CHILDREN, FAMILIES, ENVIRONMENTAL EDUCATION:
CO-CONSTRUCTING ECOLOGICAL IDENTITIES IN A CHANGING WORLD

by

JULIA KATHLEEN OSTERTAG

B.A.H., Queen’s University, 2003
B.Ed., Lakehead University, 2005

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Abstract

In this thesis I present a case study of five children’s experiences at the Intergenerational Landed Learning on the Farm for the Environment Project, and consider how the interplay between children’s agency, their family contexts, and a farm-based environmental education project co-constructs children’s ecological identities. Children’s ability to explore, expand, and enact their ecological identities is considered in terms of contexts that facilitate and constrain their agency. Findings from the research indicate that children’s identities are shifting, and that, increasingly, children are being perceived as teachers empowered to make changes in their families and communities to address environmental issues. Numerous barriers, such as urbanization, increasingly busy childhoods, family contexts, and societal, economic, and ecological transformation as a result of globalization, were found to constrain children’s ability to enact their ecological identities. Informed by a critical pedagogy of place and the new social studies of childhood, I portray children as complex, unique individuals situated within overlapping spheres of influence, and suggest that the Intergenerational Landed Learning on the Farm for the Environment Project provides a model of community-based environmental education that supports children’s exploration and expansion of their ecological identities. The study illustrates that greater efforts are needed to include families and more diverse communities in environmental education in order to validate the knowledge and ways of being of marginalized populations, build stronger intergenerational and intercultural relationships, and distribute the challenges of enacting environmental change at scales appropriate for addressing the extent of current environmental degradation.
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This research has been about relationships between people and places. It has also been made possible because of my relationships with wonderful people and places. I would like to thank some of these here, though there are certainly too many to name and acknowledge appropriately in this short space and in this manner.

I was going to acknowledge places first and then people but, once again, I see that these are inseparable, one flowing into the other. I will begin by recognizing the UBC Farm, since I have been profoundly transformed, spiritually, physically, emotionally, and intellectually, by my experiences at the UBC Farm. Not only have I gathered and eaten oyster mushrooms from the woods and vegetables from the fields, but I have also shared beautiful moments with children, staff, elders, and friends when eagles and owls have graced us with their presence. The Farm has cultivated a community of friends that have made arriving and settling in a new place easier and more meaningful. Saving the Farm has also given a refreshing “raison d’être” during the times when school is just school, instead of a place of transformative learning and action for social and ecological change.

Located on the UBC Farm is the Landed Learning Project, the project that brought me to British Columbia for graduate studies. I would like to thank Landed Learning staff – Stacy, Hannah, Thahali, Oksana, and Laura – for being great friends and guides. I have learned so much from you. To all the wonderful Farm Friends I have had the pleasure of working with and learning from – thank you for your dedication, patience, and open spirits. You are inspiring teachers and lifelong learners. Most importantly, thank you to the children and teachers who bring Landed Learning to life, and who have made this research possible.

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Chapter 1: Introduction

I think these kids are the ones who are going to make the change, really. I think adults are kind of set in their ways...they’ll teach us a thing or two. I think it’s happening.

(Priya, Simran’s mother)

Research context and background

Childhood in the new millennium is being profoundly shaped by unprecedented changes at global and local scales. Compared to their parents, children live in a world of increasing economic, social, and ecological insecurity (Lee, 2001). While children have not been asked to resolve our financial crises, they have received enormous attention from environmental educators, the public, and corporations (King, 1995) to play a role in addressing local and global environmental problems. This has led to a bifurcation in environmental education. One branch of environmental education seeks to increase children’s agency as environmental advocates, and sees children as a vehicle for influencing their parents to change (e.g. Ballantyne, Connell, & Fien, 1998/2006; King, 1995; Uzzell, 1999). Another branch of environmental educators promotes developing children’s sense of wonder in nature instead of confronting children with environmental problems out of concern that this can result in “ecophobia” (Sobel, 1996), an association of nature with fear and apocalypse instead of joy and wonder leading, potentially, to children feeling distanced from the natural world.

Caught between these two paradigms are the children themselves, too often portrayed by environmental education researchers in a “passive view” (Rickenson, 2001) with their agency limited and their complex and unique individual lives largely ignored. In bringing children’s experiences to the forefront, it becomes apparent that
Gruenewald’s (2003) goal of decolonizing and reinhabiting place requires a careful reconceptualization of children’s agency as environmental stewards, and the roles of adults and environmental education programs in co-constructing – with diverse children – ecological identities based on caring identification with nature and place combined with the necessary freedom and support for environmental action.

**Personal journey to the research question**

The initial impetus for this research stemmed out of the deep-seated uncertainty and curiosity that arose when I was encountered the reality of socio-culturally diverse school children’s lives during a series of school visits and interviews conducted with children in September 2007. The interviews were part of the Intergenerational Landed Learning on the Farm for the Environment Project’s\(^1\) yearly interviews with children conducted pre- and post-program by researchers in the Landed Learning project. As one of the researchers in the project that year, I was also an active participant in all facets of Landed Learning’s farm-based environmental education programming – from volunteering with children at the garden, filling in for staff, attending regular meetings with participating teachers and Landed Learning staff, and contributing to the project’s on-going research efforts. These school visits and interviews, however, were my first encounter with the children who would be participating in Landed Learning for the next ten months. Each interview brought me into a brief relationship with a very unique child who shared with me, sometimes eloquently, sometimes monosyllabically, and sometimes in recently learned English, a range of conceptualizations about and experiences with

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\(^1\) Throughout this thesis I will refer to the Intergenerational Landed Learning on the UBC Farm for the Environment Project as “Landed Learning,” “the Landed Learning project,” or occasionally simply as “the Farm”
farms, food, nature, and environmental issues. Reflecting on these encounters and the
diversity each child was bringing to Landed Learning, I began asking myself how a
particular environmental education project could influence children’s connections to
place and develop an environmental ethic of care when each child represented such
diverse social, cultural, historic, economic, and political “roots.”

As a result of these reflections, I designed this research to focus on children and
their families in a study on how children’s ecological identities were being shaped by the
interplay between children, their experiences at Landed Learning, and their family
contexts. It was not until I began synthesizing the emerging themes from the interviews
that I realized that this research in fact addressed a parallel concern. In focusing on
children’s families as the roots shaping their connections to place, I had neglected
children’s agency in shaping their personal ecological identities and becoming social
actors within their families and communities. As I struggled with this challenge and read
more deeply into the literature emerging from the ‘new social studies of childhood’ (e.g.
James, Jenks, & Prout, 1998), I became increasingly aware that this perspective
problematized a general tendency in environmental education to suppose that it is
possible, and ethical, to focus on children solving environmental issues as a measure of
environmental education’s success (e.g. recycling and conserving electricity and water
are common themes). On the surface, this view may appear to promote a relationship
with children that respects and values their agency; however, it may in fact place an
enormous burden on children to become, as Borstelman (1983) identifies it, “child as
future redeemer” (p. 30 cited in Myers, 2007, p. 27) and save society from environmental
degradation (King, 1995; Myers, 2007), without adequately considering the diverse
contexts of children’s lives. Based on these readings, the final research analysis focused more on children’s agency, and the factors constraining and facilitating this agency in the context of environmental action and, more broadly, the development of an ecological identity. Concurrently, the question of how to research with children became a central preoccupation that influenced my approach to this study.

As I participated in my research and volunteered with the children in Landed Learning, I became increasingly aware that the children and other research participants were expressing a shift in children’s roles in environmental education and action. This shift challenged me to recognize children’s agency in co-creating their ecological identities within various “overlapping spheres of influence” (Hidalgo, Sau-Fong & Epstein, 2004, p. 632). Therefore, the research question that emerged from this iterative process of getting to know the research participants and the research site, reflecting on emerging themes and conducting an early literature review, developing and conducting the research study, analyzing research findings, and continuously revisiting previous and new literature is:

*How does the interplay between children’s agency, their family contexts, and their experiences in an environmental education project co-construct children’s ecological identities?*

By exploring this research question, my goal is to contribute to environmental education research and curriculum textured insights from the lives of five children, their families, and their place-based experiences at Landed Learning, and illustrate ways in which we can honour the voices of children, the complexity and uniqueness of their lives, and – as committed communities of adults – create the freedom for children to explore, expand, and enact their ecological identities.
Overview of the methodologies

To address the research question, I designed a qualitative case study of children who participated in Landed Learning from September 2007-June 2008 and their families, and conducted the research between September 2007 and October 2008. Five children (Grades 5 and 6) participated in the study, along with their mothers, teachers, and volunteer mentors (called Farm Friends). My data set is based largely on semi-structured interviews with the five children (pre- and post-program), the children’s parents (only mothers consented to the interviews), the three participating school teachers, and each child’s Farm Friend. Additional data included my research journal and participant observation, photographs of the children at the project, and samples of student work. Throughout the thesis, my voice as a graduate student researcher is present as I attempt to explore how my positionality shapes both research process and research outcomes. This approach is consistent with calls in environmental education (Sauvé & Berryman, 2003) and research with children (Greene & Hogan, 2005) for greater researcher reflexivity.

