating theory to practice [and] often lack description and detail” when teaching multicultural education (p.474). Moreover, Ngo (2010) suggests that we as educational researchers need to ultimately develop theoretical and pedagogical strategies to include cultural difference as a way to incite discussion and promote critical thinking. This suggestion can be important for further research into some complications that CRRP may present, but also how it can contribute to deeper critical thinking about the teaching of EE. My research aims to begin filling this gap.
Issues of cultural under-representation and the problem with EE misconceptions in classrooms:

Key concepts surrounding race, culture, power and justice link to both CRRP and EE. The studies I examined specifically talked about Latino, Aboriginal and African American students that were not represented in the lessons carried out in the classroom, let alone in EE (Agyeman, 2003; Hong & Anderson, 2006; Lewis & James, 1995; Thompson & Horvath, 2007). Some scholars say that teachers who teach traditional EE only cater to the mainstream student population, and are just trying to “fill a void of knowledge” when teaching EE, without considering the cultural differences in a diverse urban classroom (Saul, 2000, p.5).

The history of cultural and racial diversity shows that student minorities often do not participate because they are not engaged in the content, but also because of language differences, fears of potential discrimination, and economic hardship within their community (Agyeman, 2003; Hong & Anderson, 2006). Consequently, Lewis and James (1995) present seven misconceptions and stereotypes that under-represented minorities have in terms of EE. In brief, the authors discuss the reasons why and where these misunderstandings come from and attempt to dismantle misconceptions including: “people of color have not been involved in environmental issues, resulting in a dearth of people of color who can serve as role models in environmental education”(p.6), “the needs of people of color are recognized and addressed by those setting the environmental education agenda”(p.8), and “EE programs are presented in ways that appeal to all audiences” (p.8), amongst others. According to Lewis and James (1995), these misconceptions and stereotypes have created a divide between “traditional” EE and EE that has surfaced from environmental justice and grassroots environmentalism. Ideally, to correct these misconceptions and to bridge the gap, they suggest creating a more unified “multidimensional
agenda for EE that is more likely to meet the needs of all citizens” (p. 9). However, while the authors discuss general initial steps for solutions towards an integrated EE agenda, being specific on what topics affect all students, they lack specific examples of solutions pertaining to these misconceptions. In my thinking, further research on these specific examples to reach underrepresented students in EE would be an effective practical resource for educators who teach EE in a diverse cultural setting. In addition, these examples would benefit the debunking of cultural misconceptions about EE. Thomson & Horvath (2007) have had successful and unsuccessful examples of implementing EE through a CRRP framework in a class of minority students; they state that:

…it has made [them] painfully aware of the many ways that other cultural expressions (in this case Aboriginal culture) are muted and suppressed inadvertently by the way many facilitators unknowingly promote mainstream cultures’ ways of communication, problem solving and leadership (p. 18).

To know that there are inequities such as these, and not do anything about them, we “perpetuate separate societies and will deprive the poor, blacks, and other minorities” (Mohai & Bryant, 1992, p. 8) from equitable EE. Most literature on this topic suggests far more research should be done that looks into how facilitators, instructors and educators can become more culturally fluent within a culturally diverse group of students, (Thomson & Horvath, 2007; Lewis & James, 2013). Similarly, Agyeman’s (2003) suggestion of reframing current EE programs in order to be inclusive and cognizant of all cultural identities will be a new, more successful way of teaching for environmental educators.

A consistent gap within these studies was the lack of examples that successful environmental educators practice that are inclusive of all cultural identities. While Thompson and Horvath (2007) did discuss the way in which they experienced and learned ways to create an
inclusive environmental classroom, there were no specific examples. Most studies focused on the problem of under representation, the identity of the culture which under-represented many misconceptions, but failed to present concrete examples of how to teach EE in a culturally relevant and responsive way (Hong & Anderson, 2007; Larson, Green & Castleberry, 2011; Thompson & Horvath, 2007; Agyeman, 2003; Lewis & James, 2013). Moreover, there should be more research that debunks the misconceptions the mainstream population has on minority cultural groups’ perspectives on the environment. There is a lack of “studies that have considered race and ethnicities as mediating variables when measuring children’s environmental attitudes” (Larson, Green & Castleberry, 2011).

Overall, there is a lack of research that studies how both EE and CRRP are implemented in the classroom. What would be beneficial in the long run is to have studies that seek to find successful, practical, and concrete strategies and methods of how these two concepts are implemented in teachers’ EE lessons. This is not to suggest that these strategies and methods will be a one-size-fits-all, as it is clear that the ethnicity, age, and gender of the learners in an actual classroom will drive lessons forward. Therefore my study looks into how teachers can best cater EE activities to the multicultural backgrounds of their students.
Chapter 3: Methodology

Procedure:

Qualitative research asks the question *how* we can better understand the experiences of research participants; this study will achieve this in terms of the application of CRRP to EE. My study used a case study approach, based on a linear analytic structure (Yin, 2009), which required an examination of data gathered during the process of informal, face-to-face interviews. In a case study, interviews are the main source of multiple realities, which are portrayed, in different views of a specific case (Stake, 1995). The interviews develop holistic and meaningful characteristics of real life events (Yin, 2009). Furthermore, the central inclination of case study methodology tries to “illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result” (Schramm, 1971, p.6).

The purpose of this research is to understand how elementary teachers are responding to students’ diverse cultural identities through the application of CRRP in EE teaching and learning. I aim to discuss and analyze already existing practices and methods of implementation. With this purpose, my study attempts to fill the existing gap in the literature about teaching EE in terms of CRRP.

It is my aim to gain additional and significant information on the intersection of EE and CRRP, and therefore this Master of Teaching Research Project is guided by the following key question: How does do teachers design and implement EE through a CRRP approach that privileges student’s diverse cultural identities? In addition, I investigated a number of sub-questions including: What instructional methods and strategies are teachers using to meet the needs of students’ diverse cultural identities in their EE lessons? What instructional methods and
strategies do teachers consider to be effective when teaching EE lessons through a CRRP lens? What are teachers’ impressions of their students’ responses to EE lessons taught through a CRRP lens? And, What benefits and challenges does this work present from the teachers’ perspective?

My central question and my sub-questions informed the development of an interview protocol that I created for the study’s participants (see Appendix A). The interviews were used to gain insight into how teacher’s attitudes, beliefs, successes, concerns and values play a role in their EE teaching through CRRP. Next, I conducted a series of open-ended questions to be used in face-to-face interviews of approximately an hour with the participants regarding the practice and implementation of EE through a CRRP lens. The three interviews were audio recorded in order to later transcribe and analyze them. After having done that, I reviewed the transcripts first and then organized them into a table to look for patterns of commonalities and differences between the participant’s responses. At the end of this process, I identified three common themes and presented them in my findings.

Participants:

For my proposed research, the main requisites for the participants’ inclusion were: school teachers who implement EE in their classrooms using a CRRP lens. The prerequisites that were used to select the three participants were educators who consistently implement EE in their classrooms; teach in culturally diverse classrooms in an urban area of Toronto; and teach EE through a CRRP lens.

Participant Identification:

I thankfully connected with the participants through one of the educators at OISE, who had contacts in the EE field. I attended the final class of the additional qualifications course she
was instructing in the summer of 2014 on EE. I was able to introduce my research topic to her students who were all elementary school teachers. I had the opportunity to talk to several teachers who were attracted to the subject and some with the interest in participating in my research study.

Data Collection:

Data was collected through informal face-to-face interviews of approximately one hour with each of the three consenting participants. The interview questions can be found in Appendix A. Participants had the option to skip questions if they did not feel comfortable answering them. Some questions were modified while the interview is in process, as to redirect the participants for a better-focused answer. The interviews were recorded, transcribed, and categorized in terms of patterns and major themes as part of the analysis.

As a qualitative researcher, the information I found helped me understand how EE is taught through CRRP in the real world context of elementary classrooms, set into comparison with the theories put out by the literature gathered in Chapter 2. The interview method was an effective and genuine way to find out the teacher’s experiences, practices and attitudes towards the subject. When the interviews were completed, I analyzed the data in an effort to answer my guiding research question. With this in mind, I took a reflexive viewpoint, and respected all participant’s opinions, values and beliefs.

Ethical Review Procedures:

Participants who volunteered to participate in this research were given letters of consent before the interview to read (see Appendix B for the template of the letter of consent). Before conducting the interview, teachers were required to read and sign the letter, as well as given an
opportunity to ask any questions they might have had about the interview process. By answering participants’ questions completely and thoroughly beforehand, I worked to ensure that they were comfortable in understanding all of the required information. There were two copies of the consent letter provided, so that both the participant and I could keep a copy. The letter of consent included information about confidentiality, the right to withdraw, and the level of risk this research had for the interviewee. I made sure to contact the participants in advance with all the information about the consent form and the confidentiality of the study. Adequate times to meet for an interview were negotiated between the participant and myself.

To ensure the anonymity of all the participants, the schools they worked at have been kept anonymous. The option of anonymity was offered to them to ensure that they were comfortable when answering the questions, and to protect participants from any personal or professional harm. The information provided by the participants was accessible to my supervisor, and the participants were well aware of the supervisor’s role in accessing their data.

**Data Analysis:**

Once I interviewed the participants, I transcribed the data found in the interviews from the audio recordings; after this step was complete, I highlighted important quotes. By making notes as I read through each interview transcript, I mindfully identified emerging patterns, and then consolidated these themes into five overall themes. I categorized the codes into these themes, making sure that they were relevant to my research and literature review, focusing on the matching patterns in matching and corresponding data that were directly related to my sub-questions and overall question (Yin, 2009). After the information was arranged into themes, I examined, categorized and identified the patterns in the data and created a Word document.
display chart, as recommended by Yin, (2009). This allowed me to ensure that I attended to all the evidence reviewed, and addressed all major rival interpretations (Yin, 2009).

**Limitations of the Study:**

This Master of Teaching Research Project conducted for the purpose of gaining insight on the various practices and implementations of EE through CRRP only covers a small part of the numerous amounts of scholarly work in the educational field about both topics. One of the limitations of the research is the small amount of time given for completion of the work. Much more could be added to discuss and analyze the presented research problem. The literature review, though largely selective, was carefully chosen for the basic structure of knowledge of EE through CRRP.

Another limitation of this research is the small number of research participants that were interviewed. Interviewing other educational researchers, facilitators, educators, administrators, and students could have further enriched the data on EE through CRRP. The study is intended to begin to understand the participants’ perspectives on the topic analyzed. This will allow for insight into their experiences, revealing their reflexivity on what they answer, and perhaps answering the questions based on what the researcher wants to hear (Yin, 2003).

Thirdly, I realize that my questions are limited due to my overall goal and time constraints. There are areas of the subject that I am extremely curious to explore further, such as the importance of linking Aboriginal Studies to EE through CRRP, but will not be able to do so in this specific study. In the future, I hope that other researchers will further explore this topic. Finally, I recognize that my own personal interpretations of the questions, answers and literature can also be limitations. It is important to highlight that my own personal experiences,
perspectives, biases and notions have shaped how the data has been analyzed and interpreted.
Chapter 4: Findings

The following research findings were gathered and analyzed from three interviews that were conducted between the end of 2014 and beginning of 2015. The participants were full-time teachers who implement EE in their teaching programs. These individual case studies are presented in this chapter. Each case study presents the participant’s background, and the overarching themes that emerged from the one-on-one interviews, as well as from excerpts from other data sources. The three overarching themes are EE; school background; and working with EE through CRRP. This chapter provides valuable insights into how these teachers use their instructional strategies when teaching EE through a CRRP lens. Although the participants were given the option to use pseudonyms, Lisa decided to use her real name; the remaining participants’ identity will be protected throughout this chapter.

Case study 1: Anne

Participant background

Anne (a pseudonym), is a primary/junior teacher who is in her eighth year teaching; she has been at the same school since she started teaching in Toronto. Previously she had been a special education teacher, but currently teaches a grade 3 and 4 split general education classroom in an urban model school\(^1\) in downtown Toronto. In the past, she has taught grades 1 to 3, in addition to, general education Kindergarten classrooms, kindergarten intervention, and the kindergarten diagnostic and Mild Intellectual Disability (MID) programs. In terms of her professional development in EE, Anne took Primary Inquiry in the outdoor classroom (a four-

\(^1\) TDSB Model Schools are determined by the school’s Learning Opportunity Index (LOI), which measures the external challenges affecting student success including level of parent education, family income, socioeconomic status and lone parent families. The school with the greatest
session mini-course), and completed an Additional Qualification course in EE in the summer of 2014. She was a part of the Eco School committee at her school. Anne stated that because of her background as a special education teacher, she couldn’t disassociate teaching from a CRRP lens.