Due to my underlying commitment to cultivating ethical and respectful relationships with – and between – place and people, the following sections provide an introduction to the key elements that made this research possible: Place (the UBC Farm), People (Landed Learning participants), and Program (Landed Learning).

Place: UBC Farm

The place at the heart of this research is the Centre for Sustainable Food Systems at UBC Farm², and, more specifically, the Landed Learning project located in the

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² Throughout this thesis, I will refer to the Centre for Sustainable Food Systems at UBC Farm as “UBC Farm.”
Children’s Education Garden nestled within this 24-hectare, student-run, campus farm. It was the UBC Farm that initially attracted me to graduate studies at the University of British Columbia because I recognized in the farm a very unique place where my interests and experience in organic agriculture and education could intersect, experientially and theoretically. Moreover, not only is the UBC Farm Vancouver’s only urban farm, it also “provides the sole opportunity in Canada for urban university students to gain practical experience within an on-campus production-scale organic farm” (Friends of the Farm, n.d.).

From a critical pedagogy of place perspective, the history and current situation of the UBC Farm teach us how the colonial and contested relationships between people and place remain an ongoing struggle. The historical context of the UBC Farm is that the UBC Farm, like most of British Columbia, is located on unceded Aboriginal territory. In the case of UBC and the UBC Farm, this is the traditional territory of the Musqueam First Nations. However, the most recent land-use struggles have been over the University’s plans to build market housing on the site and potentially diminish the size of the UBC Farm or relocate it entirely3 (For more on the history and political struggles of the UBC Farm, see Masselink, 2001; Wright, 2009). Although I was unaware that the farm’s future was at risk when I first became involved in Landed Learning, it quickly became apparent when the University started to build market housing on the forested lands adjacent to the UBC Farm. Due to my emotional connection with the UBC Farm, I knew that the grief and frustration that I was feeling – as giant west coast hemlocks and cedars fell and

3 At the time of writing, the University of British Columbia’s Board of Governors has indicated that the future of the Farm is secure; however, the official land-designation of “future housing reserve” has not yet been changed. The UBC Farm is currently in the process of integrating its long-term vision and mission within UBC’s commitments to a Sustainability Academic Strategy (http://www.sas.ubc.ca/) through the work of the South Campus Academic Planning committee (of which I am a student representative).
concrete buildings and green lawns covered the devastation – would be a much more intense if anything similar were to happen at the UBC Farm. As a result, I joined Friends of the UBC Farm and became involved in its campaign to Save the UBC Farm. While the threat of housing development on the UBC Farm had a powerful impact on my personal ecological identity, one of the findings from this research is that it also profoundly shaped a number of students’ connections to place and their environmental ethics of care.

**People: Landed Learning Project participants**

During the 2007-2008 school year, approximately 90 students from three Grade 4-6 classes participated in Landed Learning at the UBC Farm with their three teachers and approximately 40-50 volunteers. Coming from three different inner-city public elementary schools, the students reflect Vancouver’s cultural and socio-economic diversity. In addition, the school communities themselves are very unique and represent different pedagogical orientations. A brief description of the three schools provides some insights into their pedagogical distinctions, as well as the diversity of the students in the three classes. George Brown is a small elementary school (<300 students) with an alternative classroom design – participating students sit in a classroom arranged on a large “deck” where two teachers/two classes share a single space with loose division. The school has a small school garden designed by Landed Learning alumni students, their teacher (Dave Ptok) and Landed Learning researcher and graduate student Laura Estrada (Estrada, 2007). Hollingsworth Elementary is a larger school (520 students) with a more conventional school layout (indoors and outdoors) with individual classrooms and no school garden. Finally, Salmo Elementary is a small (200 students) public Montessori

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4 All school names and project participants’ names are pseudonyms (including adult volunteers, teachers, and students’ parents).
alternative school requiring a special application process to admit new students.

Classrooms at Salmo Elementary have some dividing walls, yet there is an open-concept feel to the school and the classes are multi-age. While there is no school food garden at Salmo Elementary, outdoor classroom space has been integrated into the schoolyard. Most of the students at both George Brown and Hollingsworth Elementary are visible minorities and over half speak English as a second language. This cultural diversity is less prominent at Salmo Elementary.

Volunteers at Landed Learning include university students and community members ranging in age from young-adulthood to senior citizens. While not all volunteers have farming or gardening experience, more knowledgeable volunteers are generally placed with more inexperienced volunteers in teams of two. These teamed adults, known as Farm Friends, work with groups of three to five children for the duration of the Landed Learning program. The majority of volunteers, staff, and project researchers are well-educated, Caucasian women, and, with hardly any exceptions, passionately dedicated to the children, the UBC Farm, and the goals of the Landed Learning project.

**Pedagogy: The Intergenerational Landed Learning Project**

Located in the Children’s Educational Gardens at the UBC Farm, the Intergenerational Landed Learning on the Farm for the Environment Project is committed to building caring relationships between people and place through experiential, intergenerational, food- and farm-based environmental education. As stated on its website, Landed Learning focuses on:
agriculture and food as the link between a healthy environment and human wellbeing. By uniting generations in a community learning initiative this program illustrates the values of lifelong learning, community mindedness, ecological and social citizenship, and civic responsibility. These are values that are difficult to communicate in schools and classrooms and are best learned through personal and community experience. (Landed Learning, 2008)

As a project of the Department of Curriculum and Pedagogy in the Faculty of Education, Landed Learning staff, graduate students researchers, and Faculty members have been developing and researching its environmental education programming since 2002. Three key questions guide the project and research agenda:

1. Will young people develop care for the environment through working with community adults to grow food crops on an urban organic farm?
2. What role does an intergenerational approach play in inspiring stewardship in children?

The curriculum for Landed Learning is based on 11 full-day farm visits and one school visit from September to June, each one exploring seasonally-relevant themes that introduce participants to the concepts and practices of sustainable agriculture, ecology, and nutrition. Although some learning at the farm takes place formally in an on-site greenhouse in a class-like context, most learning emerges through interactions with the land and collaboration with peers and volunteers in Farm Friend groups. Farm Friends work together over the school year to plan, plant, weed, observe, and otherwise tend to their own garden bed (e.g. mulching, composting, adjusting nutrients or pH levels, etc.) according to the principles of organic agriculture. Food from the garden is harvested and prepared in the kitchen by the students, and linked to nutrition education. The experiential learning that takes place at the farm is integrated with classroom lessons
across the curriculum. Curriculum connections are made by providing teachers with supporting resources (Mayer-Smith & Peterat, In Press) and through extensive collaboration between teachers and Landed Learning staff and researchers.

**Significance of the problem area**

Although researchers with Landed Learning recognize the project’s influence on children’s ecological identity construction (e.g. Estrada, 2007; Mayer-Smith et al., 2007), a connection between children and their families has not been studied and anecdotal evidence from project participants indicates that family background is a significant factor in children’s learning. In addition, we were hearing reports that children’s participation in the project may also be transforming their families. As one of the participating teachers, Andrew Brown, stated in a closing circle after one of the schools’ farm visits, “Another seed has been planted” and children are having conversations with their parents, and have plans for gardens at home (Researcher journal, February 14, 2008). Therefore, by interviewing children’s families, this research provides new insights into Landed Learning’s reach in providing farm-based environmental education experiences for children, and through these children, potentially for their families and communities.

Environmental education has long focused on children as “captive audiences” largely influenced by adults to acquire the environmental knowledge, skills, attitudes, and behaviours that will increase future ecological sustainability. This research, therefore, will increase our understanding of how children’s agency influences intergenerational environmental learning, an area under-researched in environmental education. Moreover, by focusing on children, my research contributes to the ‘new social studies of childhood’ and an emerging body of methodological considerations that specifically address
children’s agency and voice in the research process (e.g. Christensen & James, 2008; Freeman & Mathison, 2009; Greene & Hogan, 2005). The in-depth qualitative case study approach I adopted for this research – based on the detailed experiences of five children, their families, and a farm-based environmental education project – provides up-close socio-cultural descriptions of children that are attentive to children’s agency and their unique family contexts.

Finally, by working between paradigms that include critical pedagogies and place-based environmental education, a focus on children’s agency and a focus on children’s context, recognizing children’s action competence and the need to foster children’s relationships of love and wonder with nature, this research also contributes to academic endeavours to move away from dichotomies, particularly human-nature dichotomies (e.g. Ingold, 2000), and learn from the best of both worlds.

**Overview of the thesis**

Following this introduction, Chapter Two provides a review of the relevant literature. Since environmental education is inherently interdisciplinary, this literature review summarizes various perspectives – from environmental education, to anthropology, to sociology – to explore how children’s ecological identities are co-constructed through agency, their experiences at Landed Learning and their home contexts. Beyond the theoretical frameworks, the literature review also includes a history of farm- or garden-based education (from a Western perspective) and places the research more specifically within emerging studies on intergenerational influences (largely from child to parents) in environmental education.

Chapter Three describes the study’s qualitative research methodologies and
methods, with particular attention to the implications – ethical, methodological, and theoretical – of researching with children in an environmental education context.

In Chapter Four I present the ecological narratives of the five incredibly unique children – Stephanie, Simran, Michael, Aaron, and Frida – who participated in this research. Since the research’s theoretical framework seeks to balance children’s agency with an understanding of their contexts, the narratives focus on the children’s ecological identities and their experiences at home, school, and Landed Learning. While the narratives are focused on the lives of the five children, they still include the voices of their mothers, Farm Friends, and teachers to provide insight into the overlapping spheres of influence that are facilitating or constraining the exploration, expansion, and enactment of these children’s ecological identities. These five narratives are followed by a brief autobiographical account of my personal ecological identity.

The children’s complex and rich stories are examined in Chapter Five to provide an overview of how the findings from each case reveal that, while each child’s experience is unique, when taken together their stories can teach us about how the context of diverse family spheres, a farm-based environmental education project, and a changing world are simultaneously constraining and freeing the expression of children’s agency to be environmental citizens and to develop caring connections with nature.

I conclude in Chapter Six by summarizing my research findings, making recommendations for environmental education programs by suggesting a community-based approach, and proposing areas for future research.
Chapter 2: Literature Review

This study of how the interplay between children’s agency, their family context, and a farm-based environmental education project co-constructs children’s ecological identities is broad and inherently interdisciplinary. Accordingly, in this chapter I review literature based on three salient thematic areas. First, I position the research within environmental education, focusing on garden- or farm-based education, a critical pedagogy of place, environmental education research, and research on intergenerational learning and influence. Next, I consider the concept of ecological identity, specifically addressing how care and emotions are central in constructing an ecological identity. Lastly, I turn to children and childhood studies. This third section, which includes a review of the new social studies of childhood, children and families, and considerations for researching with children, reflects an exciting area of research that is new to me and emerged as a result of the research process. Remaining open to seeking new literature to answer emerging questions and guide the research process is consistent with the iterative nature of qualitative research (Hesse-Biber & Leavy, 2006, p. 57).

Environmental Education

Education has been heralded as one of the key strategies to address our growing ecological crisis, as attested by the United Nations declaring 2005-2014 as the United Nations Decade of Education for Sustainable Development, “emphasizing the critical role of education [formal, non-formal and informal] in achieving sustainable development” (UNESCO, 2007, p. 5). Environmental education has been contributing to making the public more environmentally conscious and aware for nearly 40 years by developing
people’s knowledge, skills, attitude, and behaviour to investigate issues, solve problems, and protect and improve the environment (UNESCO, 1977; Uzzell, 1999). As the field of environmental education has evolved, considerable debate has emerged regarding the field’s terminology, resulting in a plethora of theoretical orientations. Many practitioners and researchers prefer sustainability education (e.g. Sipos, Battisti & Grimm, 2005), place-based education/critical pedagogy of place (e.g. Gruenewald & Smith, 2008), ecopedagogy (e.g. Kahn, 2008), socio-ecological education (e.g. Gough, 1999; McKenzie, 2004), or education for eco-justice (e.g. Bowers, 2001); however, I continue to employ the term environmental education for its usefulness as an umbrella concept to encapsulate differing perspectives, instead of engaging in what Gage (1989) called endless “paradigm wars” (cited in Gough, 1999, p. 37).

**Garden- or Farm-based education**

Landed Learning, with its emphasis on growing food on a working farm, exemplifies a farm-based environmental education project (Bartosh, Mayer-Smith, Peterat & Sinkinson, 2004). The project also fits within the broader category of garden-based education, which United Nations researchers have defined as “an instructional strategy that utilizes a garden as a teaching tool. The pedagogy is based on experiential education, which is applied in the living laboratory of the garden” (Desmond, Griesshop, & Subramaniam, 2004, p. 20). As such, it fits within a range of experiential, hands-on pedagogies occurring in outdoor classroom spaces such as school gardens, rooftop gardens, naturalization projects, insect gardens, butterfly meadows, etc. (Coffey, 2006, p. 16). Since the terminology in the literature is relatively ill-defined, I will use the terms
farm- and garden-based education interchangeably, and include both in a review of the history of school gardens in western educational theory and practice.

The relationship between education, children, and gardens has been a facet of western educational philosophy for hundreds of years, influenced by Comenius, Rousseau, Pestalozzi, Froebel (who developed the first ‘Kindergarten’ or children’s garden), Dewey, and Montessori (Subramanian, 2002; Gaylie, 2008). Prussia developed a law in 1869 that required school gardens to be part of public school education (Subramaniam, 2002), and educational literature in North America cites a relatively long history of school garden initiatives. According to Subramanian (2002), schools and teachers have been using gardens to teach since the early 1900s, though Coffey (2006) pushes this date back to the early 1850s when there were “several campaigns to transform North American school grounds” (p. 1). Early initiatives in the United States were based on a belief that school gardens played a role in social reform, patriotism, and encouraging civic virtues (Coffey, 2006; Trelstad, 1997), though the need for beautification, protection from heat and cold, and student health were also considered essential (Coffey, 2006). Canada has also had a long history of school gardens, which, from 1913-1923, was largely shaped by the federal Agricultural Instruction Act (Tomkins, 1986). During this time, “school gardens in [Quebec] grew in number from 188 in 1910 to 1468 in 1920” (Heap, 1982 cited in Tomkins, 1986 p. 122). Of particular interest to contemporary proponents of school garden projects is Tomkins’ (1986) description of the ultimate failure of school agriculture as “an early example of the perils of curriculum implementation” (p. 122).

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5 The objectives of school agriculture were largely part of the educational movement of the day called Nature Study, which intended to “spiritualize” agriculture. “Other utopian objectives included the creation of a set of health giving principles, a positive viewpoint concerning country life, the recognition of virtues immanent in the work of the soil and the acknowledgement and application of the individual’s power over
Although by 1915 leading North American educators had recognized the importance of school gardens for whole education and city beautification (Coffey, 2006), the movement declined dramatically by the end of the 1920s (Trelstad, 1997). School gardens experienced a brief resurgence during the 1940s in the form of Victory Gardens, which were seen as part of the war effort in Canada and the United States (Coffey, 2006; Gaylie, 2008; Trelstad, 1997); however, sustained interest in school gardens did not return until the mid-1980s through Britain’s *Learning Through Landscapes* program (Coffey, 2006). Nevertheless, even with this long history and recent revival, school gardens remain the exception, not the rule, in children’s educational experiences. According to Evergreen (2006), only 0.5% of Canada’s 16,000 schools have school food gardens, compared with 5-10% of schools in the UK and 30 percent in California (p. 5-6).

Recent school garden initiatives have focused on the relationship between school gardens and developing environmental awareness, ecological identity, or scientific knowledge (Blair, 2009; Mayer-Smith, Bartosh, & Peterat, 2007). These initiatives have developed in response to concerns that increasingly urbanized children no longer have the connection to the natural world necessary to develop *care-full* relationships with nature. These concerns have been labelled variously as “nature-deficit disorder” (Louv, 2008), “extinction of experience” (Pyle, 2002), and “environmental generational amnesia” (Kahn, 2002). While the literature indicates their effectiveness in terms of cultivating environmental awareness and stewardship, school gardens have not been adequately

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nature” (Tomkins, 1986, p. 121). Many of these objectives probably still ring true today (except perhaps the last), which should act as a warning to educators as school gardens once again become envisioned for an increasing numbers of schools. Otherwise, we risk repeating the mistakes of the past in implementing garden experiences into the school curriculum.
investigated in terms of their capacity to increase diverse children’s agency as environmental citizens capable of action beyond the garden bed.