School Background

When I interviewed Anne she was teaching at a small urban school with about 250 students in the heart of downtown Toronto that was surrounded by a lot of good transit routes. “Historically,” she commented, “we’ve had a fair mix of a Portuguese community and a Chinese community”. Anne believed that the way the demographics in the local community have been gentrifying, relates to the proportion of Portuguese students’ population decreasing in the past few years. The Chinese student population is still prominent, though there are more Caucasian and mixed ethnicities population moving in. Because there is a large population of Chinese students with immigrant families, there is a lot of staff who speak the same languages as the students, settlement workers working in the school, as well as ELL support.

Every year the school measures the early development Index (EDI) which looks at what early development skills the students of the school are coming in with. As she narrated this, she also mentioned that she might get upset as economical status, total house income and the students’ parent’s post secondary education experience plays a big part on this, suggesting that many of her students come from low education and income households. While she agreed that, “there are members of the community that are very well off, some more than others” she also mentioned that “the school is certainly not a rich school”. She mentioned that often there were students that were not able to afford to go on field trips, saying that:
Although even five dollars is a lot when your 80-year-old grandmother is out there collecting bottles every recycling day. It’s like every five dollars to pay for a trip is still an issue.

For this reason, Anne reimbursed students to go on classroom field trips because she felt that they didn’t have the same opportunities as other students:

…our kids really, really lack in world knowledge and research shows that kids who kind of have a depressed score on the EDI are the ones who are most likely to fail in the provincial standards on EQAO in grade 3.

Anne felt that many of her students didn’t even have opportunities to play outside after school because of their elderly grandparents’ need to go back home right away after pick-up time. As a result, many are not very familiar with the neighbourhood’s park, a well-known park in Toronto.

**Environmental Education**

Anne spoke very positively about her experience teaching EE, especially when it was connected to going outdoors. She stated that she has always loved going outside with her students, even previous to her professional development in EE. The professional development courses she took encouraged her to extend her outdoor education program to be more focused on EE, and this has been an integral part in her teaching since then. Anne stated that she tried to “integrate it as much as possible because EE [is] a really good way to teach big ideas, which enables [her] to get through the curriculum for a split grade”. Her teaching is based on an inquiry approach, so going and learning about the environment outdoors is very important because her students are able to concentrate better in an outdoor learning space. She believes that outdoor EE deepens “their concept knowledge by having hands-on experience”.

She also believed that in order for young students to care about the environment, they needed to learn how to love nature. She stated that her “main job is to get them to love the earth
because if they love it, they are going to take care of it’. As an example, Anne mentioned that a lot of students had neutral feelings towards plants, but she connected plants to animals to make the subject of plants more attractive to them. In order to get the students interested in the school gardens, she got her class to raise monarch butterflies and evaluate each garden to see which one was more adequate for the class to release the butterflies in.

Anne mostly taught EE in Science, Language Arts, and Visual Arts. However, EE was also taught in the Social Studies, in a unit of habitats and communities when the class learned nutrition and what part of the world human food came from. For Anne, EE was challenging to connect with Mathematics, although she gave me some examples of EE math lessons that involved planting tulip bulbs. According to her, the students,

…measured the perimeter and they had to figure out if the array would actually fit the garden space that we had because they actually thought the 4 by 10 would fit but it actually didn’t. It actually exceeded the space available.

She also incorporated math while learning about the environment when she got her students to measure the perimeter and the length of the tree the classroom adopted in the nearby community park. Language Arts is easier, she commented, as her students did a lot of poetry and journal responses across the curriculum. In terms of EE, they linked it to Language Arts by writing persuasive letters to other classes about which garden was better suited for the butterflies to be released in.

Anne felt very lucky to be part of a community where forming partnerships with parent, and staff is important. She commented that the school administrative team was also very supportive towards the prioritization of outdoor classroom and her EE program. The school itself was recognized as a gold level Eco-school, so she felt like there was a lot resources made
available through this. However, Anne said one of the challenges in implementing EE was “not having a wide variety of academic print resources to tell me how to do [it] in my classroom. Sometimes I struggle with getting the right resources at the appropriate level to meet the curriculum.” She wished that she had more professional development books on the subject. Anne commented that most of the time she felt like she was on her own with EE, as a classroom teacher:

I wish had something that helped me meet you know, with the rigorous demands of the curriculum with an inquiry based approach to learning that is embedded to EE and cultural development to my students in this environment because I felt like it’s really esoteric.

However, she feels like “like it’s a positive environment even though [the parents’] participation is limited by their work schedule.”

**Working with EE through CRRP**

Anne mentioned that she did not have a “functional” definition of what CRRP meant, but she was willing to speak about how she met the needs of her school population. In terms of culturally responsiveness and relevancy, Anne was very focused on the fact that she taught at an urban school. When it came to relating this to CRRP, she said it was just a part of being equitable and for this reason she was conscious “of trying to level the playing field for my students in terms of giving them hands-on, real world experiences in nature with as much as I can get”. In general, the term CRRP for Anne meant that she looked for things to be accessible to her students from the start; for example, working on ELL’s student’s English vocabulary so she could meet the student’s needs culturally through EE. She sometimes worried about how she was not incorporating CRRP enough, but she was conscious that “EE is a really good way to
work on expanding their world knowledge and it’s a lot easier to go outside.” Anne noted that, “EE is an easy way of giving them a shared experience and building on their concepts stemming from that over a period of time.” In Anne’s class, an example of an EE through CRRP lesson could have started with someone eating a litchi fruit and everyone figuring out where that fruit came from, and drawing the connections they observed instead of writing them as part of giving more support to the ELL student. Anne was confident that “every single person [was] more successful when I [did] an EE approach,” since “every single person [needed] to have an opportunity to successfully and to excel and obviously everyone [had] different challenges and benefits that they bring into the classroom”.

According to Anne, the students’ responses when she implemented EE through CRRP were of pure joy:

I have never experienced anything like when we had a map where our tree was in the park and we had to go and find it. I said we have to find where it is. I’m not going to tell you and like every single kid in my class was electrified. “There it is!” “I see it!” And they ran to it. Like it’s just a tree! It’s completely tangible. There is no mistaking it.