**Critical pedagogy of place**

The literature on garden-based education indicates its position within the field of place-based environmental education (Hutchison, 2004; Smith, 2002; Woodhouse & Knapp, 2002). According to Hutchison, community gardening initiatives are an example of environmental education programs that emphasize local more than global study. While garden- and farm-based education research indicates their effectiveness at cultivating environmental awareness, a critical pedagogy of place (Gruenewald, 2003, 2008) lens has largely not been employed by researchers to include students’ sociocultural contexts. Since many researchers cite the important relationship between culture, learning, and the environment, additional research to explore these relationships is needed. Gruenewald’s (2003) critical pedagogy of place provides an appropriate theoretical framework for this research, in that it combines critical pedagogy and place-based education and can result in the best of both worlds: “critical pedagogy offers an agenda of cultural decolonization, place-based education leads the way to ecological reinhabitation” (p. 4). Moreover, according to Gruenewald, a critical pedagogy of place overcomes some of the critiques of critical pedagogies and theories, on the one hand, which focus almost exclusively on the social and urban realms, and place-based pedagogies, on the other hand, which have been largely oriented toward rural populations and ecology.

Bowers’ work, both in critiquing critical theory and developing ecojustice education – an approach that reconciles some of the differences between ecological place-based education and critical pedagogies, provides some key ideas leading toward the
development of a critical pedagogy of place (Gruenewald, 2003). Although Bowers (1995) recognizes the importance of developing relationships to place, he also recognizes the role of individuals, language, and culture in constructing knowledge and worldviews: “If we are to avoid the double bind that our rationalistic ways of thinking puts us in terms of deepening the ecological crisis, it will be necessary to understand the complex nature of culture” (p. 28). As a result of this, Bowers advocates for trans-generational learning and communication based “on a deep knowledge of several cultures” (p. 194). However, although both Bowers and Gruenewald acknowledge the role of culture in shaping learning and our relationships with nature, neither problematize ‘trans-generational learning’ by unpacking the inherent power differences and sociocultural contexts that characterize adult-child interactions. McKenzie (2004) critiques this position from a poststructuralist perspective, questioning critical theorists’ “notion of a unified subject, capable of self-conscious agency” (p. 179). Therefore, while Gruenewald (2003) commends Bowers for being one of the few educational theorists taking the intellectual challenge of “interrogating the links between environment, culture, and education” (p. 11), it is clear that additional work is required to understand the “cultural complexity of decolonizing and reinhabiting places” (p. 11). Environmental action competence (e.g. Uzzell, 1999, see below), an area of environmental education largely developed by a Danish group with a critical pedagogy foundation, may be a bridge between critical and post-structural theories that can contribute to a critical pedagogy of place, since environmental action competence is based on how (1) factual knowledge, (2) interpretive knowledge, and (3) commitment to change influence a person’s agency, within the space of human freedom and complex contexts (Fontes, 2004).
Environmental education research

The lack of consideration regarding the place of children in a critical pedagogy of place is paralleled by

a high degree of conceptual uniformity within the evidence base [in environmental education research] in the sense that much of the research is underpinned by a passive view of students. Students in environmental education learning research tend to be individuals who are to be altered though educational programmes, or young people whose environmental attitudes and knowledge need to be understood in order that they can be more effectively changed through educational interventions. (Rickenson, 2001, p. 217)

Rickenson’s (2001) review, *Learners and Learning in Environmental Education*, provides an excellent starting point for understanding how environmental education research inquires into the interplay between children, their parents, and environmental education projects. According to Rickenson, three established nodes of evidence in environmental education research between 1993 and 1999 include (1) learners’ environmental knowledge; (2) learners’ environmental attitudes and behaviours; and (3) learners’ environmental learning outcomes. This thesis positions itself within what Rickenson identifies as the three emerging nodes of research: (1) learners’ perceptions of nature; (2) learners’ experiences of learning; and (3) learners’ influences on adults (p. 219). The questions associated with the third node form a central area of investigation for this thesis, since I consider children’s capacity to influence adults to be an example of children’s agency in enacting their ecological identities. As the dearth of research into intergenerational influence through environmental education indicates⁶, this is an area in need of additional research (Ballantyne, Connell & Fien, 1998/2006; Ballantyne, Fien & Packer, 2000; Duvall & Zint, 2007; Leeming & Porter, 1997).

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⁶ Rickenson (2001) cites five studies and Duvall & Zint’s (2007) review is based on ten studies.
Intergenerational learning and influence

Children’s ecological identities have particular salience when children are able to become ecological and social actors by sharing their learning and environmental ethic of care with their families and communities. Understanding whether and how children can influence parents’ and community knowledge and behaviour regarding environmental issues through children’s participation in environmental education programs is poorly understood by environmental education researchers. However, the implications are significant. Currently, most environmental education programming is aimed at children since children are considered to be “a captive audience, represent future environmental stewards, and are more easily taught and influenced than adults” (Vaughan et al., 2003, p. 13; see also Duvall & Zint, 2007). Three problems arise with this orientation in environmental education. Firstly, and most frequently critiqued by researchers investigating intergenerational influence, focusing on educating children ignores the inevitable delay in responding to environmental problems requiring immediate attention (Ballantyne et al., 1998/2006; Duvall & Zint, 2007; Uzzell, 1999). Secondly, the common perception of children as a captive and easily influenced audience is rarely questioned in terms of its representation of children’s agency and the “nature of the teaching-learning relationship between adults and children” (Uzzell, 1999, p. 397; See also Ballantyne et al., 1998/2006). Finally, this perspective erases the social, cultural, political, and economic differences that shape children’s lives and dramatically influence their agency in society (Ballantyne et al., 1998/2006; King, 1995; Uzzell, 1999).

While extensive research is currently lacking, reviews of studies on intergenerational influences indicate that children can influence their parents’
environmental understanding and action (Ballantyne et al., 1998/2006, 2000; Duvall & Zint, 2007; Evans, 1996; OECD, 2009; Uzzell, 1994). Drawing on social science research, Ballantyne et al. (1998/2006) indicate that, “increasing with age, children and adolescents can actively influence their parents’ values, attitudes, parenting decision making and family solidarity in a reciprocal and constructive manner” (p. 420).

Unfortunately, most research in environmental education and the social sciences continues to emphasize a passive view of children by focusing on “a unidirectional influence of adults upon students” (Ballantyne et al., p. 417) and superficial physical and material changes, particularly in terms of consumer choices (King, 1995; Uzzell, 1999). Examples of oft-cited literature that emphasizes the influence of adults in shaping children’s ecological identities include Rachel Carson’s (1956) frequently cited and seminal The Sense of Wonder and Palmer’s (1998) study from the early 1990s that found that 42% of respondents cited childhood experiences in the “outdoors” and 38% cited the role of their parents or other close relatives as significant in shaping their commitment to environmental concerns (p. 150; See also Chawla, 2002). While adults and families are certainly important in shaping children’s ecological identities (Rickenson, 2001, p. 245), in order to better understand the role of children in influencing adults’ environmental attitudes and behaviour Ballantyne et al. (1998/2006) call for additional research to:

- document the process of parent-student and community-student interaction;
- describe the nature of influences, especially in terms of environmental learning and actions, between young people, parents and community;
- determine how students, parents and community members perceive processes of influence in their relationship and ascertain the extent of student agency and parental interest;
- identify factors affecting the process of intergenerational influence, including the influence of school and community context;
- evaluate the effectiveness of environmental education programmes in promoting intergenerational influence;
• define pedagogical considerations in environmental education programme design and teaching approach related to intergenerational influence; and
• develop methods for measuring the transfer of intergenerational environmental learning. (p. 421)

This thesis contributes to efforts to address all but the last of Ballantyne et al.’s recommended areas of additional research.

Although the research is still preliminary and limited, studies indicate that certain factors can contribute to increasing intergenerational learning through environmental education programming. Conversation is understood to be one of the key mediums for intergenerational influence to occur (Ballantyne et al., 2001; Leeming & Porter, 1997; Uzzell, 1999). Factors that increase discussions at home include: (1) requiring students to do homework or projects at home; (2) participation in novel or particularly enjoyable experiences (usually out of the classroom; however, discussions are often limited to descriptions of the experience); and (3) duration of the program (Ballantyne et al., 2001; Uzzell, 1999; Vaughan et al., 2003). None of the research indicated whether parents’ participation in the environmental education program itself (for instance, beyond the role of chaperone during overnight trips) influences intergenerational learning; however, Uzzell (1999) concludes that “for catalytic effects to occur it is necessary to work simultaneously with the child and the parent(s) in order to support both the children and the parents” (p. 407).