Anne also said that she saw that this approach was working because she saw their success. For example, “every student of mine did a really great job on those persuasive letters” that they wrote about the monarch butterflies. Everyone was really successful “because I was able to meet the threshold of the leveling the playing field because everybody had that opportunity.”

**Case study 2: Evelyn**

**Participant background**

Evelyn (a pseudonym), is a full time teacher at a downtown Toronto urban alternative school. This is her fifth year teaching after having completed a two-year education program. She
has taught kindergarten, grade 5, grade 6, a grade 2/3 split class, and this year she was happy to be teaching a grade 1/2-split class.

Evelyn got interested in teaching EE two years ago when she taught the full day kindergarten program since it had a big emphasis on play based and inquiry learning, and she felt that this would go hand in hand with EE professional development options that she wanted to explore. Evelyn also took a couple of workshops on outdoor learning and outdoor education, and she implemented this with her kindergarten classes. She also undertook a four–session mini-Additional Qualification course, Primary Inquiry in the outdoor classroom last year, and this year she planned to take the second part of the qualification. She was part of an informal grassroots professional learning community (PLC) group at her school that met every two weeks to share their “treasures and troubles about how [their] environmental and inquiry programs were doing”. Most of her EE happened in the neighbourhood around her school, although she has also explored High Park and the Humber River green spaces.

School Background

Evelyn taught at an urban alternative school in downtown Toronto. Based on the TDSB Learning Opportunities Index (LOI)\(^2\), Evelyn’s school is 300. She considered her school to be “economically privileged for sure”. However, “this school”, she mentions:

…is founded on ideas of social justice so we do reach out to families that are marginalized or under privileged in some ways. So for example, we have a lot of queer families at the school. We have a lot of families who have children through adoption. We have a few families who are first nations and from other racialized communities; single parents, different kinds of homes and that kind of thing. So I think the school makes a big effort to draw in a diverse community

\(^2\)“LOI is a kind of rating that is done based on parent education, family income and socioeconomic factors they rank each school in the TDSB. The lowest schools rank from 0 -100 or 150 are considered model schools and it goes up to 400” (Evelyn).
but I think it’s something that we are still working on and we still strive it to be more representative of Toronto in general.

The school adjacent to Evelyn’s school was a neighbourhood model school, which many of the children living in the area attended. The neighbourhood was gentrifying, she informed me, but the students who attended to her school were mostly not from the area as they were upwardly mobile enough to seek out an alternative school outside of their area and send out an application for attendance.

Her previous school had a different demographic. This school was quite the opposite as her current school as it was a model school in Scarborough, and it ranked about 40 in the LOI. The neighbourhood around this school had two Toronto community family residences, and “we had students who were in very transient homeless situations that would stay in a shelter nearby and would arrive and then leave often thorough the year.“ Naturally, her experiences teaching EE would be different in these two environments.

**Environmental Education**

Evelyn commented that though her family was environmentally conscious, she wasn’t always interested in EE. She felt like she started to become more aware about the importance of EE for children three years ago. She linked her childhood experiences outdoors to the reason why she cared about the environment and informed me that she wanted to give her students those kinds of opportunities that many were not getting at home.

Reading environmental books such as *Last Child in the Woods* by Richard Louv (2005) and works by David Sobel gave her those “Aha!” moments where she realized that her students did not love nature the way that she did when she was their age and that made her want to
implement EE in her classroom. As a result, Evelyn did a monarch butterfly study with her classroom for the past two years. She mentioned that it was a great introduction to her EE program in September, the month when the classroom rears and later on releases them, and by the end of the school year the monarchs return to Ontario again. This nature study really emphasized observation as a big part of her EE programs, she added. For example:

…watching the caterpillars eat and making observations about those kinds of things, or watching those caterpillars turn into chrysalis. Watching the Chrysalises change colour from green to black and orange, watching the chrysalis hatch and change colours and this year specially the children were asking lots of questions about Monarchs and we made a big effort to observe our Monarchs in the classroom and then seek out a lot of information about those Monarchs to answer those questions that they were asking.

Outdoor education was omnipresent in Evelyn’s classroom. Going outside everyday was essential to her previous kindergarten program, to the point where the students had a designated spot to leave their belongings before outdoor learning. Evelyn found that naturally generating questions about the environment, weather, and geography worked well if she took the students outside daily. Daily outdoor activities made a connection about being environmentally conscious, as she found:

… we are teaching kids to love the earth by taking them outside and creating a relationship with nature and were also having them critically examine things like “why can’t I waste this piece of paper?” and “you know my mom will buy another one”, it’s still important that we don’t waste paper in the first place.

Evelyn said that teaching EE made her more critical about the ways that it can help her students and their families beyond just going outside. The learning happens “from watching the life cycle transformation and metamorphosis was really powerful for the kids and it kind of branched into all areas of our classroom”.
In terms of teaching EE across the curriculum, Evelyn said that the activities they did that applied to EE were “really powerful for the kids and it kind of branched into all areas of our classroom”. Like Anne, Evelyn agreed that EE is easy to do in Science, because it is hands on and can easily be taken outdoors. She was keen on talking about her activities in Social Studies that integrated EE (such as mapping), and in Math (such as patterning and geometry). EE was also heavily infused into Language Arts; for example, in her study of butterflies, there was a big emphasis on writing and drawing diagrams about their observations.

When I asked her questions about how much support she got on her EE program, Evelyn stated that one of her previous teaching partners was “willing to go into this journey with me and kind of go outside everyday, which is like a lot to ask somebody. So I think she was my biggest support”. In contrast to Anne, Evelyn told me that she didn’t feel that she did not have the best support at her last school from the administration or other colleagues, although the parents were helpful after working on them for a while. It was evident that Evelyn felt passionate about her work in EE when she said:

…you don’t need money to run a good EE. But feeling validated, people recognizing that its important work and like giving you recognition for what you do and saying what you are doing is really important is really the only support that matters in the end.

Another challenge while teaching EE that Evelyn mentioned was getting all the students to come prepared for the weather; she made sure she always had extra clothing and equipment on hand for those who forgot theirs. She always tried to have the students go outside everyday. If it was really cold, she would shorten the time outside, which made her realize that often times her students would come dressed for the cold but not for the wet.
Working with EE through CRRP

When asked about what Evelyn’s understanding of CRRP was, she answered that she was not an expert, but that her teaching program implemented it and she practiced it while training to be a teacher. She positioned herself in the alternative school she taught at and reflected that:

…as a white, straight, not Christian, non religiously minority group, middle class female, I have a lot of privileges in society and I’ve also non purposefully been taught a lot of biases in my life that could have an impact of the way that I teach my students or discriminate against my students and so my job as an educator is to critically unpack and think about those biases that I have and actively work to disbelief those and to adjust my teaching accordingly. Also to pass that along to my students and have them become aware of their own privileges and how they can work to make the world a socially just place.