Two general research orientations characterize studies on children’s agency in shaping adults’ environmental learning. While both focus on empowering children to become active social agents, Ballantyne et al., (1998/2006) advocate for a dynamic interactional approach while Uzzell (1999) calls for increasing students’ action competence. The dynamic interactional model is based on the “mutual interaction
between people (irrespective of age) and the environment in which they are active agents” (Ballantyne et al., 1998/2006, p. 419); whereas environmental education within an action competence framework “concerns itself with action on the social and natural environment rather than simply the acquisition of learning or opinion formation. Action-competent environmental education aspires to reach…solution finding. It will necessarily imply the ‘training of the political subject’ (the citizen)” (Uzzell, 1999, p. 402). While Ballantyne et al. and Uzzell’s theoretical positions differ slightly, the outcomes remain similar in terms of promoting children’s agency, understanding the interplay between agency and context, and, ultimately, focusing the project of environmental education toward attaining solutions to ecological and social problems.

Not all environmental educators, however, see the goal of environmental education in terms of empowering students to bring about social and ecological changes. Sobel (1996), for instance, is concerned that confronting children with environmental issues at inappropriate developmental stages can lead to “ecophobia”, or a fearful view of nature that can result in paralysis rather than action. Sobel (1996) advocates that, “what’s important is that children have an opportunity to bond with the natural world, to learn to love it before being asked to heal its wounds” (p. 10 cited in Gruenewald, 2003). These diverging positions, according to Berryman (2000), have led to tensions within environmental education: “On the one hand, some [e.g. Cobb, 1977; Hutchison, 1998; Sobel, 1995] insist on empathy, exploration, bonding, attachment and relatedness while on the other hand, some [e.g. Uzzell, 1994] insist on problem solving and acquiring action competencies” (p. 10). By exploring how children’s ecological identities can grow out of an ethic of environmental care and through the support and space for children to
enact their agency, this thesis attempts to learn from and contribute to both perspectives, since, as Berryman suggests, the goal is to bring the need for wonder and agency closer together, instead of focusing on their either/or nature.

### Ecological Identities

According to Thomashow (1995), ecological identity “refers to all the different ways people construe themselves in relationship to the earth as manifested in personality, values, actions, and sense of self” (p. 3). Since most people understand themselves in terms of their social identities (e.g. gender, culture, etc.), acknowledging the significance of our ecological identities “gives an individual the ability to connect his or her social behaviour to its environmental impacts” (Zavestoski, 2003, p. 298). As such, ecological identity moves beyond environmental education’s focus on developing knowledge or changing behaviour, and emphasizes a relational view that recognizes that “to be in touch with the earth requires acquiring an ecological identity co-constructed with others (human and non-human) and thus has to do with how we see ourselves in the world and in relation to others” (Morris, 2002, pp. 81-82). Moreover, since identities are based on “long-term, living relations between persons and their place and participation in communities of practice” (Lave & Wenger, 1991, p. 53), ecological identities are best understood as plural, fluid, and dynamic (Kalof, 2003, p. 163) and maintained when other social actors treat these identities as meaningful (Zavestocki, 2003).

Since much ecological identity “work” (Thomashow, 1995) is conducted in an autobiographical and retrospective mode, the concept is frequently critiqued for lacking in usefulness. Zavestoski (2003) suggests that, “rather than concerning ourselves with the precise origin of ecological identities, we might do better to focus on the ways that
current social structures and social meanings prevent ecological identities from becoming more important and more salient identities in a wider range of individuals” (p. 311). This is a valid critique, which I attempt to address in this thesis by investigating the social structures that constrain and facilitate the emergence of ecological identities, particularly in the context of child-adult relationships.

Ingold (2000) provides important insights from the field of anthropology into identity construction that challenges human-nature dichotomies and can inform thinking about non-hierarchical teaching and learning relationships. According to Ingold (2000), identities result from “condensations of histories of growth and maturation within fields of social relationships” (p. 3). By focusing on how children are literally grown (he compares raising children to growing a garden), Ingold (2000) questions the traditional genealogical model that informs much our thinking of children as the products of their parents and society. In the genealogical model “the essential or substantive components of personhood are ‘handed on’, fully-formed, as an endowment from predecessors. Their origins, in other words, lie in the completed past, rather than in the present lives of recipients” (p. 135). Ingold (2000) proposes, instead, that

persons undergo histories of continuous change and development. In a word, they grow. Indeed more than that, they are grown. By this I mean that growth is to be understood not merely as the autonomous realisation of pre-specified developmental potentials, but as the generation of being within what could be called a sphere of nurture. (p. 144)

Though Ingold writes from an anthropological perspective, much of his work parallels the theoretical underpinnings of the new social studies of childhood. Ingold’s understanding of learning and identity construction, therefore, provides important conceptual frameworks for this thesis and my exploration into children’s ecological
identities in terms of children’s agency and their situation within complex spheres of influence (e.g. Landed Learning, family, school, community, culture, etc).

**Care and emotion**

Identity can also be conceived of as affinity, or “our kinship with those with whom we have a community of interest rather than a sameness of essential character” (Kalof, 2003, p. 163). As such, feelings are a critical component of ecological identity construction for they are one way in which we are – bodily and cognitively – able to expand our sense of self into the world (Ingold, 2000; Milton, 2002). For instance, when I see an old tree being cut down that I have known for years, my emotional response is visceral, and reminds me of how connected I am to my surroundings (e.g.: Milton, 2005; Sommer, 2003). In recognizing our identification with nature, people feel inclined to act protectively towards nature (Milton, 2002, p. 74). The work of Wilson (1984) in developing the concept of biophilia would indicate that all people have an innate affinity with nature; however, this identification process is not universal. Milton (2002) suggest that,

> [w]hat each individual comes to value most will depend on the context in which they learn about the world, the kinds of personal experiences they have, the ways in which they engage with their fellow human beings and with their non-human surroundings. The process of living, and learning to live, in particular contexts provides each individual with the reference points for defining their own personal identity. (p. 108-109)

Investigating an “ethic of care” (Gilligan, 1982; Noddings, 1992) or, more specifically, an environmental ethics based on care (e.g. Bai, 2004; Jickling, 2004; Leopold, 1949/1968), can provide insight into how an identity expands to include feelings of
affinity with the natural world, as well as the contexts (particularly educational) that help co-construct feelings of identification with nature.

**Children and Childhood Studies**

Due to the interdisciplinary nature of this research and topic, I am not able to provide an exhaustive review of the literature on children and childhood within the scope of this master’s thesis. To support my research design and findings, however, I have drawn from a number of texts from sociology, psychology, and education that I feel illuminate this discussion on children, childhood, families, and considerations required for conducting research with children.

**The new social studies of childhood**

The study of children and childhoods as an area for formal academic research has grown dramatically in the past decade (Fass, 2008, p. xi). This has led to a burgeoning field called ‘the new social studies of childhood’ (or the new sociology of childhood) based on a child-centered, social constructionist (James, Jenks, & Prout, 1998) or social constructivist (Freeman & Mathison, 2009) view of childhood. At the heart of the new sociology of childhood lies a critique of traditional developmental psychology and social learning theory for viewing children as ‘human becomings’ rather than ‘human beings’ (James et al., 1998), which casts children as incomplete adults imitating or modelling their parents rather than adopting “styles of behaviour that allow them to navigate the social settings of childhood” (Scourfield, Dicks, Drakeford, Davies, 2006, p.8). The following list summarizes Brooker’s (2001) principles of a new social science of childhood:
• childhood is a distinct phase in human experience, valued for its own unique qualities rather than its resemblance to adulthood
• children are fully formed and complete individuals (not incomplete adults)
• children are autonomous subjects (not members of families) whose views are not assumed to be identical to their parents’ or families’
• children have rights of their own (cited in Freeman & Mathison, 2009, p. 7)

In addition, scholars in the new social studies of childhood recognize that there is no universal notion of “childhood” but that it is differentiated by age, class, race, gender, and other social identities (Freeman & Mathison, 2009; Gutman & de Coninck-Smith, 2008). Furthermore, as a result of globalization and the effects of the “age of uncertainty” (Lee, 2001, p. 2), the dichotomy between the independent adult and the dependent child is blurring (Lee, 2001). Children are no longer perceived as essentially vulnerable and dependent on adults, and adults’ independence is eroding alongside the erosion of other stable adult identities (e.g. employment stability, long-term relationships, etc.). The most salient example of children’s increasing voice and independence in society is the adoption of the UN Convention on the Rights of the Child\(^7\) in 1989.

These changes have significant implications for children and educators, in that it “becomes difficult to know how to colonize this uncertain future, to predict what sort of person is best suited to that future. Furthermore, there are few guarantees that investments made in the young will produce a reliable return” (Lee, 2001, p. 33). Lee, like most theorists in the new social studies of childhood, refers largely to social environments and the impacts of globalization on our social or economic identities (employment, gender roles, relationships, etc.). The impacts of global ecological

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\(^7\) E.g.: The UN Convention on the Rights of the Child (adopted in 1989) ostensibly increases children’s agency by creating a space for their voices to be heard. Article 12.1 states that “Parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child” (General Assembly of the UN cited in Lee, 2001, p. 93).
destruction on our identities, on the one hand, and our strategies to educate children for a sustainable future, on the other, have largely not been explored by researchers in either the new social studies of childhood or environmental education.

**Children and families**

Traditional research on children has focused primarily on the influence of family and parents on children’s development and socialization: “The family, alongside the school, was seen as a major site for the socialization of children and, in studies until the 1960s, the question of the agency of children – the possibility that children might be studied as independent social actors – was rarely raised” (James & Prout, 1996, p. 42). While children’s agency defines research in the new social studies of childhood, researchers are still well aware that “the family’ (together with the school) provides one of the more important social and emotional contextualizations of [children’s] everyday lives” (James & Prout, 1996, p. 45). The challenge for contemporary researchers, therefore, is to recontextualize children within their families and “take account of the permeability of the boundaries between families and the outside world and the ways in which children negotiate there” (Brannen & O’Brien, 1996, p. 1).

The relationship between children and their families also has important implications for education. While schools are still largely separate institutions with very little two-way communication with families, education researchers recognize that families play a powerful role in shaping students’ learning:

Although family influences are both powerful and continuous, they are relatively hidden. Many schools know little and see less of the family lives and circumstances of the children they teach. While this is generally true, it is particularly heightened where family culture and lifestyle differs sharply from that of the class and staff rooms, where families lack
confidence, do not speak English as a first language or have become disaffected through their own school experience. (Bastiani, 2000, p. 20)

The challenge for educators in the context of rapid cultural change is, according to Hargreaves (2001), that the sociocultural distance between teachers, their students, and their students’ families is widening. Teachers represent a relatively ethnoculturally homogenous group, and, as a result, “they are physically, socially, and culturally removed from the communities in which they teach and do not know where parents and students are coming from” (Hargreaves, 2001, p. 1062).

While the above examples illustrate the sociocultural distance between school teachers and students’ families, the same holds true for environmental education and educators, where the worldviews of marginalized people have not been adequately represented (Marouli, 2002). In response, Marouli (2002) suggests, “Multicultural Environmental Education highlights the importance of reaching out to culturally diverse populations and of understanding, respecting, and utilizing their perspectives in environmental education” (p. 28). Increasing the number of “migrant professionals” in environmental education programming has also been seen as one solution to overcoming the sociocultural distance between students, families, and environmental educators (Van der Waal, 2009).

One of the critiques of multicultural environmental education has been its focus on understanding cultural diversity mostly in terms of ethnic diversity, and less frequently in light of social class (Marouli, 2002, p. 39). In addition, while culture and class play important roles in differentiating families, gender roles are also important considerations. With a shift toward increasing children’s agency in society and within the family, “[a]dults, though primarily mothers, ‘sacrifice everything’ for their children and
they, in return, are expected to experience ‘the best time of their lives’” (Jenks, 1996, p. 14, see also King, 1995). I use in-depth qualitative case studies in this study to address the need in environmental education research and research on children and families more generally for more nuanced explorations the intersections of culture, class, and gender at the level of diverse children and their families.

**Considerations for researching with children**

Influenced by the emerging new social studies of childhood, childhood researchers have become increasingly aware “of the invisibility of children’s perspectives and voices and the fact that children’s worlds have typically become known through adult concerns” (Brannen & O’Brien, 1996, p. 1). Researchers are proposing alternative approaches for researching with children to increase their agency and voice throughout the entire research process and value the unique ways in which children experience the world (Greene & Hill, 2005, p. 3). One of the ways in which researchers propose to overcome the *adult ideological bias*, in which we “obtain, analyze, and interpret data about children from the perspective of nonchildren” (Boocock & Scott, 2005, p. 33)\(^8\), is to encourage methods whereby children are involved in research design, analysis, or review of transcriptions (Greene & Hill, 2005, p. 12). Maximizing opportunities for children’s input at each stage of the research process is consistent with the UN Convention on the Rights of the Child and participatory research considerations (Hill, 2005, p. 65). While increasing children’s participation in the research process is laudable, numerous practical and ethical challenges exist that can limit the effectiveness of their participation. These are addressed in more detail in Chapter Three.

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\(^8\) This bias has been compared to the discrimination encountered by women and racial and ethnic minority communities (Boocock & Scott, 2005)
Summary

Children and adults’ identities are undergoing rapid change as a result of globalization (Lee, 2001) and global ecological destruction. We are increasingly uncertain about how to prepare for this future; however, children and environmental education – particularly garden- or farm-based education – are well-positioned to play important roles in shaping this uncertain future. Greater research is required to recognize that children’s ecological identities are not developed in a vacuum but that they are co-constructed through children’s agency, their emotional connections to place, their family contexts, etc. Based in the theoretical foundations of a critical pedagogy of place and the new social studies of childhood, this research aims to understand how environmental education can co-construct children’s ecological identities in ways that nurture an ethic of environmental care, empower children’s agency to become social and ecological actors (e.g. through children’s capacity for intergenerational influence from child to adult), and respect, value, and integrate the diverse contexts of children’s lives and families.
Chapter 3: Methodology

Each interviewing relationship is unique, just as each child is an individual. (Rogers, Casey, Ekert, & Holland, 2005, p. 159)

The purpose of this study is to understand how the interplay between children’s agency, their experiences at a farm-based environmental education project, and their family contexts constrains or facilitates the exploration, expansion, and enactment of children’s ecological identities. In this chapter I first provide my rationale for selecting a qualitative case study research design, including an introduction of the research participants, and discuss some considerations for researching with children. In the ensuing sections I describe the data collection methods, transcription process, data analysis, research ethics, and conclude with a discussion of the limitations to the research.

My approach to research design in this thesis reflects the iterative and dialectical processes of learning to research, researching, and learning from my research that have characterized this experience and its outcomes. Mid-way through this research process, I read Weber’s (2001) short story, The Research Bazaar, which I felt captured my experiences with research methodologies. The story is about a young graduate student who, “seeking the truth, ventured into the research marketplace, hoping to buy some good methodology” (p. 196). He purchases many methodologies, each in attractive, bright packages but, upon opening them, finds them all more or less the same on the inside. Confused, he contacts his advisor who replies ambiguously, “Things are seldom what they seem” (p. 198). Weber does not share with the reader what finally happens in the keen graduate student’s search for a methodology, though we learn that the student’s advisor believes
that he would probably soon (too soon) stop comparing them and that once he began to notice the differences, alas, he would no longer perceive the sameness...Unless he would be one of those who dare to handle paradoxes and use them wisely, who dare to combine and create, and who dare to treat methodology as methodology, which sometimes means treating it as more than methodology.

(p. 198)

As a graduate student researcher, I recognize my own confusion and uncertainty in this fictional story. In the end, I appreciate my mentors’ words (live and on paper) in guiding me on this research journey; however, I am well aware that I remain a novice in conducting research. For this, Merriam’s (1998) cautious but helpful words give me cause to hope:

If the personality characteristics [i.e.: tolerance for ambiguity, sensitivity, and communication skills] are present to some degree, [qualitative research] skills can probably be cultivated; certainly communication skills can be developed to a higher level in almost everyone. And of course the more experience a person has in doing this type of research, the more likely it is that the needed skills can be developed. (p. 24)

**Qualitative case study**

My choice of qualitative research methodologies in this study have been fundamentally influenced by the theoretical framework of a critical pedagogy of place (Gruenewald, 2003), which continuously reminds me to be attuned to the role of culture and power in shaping our various relationships with people and places. Guided by this perspective, I decided upon a case study research design with multiple cases to gain insight into the influence of the Intergenerational Landed Learning on the Farm Project on the complex lives and experiences of culturally and socially diverse children and their families – through the lens of children’s agency in shaping their own and influencing others ecological identities. Qualitative research methods create the space for children to generate their own meanings of their lived experiences (e.g. Merriam, 1998; Scourfield et
al., 2006). Greene and Hogan (2005) advocate for this approach to researching with children because “children are subject to historical and cultural influences that ensure that every child has an individual and unique experience of his or her childhood” (p. xi). I decided to engage in a researcher relationship with five children (and their parents, Farm Friends, and teachers) based on my assumption that sensitivity to this diversity would be increased and more nuanced understandings of children’s experiences in developing ecological identities would emerge.