Evelyn also felt that it was important to know the community that she was working with, and “how you can meet their needs so that they see the value of EE”. For example, in the inner city school she previously worked at, it was important for the children who were in an “undeserved neighbourhood to be taken outside and show them the beauty of the neighbourhood” before they went home, as some students would stay in school almost 12 hours a day and did not have outdoor playing time. It was important to her that these students “had opportunities to explore the nature of their own backyard and feel connected to their community in that way”.

When she talked about her current classroom to me, she talked about how she connected environmental issues to economic and employment issues around the world. She felt that this was important to cover:

I think it’s really easy for people in a privileged position to look at something that’s happening somewhere else in the world and cast blame and point fingers or think discriminatory things like, “oh because they live in that part of the world they think this” or “they act this way” or “it’s their culture that makes them that way” or things like that and I think that environmental work has to be a more global thing.
Evelyn was eager to share with me some EE lessons that she felt had cultural relevance; for example, “showing the kids examples of wonderful EE work that’s happening in other cultures and other communities.” Connecting with these environmentally active groups in different cultures (like they did as part of their monarch study) made her students feel like their work was relevant. Evelyn’s class got to correspond with Mexican students that were also studying, protecting and caring for this endangered species as they were. Therefore, even though they didn’t have any Mexican students in the classroom, they were still able to relate to them in a positive way.

Evelyn also talked about how she liked linking EE to aboriginal knowledge. She read her class a First Nations story called *The Great Change* by Gabriel Horn (1995) when one of the monarch butterflies did not successfully make it out of its cocoon. The story was “about how when something dies it returns to the earth and it helps cultivate new life”. She read this book to connect the student to topics like why monarchs are disappearing from the planet.

When commenting about how she perceived her student’s responses to the types of EE lessons she was teaching through a CRRP lens she noted that:

> They really choose what they are engaged in the fact that they listen and contribute to class discussions or listen to what their peers have to say or they are in certain topics that we talk about. I think shows the level of engagement. I think these kids really wear their heart on their sleeve when it comes to showing what they care about and its really clear the way that they behave during our EE based lessons.

I could tell as she smiled and gestured while she commented, that she genuinely felt that her work was worthwhile and responded well with her students.
Case study 3: Lisa

Participant background

Lisa (her real name), has taught grade seven and eight for 18 years. When I interviewed her she was teaching a grade seven class with 35 students in an urban elementary and middle public school in downtown Toronto. As we were talking about her interest in EE, she reminisced about how she has always been learning about the environment from a very young age. She remembers her mom showing her a cicada and her teaching her younger siblings about it and about the outdoors. Lisa has been always interested in teaching students about “what’s outside and learning about the natural” but never thought there was a course curriculum called Environmental Education until she did the Additional Qualifications course in the summer of 2014.

Although Lisa said that the only professional development course she had taken had been the EE Primary Inquiry in the outdoor classroom Additional Qualifications course, she considered her large amounts of time volunteering at wildlife rehabilitation organizations, and rescue animals centres, feeding and taking care of wild animals such as bears, lions, turtles and skunks to name a few, being a very significant part in her development towards her knowledge in EE.

School Background

Lisa explained that her school demographics are:

…extremely diverse. We have students who are Tibetan, students who are Roma, Hungarian, Czech, Jamaican, Iraqi, a couple of different countries in South America, a couple of different countries in Africa, Chinese, Japanese and Vietnamese. We are pretty international.
In her class alone, mostly everyone had immigrated, or with their parents, “many of the students have come as refugees, not as immigrants”. Lisa’s school neighbourhood was made up of a mostly low-income new immigrant population. “It is a very interesting neighbourhood,” Lisa comments:

…when people first arrive in Canada they come here. Our school population goes up dramatically. Almost doubles in size. Then either they're deported, [many of the Roma], or they move to other places in the city and that changes our demographics.

Despite the school and neighbourhood having a negative stereotype in the city as being poor, and a lot of families not wanting their children to attend it, Lisa assured me that her school community was very supportive of each other and that it was, “a great school and we are so diverse and very caring and very respectful and have many different talents…and people don’t realize how wonderful it truly is”.

**Environmental Education**

When it came to implementing EE in her classroom, Lisa was very keen on her students learning how to ask the right questions. She did outdoor education with them when they worked in the school garden, and encouraged them to ask questions about what they were doing or what they were observing. Through their questions, each child came up with their own inquiry project on a specific EE topic.

Another example she mentioned about EE in her classroom was talking about movies, in this case the movie *Fern Gully* and who it was affecting aside from the media and why. From this, conversations about different EE topics surfaced, like carbon footprints, the importance of trees, recycling, and paper use. Lisa’s goal was for her “students to make connections about the
use of media driving EE initiatives. I want them to see. That's basically what it is I want them to do, to use multimedia to drive EE,” and, “for the students to learn how to make good questions.”

Lisa talked very positively about the campsite program run by the Tim Horton’s franchise. At the camp, “the students had an opportunity to go experience and interact with horses, goats, bunnies and other animals,” which was an incredible way to learn, especially for ELL learners, of which there were many in her class.

In terms of cross-curricular implementation of EE, Lisa said that she taught a lot about the environment in geography. Her creativity and interest in the environment enabled her to do EE in Visual Arts, as well as in Math. Lisa organized her schedule as “a five day cycle and on the fifth day of the cycle, “I (had) a whole day of EE and I will combine Language, Math, Geography, Science, Drama, everything into an EE kind of activity.” She is also in charge of the Eco-school program, with her Vice-principal expanding her EE vision in an extra-curricular way just like Anne.

Lisa recognized that there were challenges in taking on EE on top of everything else, especially when she has such a diverse classroom. Some challenges she identified included:

…the lack of time, lack of availability and translating it to different languages. I wish I could. Every time I'm out and I read a magazine or go to a bookstore I see something else that I can bring into my classroom. The challenge is that I can't, I can't take on everything else. There are limits, and the challenge is setting limits.