**Case Study**

According to Merriam (1998), a “qualitative case study is an intensive, holistic description and analysis of a bounded phenomenon such as a program, an institution, a person, a process, or a social unit” (p. xiii). Landed Learning is the bounded phenomenon that frames this case study, and at the heart of this research are the cases of five children who participated in Landed Learning from September 2007 until June 2008. However, because this research intrinsically recognizes that people experience and make sense of the world through their layered relationships with people and places, my research positions itself between approaches interested in the power of context to shape learning and identities and, as the literature from the new social studies of children calls for, attempts to reveal how children are agents actively co-constructing their identities. Thus, while I attempt to present each child as an individual and an agent, I try to account for the over-lapping spheres of influence that play a role in shaping each child’s ecological identity. In this research, the spheres of influence I specifically consider are the Landed Learning project and the family; however, other spheres (e.g. peers) emerged during the research process. Therefore, I include additional voices in the presentation of each child’s
case: the children’s mothers, Farm Friends, teachers, and my own participant observations.

Stevenson (2004) classifies case studies within positivistic, interpretive, and critical inquiry orientations. The case study design developed for this research encompasses all three orientations. My decision to select a range of students, instead of just one revelatory case, is consistent with Yin’s (1994) positivist orientation, which recommends a contrasting multiple case design for methodological validity, reliability, and generalisability (cited in Stevenson, 2004, p. 43; See also Merriam, 1998). However, since this research was exploratory in nature and not theory testing, it also fits within an interpretive, naturalistic, or constructivist paradigm of inquiry. According to Stevenson (2004), “interpretive research is concerned with illuminating the sense that participants make of their experiences” (p. 43). Finally, because this research is informed by a critical pedagogy of place, it is also possible to position this study within critical theory since it contributes to efforts to “transform social, economic and political structures that constrain and exploit people, particularly those marginalized as a result of their race, class or gender” (Stevenson, 2004, p. 45). In my analysis of these cases of five children, I explore how environmental education and, as a corollary, environmental education research need a critical awareness of possible aged-based discrimination in order to value, respect, and support culturally and socio-economically diverse children’s agency in education and research.

The five cases in this study were selected according to three criteria: (a) a boy and a girl from each school; (b) parental consent to an interview; and (c) recommendations based on conversations with students’ teachers to help identify potential case participants.
This third sampling criterion was based a desire for “maximum variation” (Glaser & Strauss, 1967 cited in Merriam, 1998, p. 62) because I was interested in selecting students with a variety of responses to Landed Learning, not just those students demonstrating “strong” ecological identities. Receiving parental consent for parent interviews proved to be the most limiting criteria since it was difficult to recruit parents through consent forms sent home with the children. Face-to-face contact with many parents at Family Day, a special Landed Learning program event held in June 2008, led to greater parental participation.

**Research participants**

Since this research involves students, their parents (only mothers consented and were available for interviews), farm friends, and teachers, I decided to focus on the experience of five students⁹ to provide a balance between in-depth description, range of student experiences and backgrounds, and manageability of the data. As an aid to help readers remember who the five children are and their relationship with the other people in their case, I provide a summary of the names of the children, their parents, teacher, farm friends, and school in **Table 1**.

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⁹ Initially, I had planned to have six case study students, two from each school; however, I only received one consent form back from a parent at George Brown Elementary.
Table 1: Summary of research participants (all pseudonyms)

<table>
<thead>
<tr>
<th>Child’s name (Abbreviation)</th>
<th>School</th>
<th>Teacher (Abbreviation)</th>
<th>Additional research participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephanie (SL)</td>
<td>Hollingsworth Elementary</td>
<td>Andrew Brown (AB)</td>
<td>Mother: Claire Farm Friend: Elizabeth Farm Friend: Anastasia</td>
</tr>
<tr>
<td>Simran (SC)</td>
<td>Hollingsworth Elementary</td>
<td>Andrew Brown (AB)</td>
<td>Mother: Priya Farm Friend: Alice</td>
</tr>
<tr>
<td>Michael (MW)</td>
<td>George Brown Elementary</td>
<td>Dave Ptok (DP)</td>
<td>Mother: Nancy Farm Friend: Vera</td>
</tr>
<tr>
<td>Aaron (AC)</td>
<td>Salmo Elementary</td>
<td>Barb Taylor (BT)</td>
<td>Mother: Nora Farm Friend: Jackie</td>
</tr>
<tr>
<td>Frida (FE)</td>
<td>Salmo Elementary</td>
<td>Barb Taylor (BT)</td>
<td>Mother: Michaela Farm Friend: Jane Farm Friend: Emily</td>
</tr>
</tbody>
</table>

The unique lives of these children will become more tangible in Chapter Four as I explore their ecological identities in the form of detailed narratives.

**Research with children**

Throughout the research process, I became increasingly concerned about the ethics of involving children in research: Was this research with, on, or for children? How can diverse children’s experiences be accessed and interpreted by a white, university-educated, adult researcher? I would like to say that these concerns were addressed before I conducted my research, but the reality is that they emerged during the research process itself. In this matter I am apparently not alone. According to Greene and Hogan (2005), “[there is] little explicit attention to method…in published research on children or childhood” (p. xiii), and literature on researching with children is relatively recent (e.g. Freeman & Mathison, 2009; Christensen & James, 2008; Greene & Hogan, 2005). This literature is largely influenced by considerations from the new social studies of
childhood, and concerns itself with increasing children’s agency and voice in the research process, while respecting children’s individuality and diversity.

Developing a research relationship with children that respects their agency, individuality, and diversity, and, as much as possible, includes children in the research process is challenging, particularly within the constraints of master’s level research. In particular, one-on-one interviews with children demand considerable care since:

• Power relations between children and adults are unequal (Hill, 2005)
• “Children may try to give adult-friendly responses” (Freeman & Mathison, 2009, p. 66)
• Children may be unaccustomed to disagreeing or sharing their views with adults (Hill, 2005)
• “Question-and-answer mode of interaction make children feel less powerful” (Freeman & Mathison, 2009, p. 66) and replicates teacher-student interactions (Westcott & Littleton, 2005)
• Children and adults communicate differently; however, children are also very unique and their language competence does not only depend on their developmental stage (Hill, 2005)
• Language barriers may exist between children and adults
• The site of the interview may influence the researcher-child interaction (e.g.: adults traditionally have authority in school settings, the need for privacy and freedom from interruptions needs to be balanced with children’s comfort levels when in the presence of an adult, etc.) (Freeman & Mathison, 2009)

Although empowering children is important in the research process, Humphries and Martin (2000) emphasize that it would be an oversimplification to suggest that children have no power when they participate in research (cited in Hill, 2005). The challenge is that the interviewer and the child need to successfully negotiate “a shared, co-constructed, meaningful context for their interaction” (Westcott & Littleton, 2005, p.
As a result of these concerns, it is important that researchers clearly explain to children the research study, children are not pressured to participate, and researchers adopt an interpersonal style and setting that reduces children’s inhibitions and desire to please (Hill, 2005, p. 63). Freeman and Mathison (2009) provide some useful tips to help guide researchers in establishing a comfortable and participatory relationship with child participants in interviews, such as developing a “complete protocol with backup activities for shy or hesitant participants [and considering] alternative activities such as drawing, writing, keeping a written or audio journal, taking pictures, or using video clips, pictures, scenarios, maps, or other visual elicitation strategies to engage the children” (p. 96).

While many researchers working with children use focus groups as a research method to provide a less threatening context and allow children to express their identities in the context of their peers (Eder & Fingerson, 2003; Freeman & Mathison, 2009; Scourfield et al., 2006, p. 29), I chose one-on-one interviews because they were already incorporated into Landed Learning’s yearly research efforts and because of the rich qualitative data they can yield for case studies. Furthermore, since the concept of identity is one that is challenging for adults and children to discuss directly, it is best, according to Anthias (2002), “to allow subjects to talk about themselves, their lives and their experiences, and their ‘identity’ will emerge from this narration (p. 492 cited in Scourfield et al., 2006, p. 28). Conducting in-depth conversations with children about their individual lives and experiences may have been challenging in the context of group interviews.
Data collection methods

The primary data collection method in this study was to conduct semi-structured interviews; however, to increase research validity, particularly in research involving children, it is recommended that interviews be combined with additional data collection methods (e.g. Eder & Fingerson, 2003; Merriam, 1998). Moreover, Dunn (2005) concludes that in research with children and their families “we have to patiently amass evidence from a variety of social settings, and be very cautious about making inferences of any generality” (p. 98). Photographs, samples of student work, and my researcher journal with participant observation notes were included in my research design to increase research validity.