Lisa also comments about how many teachers don’t realize there is a policy document for EE in the system. She thinks that since new policy documents such as these used to be received by mail, and this has discontinued (to be replaced digitally), teachers are not aware that it is out there; “it’s more inconvenient to teach it if there is not a paper copy of it”.
Working with EE through CRRP

When I asked Lisa about what she understands CRRP, she said that her “understanding is one which you are responding to where people are from”. She added that it was important to realize what cultures she’s working with:

…when you're looking to teach a specific topic decide if you want to address a culture within or a culture beyond. As a teacher you're always supposed to start where student is so if I have a student who academically is starting at a grade 5 level, in mathematics then I can't start teaching him great seven math. I have to start with the great five and then see how far I can move them along.

Lisa said that this sort of thing happened in any area of the curriculum; for example, she was working with an aboriginal student who had different body language to show that he was listening and paying attention to what she was saying:

…then I'm not being culturally responsive nor responsible by assuming that he's going to change his way to meet my need. I'm only with him for what, 10 months of his life? I need to be able to approach where I'm going to be able to work with that student.

Lisa felt that teaching EE through a CRRP lens, she was helping her students learn about where they were from, and the rest of the class was learning about it too. For example, some of the Roma students in her classroom had not had any academic experience in school before coming to Canada because of discrimination, racism and economic reasons; however, Lisa explained, “that didn't mean they did not have a lot of life experience.” At the Tim Horton’s camp, the Roma students:

…were able to teach our students so much in terms of how to respond to the animals, how to move around to them and how to have the animals respond to them. In fact and it was such an interesting opportunity for them to show other skills that they have, that we don't necessarily evaluate in our curriculum, or in our society but they do in theirs.
EE THROUGH A CRRP LENS

With this example, Lisa explained that, “culturally responsive pedagogy means keeping that kind of stuff aligned when I developed the lessons that I'm using here in my classroom.” She used these activities “so that [she could] try to start where the student [was] and massage them around to get them into an activity where [she could] evaluate them according to the curriculum that [they used].”

It was important for Lisa to talk and reference her students’ previous experiences when teaching. This strategy in any subject as well as EE “(brought) it all home and makes it fun and interesting.” She added that she could get a sample from across the world and have different student in her class talk about the different places that they are from; for example, for “a grade eight Geography project about urban populations, you can travel with the students as they learn about the countries where they and their families come from”.

In addition, Lisa felt that the students gave off positive responses when she applied a CRRP lens her EE program. Her face lit up when she commented about some of the things she observed about her students:

I love when they tell me something that they've learned. When they have that Aha! moment….and it's hard to even hear them sometimes but you know you can see the way they move their bodies, the nonverbal cues, when their shaking their shoulders around or wiggling their hips maybe a little bit. They are showing some pride. I probably should be recording more, that they're involved, that this has made a difference for them.

By her positive body language when commenting about her students’ response, I could tell that Lisa felt she was teaching her students meaningful lessons that the student’s found engaging.
Chapter 5: Discussion

The purpose of this study was to explore how EE through CRRP is being implemented in urban elementary schools with the hope to gain a better understanding on how to successfully teach EE. Both my literature review and my interview findings have helped me gain insight on how educators present their EE knowledge to diverse populations of students, reminding me that there are no definitive ways on how to do so.

There are four major findings that have emerged from the data I collected. First, I have learned some of the challenges teachers have faced while teaching EE through a CRRP lens. Secondly, I have discovered the different strategies that have been successful with their students. Thirdly, I have found the different definitions of what CRRP means to them and in effect, the CRRP lens each one takes when applying it to EE. And lastly, I have learned about students’ responses to EE, according to each participant’s impressions on the EE lessons they have taught.

One challenge that I have learned about teaching EE through a CRRP lens are that the participants have struggled with limited support from their community. For example, Evelyn comments that she had to prove to staff members, parents, and the community at her previous school that her EE program was good for the students. She felt that:

…good people that you’re working with is the best support you can get. You don’t need money to run a good EE program, but feeling validated, people recognizing that its important work, and giving you recognition for what you do, and saying what you are doing, is really important…[it] is really the only support that matters in the end.

Another challenge is the limited resources in practical ways to teach EE in a diverse classroom. Anne comments that:

Sometimes I struggle with getting the right resources at the appropriate level to meet curriculum expectations. So the challenges are not having a wide variety of academic print resources to tell me how to do that in my classroom.
Finally, there is the challenge of a lack of time to plan lessons for EE lesson through the CRRP lens. Lisa best put it as this:

I think that anybody that does this kind of work has to be willing to give a lot of time because it takes a lot of time to think outside the box and to prepare opportunities that are not in textbooks. You can't buy a book that says do this and do that. It takes a lot of time to prepare that. It takes a lot of creativity. You have to have to really think about your own experiences where you have been where you want to go be on your toes a lot of the time….The program designing is basically on me. If you're not willing to look outside the box you're going to find this approach foreign and uncomfortable.

Consequently, these challenges provide evidence about the real life context of what it means to teach EE through a CRRP lens, and should be researched and studied further.

As for the beneficial strategies for teaching EE through CRRP, I found a commonality that all participants agreed with: teaching EE in an outdoors setting. All participants agreed that taking their class outside to learn further, engaged them in what they were doing. By learning to love nature and the outdoors, the students were learning to love and care about the environment. But having outdoor lessons also meant different things for each individual. Anne and Evelyn agreed that the outdoors offered many of her students’ opportunities that they wouldn’t otherwise have because of their economic situation, while Lisa said that learning outdoors brought out deeper questions from students who had a language barrier and or didn’t have much experience in the outdoors. In addition to students learning in an inquiry-based approach, it was a great insight to see that these strategies benefitted not only the students but also the teachers. Evelyn commented:

…ever since I have started taking my kids outside, I have found my job to be easier, not harder. The outside is such a calming place for everybody that even if a kid is running around screaming it doesn't matter in the same way that is does when you're in a classroom with a contained space. All of our stress levels go down, yeah. It’s more natural.
In regards with teaching with a CRRP lens, the participants all have very different student demographics in their classroom; and, all were aware that they needed to use their students’ identities as a tool for their learning. For example, Evelyn took into account her reflexive positioning in her classroom, and she tried to teach without misconceptions and stereotypes that have formed from her own experiences. Anne believed that she was practicing CRRP by levelling the playing field of the students who are not as privileged than others. Lisa’s understanding of CRRP was one in which she was responding to where her students came from, so that she could start with what they have to offer and then they can work their way from there.

According to the participants, teaching EE through a CRRP lens has had enormous positive impact with their students. The three of them could sense their lessons were engaging by the way students showed their excitement, they behaved toward them, and their success in the criteria of the task. Anne commented that she sensed pure joy coming from her students when they finally found their adopted tree for the first time; “every kid in my class was electrified!”. Lisa explained that she could tell they were enjoying her classes when she found the class neatly organized and everything put back in the right place. By doing this, her students showed her they were anticipating their next lesson. Likewise, Evelyn added that she could tell when her students were engaged in her lessons when they eagerly contributed to class discussions and they showed their attentive listening skills based on their body language.

By the way the participants commented on their perception of how the students are responding to EE lessons, I realized that their students’ positive responses truly drive the passion they have for teaching EE. These teachers are well aware of how important it is to implement it in their classrooms.
Connections to the Literature Review

I found many strong relationships between the data in this study and the existing literature review on this topic. One important connection is that all of the participants integrated EE in a cross-curricular manner. EE was active in many subjects of their programs, connecting their environmental responsibility to more of the things they learn and do, so this mindset goes beyond the classroom setting and into their personal lives (OME, 2009a; Sauvé, 1996).

To really impact students integrating EE in most subjects, I found that all the participants were significantly committed to creating EE lessons that were relevant to their students and their beliefs and past experiences. In addition, all of them worked within their urban environment to bring out meaningful EE that their students could relate to. For example, Anne’s lessons included adopting a tree in the neighborhood’s park with her class, while Evelyn’s class connected their geographical position in urban Toronto to the Monarch butterfly’s migration route making its way to Mexico and returning back to Ontario. Lisa’s lessons included the class taking care of the school garden while learning what plants are local to this part of Canada and Ontario. As a result, the participants connected their natural environment to EE, and were teaching their students to appreciate and respect the environment in which they lived on (Orr, 1992; Lewis, & James, 1995; Saul, 2000). They did not have to leave the neighbourhood to do EE, as this includes learning about natural and built environments. (Orr, 1992)

My data shows that there is a connection between what Sauvé (1996) suggests, saying that teaching EE should go beyond the western worldview of just focusing on natural environments. Evelyn explained that she valued the perspectives of Aboriginal stories and about the environment and tried to include it in her lessons. This was not only CRRP focused; while she was taking into account her Aboriginal student’s culture, she was also opening the doors of
environmental wisdom to her students that can offer valuable different perspective into how to treat and view the planet (Martusewicz, Edmundson & Lupinacci, 2011). Anne and Lisa’s students’ diverse ethnic background made it easier for them not to teach EE in a superficial manner. Lisa made sure to include some of the historical background of her students in her lessons. That way she “could get a sample from across the world and have different people in my class talk about different places in the world, it (brought) the story more home.” An excellent example of this was in a field trip; Lisa’s ELL Roma students showed the rest of the class the appropriate way to respond to farm animals, and how to have the animals respond to them. Despite their limited English, the students were able to showcase the skills that they had and developed within their culture and comfort zone, in a way that was comfortable to them and did not have any language barriers. In this way, Lisa was able set them up for success by letting their knowledge transcend their limited communication skills. They were able to show other students skills that they might not be familiar within the urban Toronto and Canadian context, and expand on important lessons that could have tied in well with EE topics such as the treatment of farm animals and environmental sustainability. The same would apply to Anne; her EE lessons went beyond the mainstream approach and connected EE to relatable human topics. For example, the discussion of where litchi fruit came from, where were they grown, and how they got here, surfaced when one of her students was eating it. These examples triggered my thinking that teachable moments such as these are always available in EE if teachers practice it through a CRRP lens.

These examples are also encompass what scholars Milner (2011) and Hong and Anderson, (2006) in my literature review suggest; that it should be crucial to develop cultural competence to maximize learning opportunities in within diverse classrooms (Milner, 2011). As
a result, a stronger relationship between teacher and student, and student to student is being created.

A review of the literature also revealed the danger in multicultural approaches of the potential to “heighten salience of racial, ethnic, national, class, gender, religious, and linguistic differences” (Ngo, 2010, p. 474). Ngo suggests that teachers need to be extremely careful when they focus on ethnic differences through their lessons. This is because issues of cultural under-representation and stereotypes of cultural EE misconceptions might arise. Responding to this, my findings show that the participants in this study are aware of implementing a critical thinking approach to EE teaching on top of their CRRP. An example that really stood out was Evelyn’s Monarch butterfly study. While discussing the issues behind the reasons why Monarchs were endangered, Evelyn’s class discussed many topics, such as logging in Mexico, low social economic status, and power. Evelyn made sure to take on a critical approach when discussing topics like these, so that her class did not have any misconceptions about how the general Latin American, or more specifically the Mexican population, responds to the environment. To ensure this, she connected her students with students in Mexico, who were studying Monarchs as well, to take part in a friendship butterfly bracelet exchange, so that they could relate to each other and to show her class that they care as much for the endangered species as her students.

Due to its limited scope, this study had insufficient data in terms of misrepresentation and under-representation about how the minority populations view EE. This suggests a need for further time and research on this topic.
Implications

This research journey has taught me a lot as a teacher, a learner and as an earth-caring human. First of all, knowing that there are teachers out there that are already consciously educating about environmental stewardship inspires me beyond words. It was a great experience to connect with them and listen to what they are implementing in their classrooms about EE, especially while trying to meet the needs of their specific student populations. The entire experience confirmed my belief that quality teaching comes from passionate, creative teachers. Moreover, the experience has demonstrated to me how EE can be taught in a variety of different ways, working from in multiple perspectives, and most importantly, how beneficial it is if done through inquiry learning and critical thinking.

The process of this study has provided me with insight about how teachers implement EE through a CRRP lens in urban setting; this especially holds true when there is diversity in a single classroom. Unquestionably, teachers need to take into account the school and student demographic background, the environmental aspects of the community, and the students’ responses to the lessons they are being taught to improve as an EE educator.

The findings of this study highlight some of the challenges educators face when trying to implement EE in their schools, whether it is a lack or community, staff or parental support, the lack of printed practical resources, or the lack of time they have as teachers to fulfill the rest of the curriculum expectations in other subjects. Because of this, I think there is a gap between the EE teachers are practicing and what is included in the curriculum. There is a great need for further research on how EE can be carried out across the curriculum to be integrated in all subjects.
Lastly, this study will hopefully provide readers some insight, knowledge, and strategies that the participants found effective in response to their student’s reactions when implementing EE through a CRRP lens.

Limitations

One of the limitation of this study lies on its small sample size of participants. Therefore, the findings presented in the study are reflective of the personal experiences and beliefs of only three educators. In addition, while the study tries to cover some of the parts of teaching EE through a CRRP lens, it does not cover everything there is to know about this subject.

Recommendations

The findings on this study raise new questions and aim to instigate further research on this topic. For instance, how can we encourage more educators to teach EE, and do it in with a CRRP lens? that there are EE policy and curriculum documents teachers should be implementing in their classrooms? Shouldn’t EE be taught within social justice content, Aboriginal and peace studies since all of these topics have a strong connection with the environment and its degradation? Lastly, how can we tackle issues such as under representation of minority population groups in EE, and the stereotypes and misconceptions they may face, when EE is taught?

Conclusion

In conclusion, this study aimed to introduce the different ways in which EE is being implemented through a CRRP lens. When planning EE lessons, it important to take into account both the natural and built environment around the school’s neighbourhood and where the student
lives, as well as the cultural backgrounds of the students themselves, in order to fully teach EE across the curriculum. If the teacher’s goal is for their students to learn how to love where they live and care for it, it is essential that the teacher use the children’s identities and experiences as a vehicle for their learning.
References


Larson, L. R., Green, G. T., & Castleberry, S. B. (2011). Construction and validation
of an instrument to measure environmental orientations in a diverse group of children. *Environment and Behavior, 43*(1), 72-89.


Appendices

Appendix A: Interview questions

Brief Introduction:

I would like to thank you once again for your participation. This interview will consist of approximately an hour and will be digitally recorded with a digital recorder and an IPhone as a backup. Your answers to the following questions, which are based around Environmental Education through Culturally Responsive Pedagogy will form part of the data collection for my research paper.

Interview Questions:

Background information of the participant

- How long have you been teaching?
- How did you become interested in environmental education?
- When did you become interested in it?
- Can you provide a specific experience of when or why your interest started?

Demographics:

- Describe your school demographically.
- What grade levels have you taught?
- How many students are in your current classroom?
- What is the school neighborhood like?

Questions about EE

- Can you give me an example of an EE lesson that you have taught?
- What were your learning goals for it?
What did the students do?

How did you assess the lesson?

Do you teach EE only in one subject area, or across the curriculum?

Have you completed professional development in EE?

Questions about CRRP

How did you develop the interest of Culturally Responsive and Relevant Pedagogy (CRRP)?

What’s your understanding of it?

How long have you been working through a CRRP lens?

Do you teach environmental education through a CRRP lens? If so, what does this look like?

Participants understanding of the topic and/or context, issues, etc.

Why do you apply a CRRP approach to EE?

How do you apply your CRRP lens to EE in your classroom?

Can you give me some examples of how you have done this?

What were your learning goals?

What instructional strategies did you use?

How did you assess students?

How did students respond?

Benefits

What are some of the benefits for students when you teach environmental education through a CRRP approach?

What kinds of factors and/or resources support you in this work?

How is this playing out with the students in your class?
Challenges

- Do you have any challenges in teaching EE through a CRRP lens?
  
  If yes, what are some of the challenges that you face teaching EE through a CRRP lens?

- How do you respond to those challenges?

- Can you give me some examples?

Strategies

- How do you teach EE in ways that are culturally responsive?

- What are some of the indications that show your students’ positive engagement when you implement CRRP in EE lessons?

- Can you tell me some examples?

Conclusion:

Thank you very much for your participation. The benefit to you participating in this project is an opportunity to reflect more deeply on your practice and contribute to the growing body of research in Environmental Education. I will share with you copies of the transcribed interview to ensure accuracy.
Appendix B:
Letter of Consent for Interview

Date:

Dear participant,

I am a graduate student at OISE, currently enrolled as a Master of Teaching candidate in the University of Toronto. I am researching Environmental Education through Culturally Responsive and Relevant Pedagogy to contribute to the growing body of literature in this area, and for the purposes of investigating an educational topic as a major assignment for our program. I think that your knowledge and experience will provide insights into this topic.

I am conducting a research study as a requirement of the Master of Teaching Program at OISE. Faculty members who are providing support for this process are Dr. Mary-Lynn Tessaro and Dr. Hilary Inwood. My data collection consists of a 45 to 60 minute interview that will be digitally recorded. I would be grateful if you would allow me to interview you at a place and time convenient to you. I can conduct the interview at your office or workplace, in a public place, or anywhere else that you might prefer. The contents of this interview will be used as part of the data for my study, and may inform my final research report, a presentation to my classmates, and may potentially be used as part of a conference or in a research publication in the future.

As I would be building my research on the work that you do in your classroom, I would like to acknowledge and honour your work; if you agree to participate you have the choice as to whether you want your real name used to acknowledge your work, or would prefer to be listed under a pseudonym in my findings. In either case, the transcript of the interview remains confidential and if you wish to be listed under a pseudonym, anything that might identify you in my written work, oral presentations, or publications will be protected. The only individuals who will have access to the data will be my research supervisor and my course instructor.

As one of the study’s participants, you are free to change your mind at any time, and to withdraw even after you have consented to participate in the study. You may decline to answer any specific questions. I will destroy the audio recording I make of our interview after the papers based on this topic has been presented and/or
published, which may take up to five years after our interview. There are no known risks, though it is important to keep in mind that we will be discussing notions around cultural diversity and equity. The benefit to you participating in this project is an opportunity to reflect more deeply on your practice and contribute to the growing body of research into Environmental Education. I will share with you copies of the transcribed interview to ensure accuracy.

Please sign the attached form if you agree to be interviewed. The second copy is for your records. Thank you very much for your help.

Yours sincerely,

Researcher name: Tatiana Lopez
Email: Phone number:
Research Supervisor’s Name: Hilary Inwood
Email: Phone number:

Consent Form

I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw at any time without penalty.

I have read the letter provided to me by Tatiana Lopez (name of researcher) and agree to participate in an interview for the purposes described.

I would like to be listed as a pseudo name

Signature: ______________________________________

Name (printed): ________________________________

Date: ____________________