Although these additional data sources allowed for triangulation during analysis, it is important to keep in mind Greene and Hill’s (2005) advice: Triangulation does not mean ‘anything goes’ in deciding on research methods. Clear rationale is still necessary. Also, triangulation can give the impression that “there is a reality to which one can come closer by combining multiple perspectives” (p. 16). Nevertheless, multiple data sources were beneficial in this study for providing a more holistic and vivid picture of each child, particularly in terms of how their identities were being expressed in multiple relationships and contexts. Table 2 provides a summary of the data collected and schedule of research events for this study.
Table 2: Summary of data collected and research events

<table>
<thead>
<tr>
<th>Name of Child (Abbreviation)</th>
<th>Pre-program interview</th>
<th>Post-program interview</th>
<th>Parent, interview (mothers)</th>
<th>Farm Friend, interview</th>
<th>Teacher, interview</th>
<th>Photographs (total)</th>
<th>Samples of student work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephanie (SL)</td>
<td>September 24, 2007&lt;sup&gt;1&lt;/sup&gt;</td>
<td>June 22, 2008</td>
<td>June 13, 2008</td>
<td>June 18, 2008</td>
<td>June 18, 2008</td>
<td>October 17, 2008</td>
<td>76</td>
</tr>
<tr>
<td>Simran (SC)</td>
<td>September 24, 2007&lt;sup&gt;1&lt;/sup&gt;</td>
<td>June 22, 2008</td>
<td>June 13, 2008</td>
<td>June 18, 2008</td>
<td>October 17, 2008</td>
<td>53</td>
<td>Farm journal, poster, class assignments, letter to UBC President</td>
</tr>
<tr>
<td>Michael (MW)</td>
<td>September 21, 2007&lt;sup&gt;1, 2&lt;/sup&gt;</td>
<td>June 20, 2008</td>
<td>September 23, 2008</td>
<td>November 21, 2008</td>
<td>81</td>
<td>Letter to UBC President</td>
<td></td>
</tr>
<tr>
<td>Aaron (AC)</td>
<td>NA</td>
<td>June 24, 2008</td>
<td>June 19, 2008</td>
<td>October 14, 2008</td>
<td>32</td>
<td>Class assignments</td>
<td></td>
</tr>
<tr>
<td>Frida (FE)</td>
<td>September 31, 2007</td>
<td>June 24, 2008</td>
<td>June 12, 2008&lt;sup&gt;3&lt;/sup&gt;</td>
<td>June 19, 2008</td>
<td>October 14, 2008</td>
<td>41</td>
<td>Environment website, class assignments, poem</td>
</tr>
</tbody>
</table>

1 - Interview conducted by another member of the Landed Learning research team
2 - Transcription completed by another member of the Landed Learning research team
3 - Michaela voluntarily provided an email follow-up with additional comments after our interview

Interview

In total, 24 semi-structured interviews were conducted for this study. While pre- and post-program interviews with the children were the primary data sources, semi-structured interviews were also conducted with the children’s parents (only mothers consented and were available for interviews), Farm Friend volunteers, and teachers.

The children’s pre-program interview protocol was developed by the Landed Learning research team (See Appendix A) and addressed a range of questions regarding the child’s home, family, farming/gardening experiences, conceptions of nature compared with environment, nutrition, and gardening and food system knowledge. Although I was a member of the Landed Learning research team that conducted pre-program interviews
in September 2007 with all the participating children, I had not selected which students would be part of my case study at that time and, therefore, did not personally conduct all the pre-program interviews with the children in this study. The Landed Learning research team (myself included) designed the post-program interview protocol (See Appendix B). To specifically address my research question, I added four questions to the post-program interview that I asked only to the five case study participants. The children’s pre-program interviews ranged from 15-25 minutes in length, whereas the post-program interviews (conducted in June 2008) were between 20-45 minutes in duration. All interviews took place in the children’s schools during school hours.

The questions used in the semi-structured interviews with parents (See Appendix C) were loosely based on Seidman’s (2006) phenomenological interviewing model that recommends focused life-history interviews. Questions in part one explored the family’s history, connection with nature and food growing activities, part two explored daily activities, and part three asked about the child’s experiences with the Landed Learning Project, the child’s connection with nature, and how the mother and the child perceived and talked about Landed Learning. Shorter semi-structured interviews with Farm Friend volunteers and the students’ teachers were conducted (See Appendix D and Appendix E) to provide additional insight into the children’s learning at Landed Learning. Since the cases were not finalized until the end of the program and I was assisting with program delivery on farm days, I was unable to conduct detailed participant observations with each case child (see below). Interviews with Farm Friends, therefore, were important because they were based on the belief that these volunteers would have developed closer relationships with the children at the Farm, and, therefore, could provide specific insights
into the child’s learning, values, and behaviour while participating in Landed Learning. The students’ teachers provided perspective on the students’ learning, general interests, and personality (both at school and at Landed Learning). The teachers could also provide some additional insights into the relationship between the child and the family, and how the family context may influence the children’s identity.

**Photographs and samples of student work**

Photographs and student work (i.e. personal documents) are examples of documentary material, and, according to Merriam (1998), “[o]ne of the greatest advantages in using documentary material is its stability. Unlike interviewing and observation, the presence of the investigator does not alter what is being studied” (p. 126). However, the challenge with both these sources of data is that they are not developed explicitly for research purposes (Merriam, p. 124).

Photographs of children’s experiences at Landed Learning are taken by groups of elementary students as they rotate through the task of being Farm Reporters. In addition, Landed Learning researchers also document each visit through photography, as do teachers at special events such as Family Day. Landed Learning staff save all digital photographs for later use by the teachers, students, or Landed Learning researchers. For this study, I went through the photographs taken by students, researchers, and teachers from September 2007 – June 2008 and gathered any images that included one or more of the case children. When I went to analyze the photographs, I was able to focus on the child in a “natural” environment and context (Merriam, 1998, p. 126) instead of isolated

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10 Each Farm Friend group rotates through a series of special tasks at every Farm visit. These tasks include cooking, managing the irrigation system, composting, cleaning the greenhouse, checking the garden for garbage and tools, doing dishes, and taking photographs.
in the “unnatural” context of a one-on-one interview. This question of reliability, however, is contested since, according to Shratz and Walker (1995), “there has been as much mistrust in the reliability of images to depict social reality as there has been trust in the use of words to do so” (cited in Freeman & Mathison, 2009, p. 159).

The student work collected in this research varied widely, depending on what the students’ teachers were able to provide at the end of the school year. While student work “provides an account that is based on the author’s experience” (Burgess, 1982, p. 132 cited in Merriam, 1998, p. 116), instead of being filtered by the researcher, its reliability still needs to be understood in the context of its production since it may be atypical, edited and refined, and incomplete (Merriam, 1998).

While both photographs and student work contributed complementary and different (Freeman & Mathison, 2009, p. 148) insights into children’s experiences, neither data sources were used predominantly in this study. The analysis of these documents was conducted by comparing the photographs and student work to findings categorized from the interviews to either bring new perspectives to light or validate interview findings.

**Researcher journal: participant observation and self-study**

Throughout the research process I maintained a researcher journal to record my thoughts, discussions during Landed Learning meetings with staff, researchers, and teachers, reflections on readings, and, primarily, observations of children at Landed Learning. Since I was a complete participant in Landed Learning’s daily activities from September 2007 - June 2009 (normally as a replacement Farm Friend volunteer or, occasionally, as a replacement for Landed Learning staff), I wrote my notes after each
visit ended. Landed Learning volunteers, teachers, and students were aware of my identity as a researcher, which, according to Merriam (1998), positions me in relation to research participants as a “collaborative partner” (p. 101). However, participant observation only formed a secondary source of data collection since it mostly provided information on the general nature of the Landed Learning project, and not detailed observations of the case children. Nevertheless, I was able to observe each child involved in this study in the garden at least once and record these experiences.

The researcher journal also allowed me to engage in greater self-study and reflexivity as a researcher in order to reflect on and expose potential biases and assumptions that may be shaping my research process and analysis. Across various disciplines, researchers are calling for greater reflexivity in the research process. For instance, Sauvé and Berryman (2003) recognize that

[one of the main features of more contemporary environmental education research is precisely that it is becoming more reflexive on the objects of research as well as on the research process itself (the interaction between the researcher and the object). More viewpoints’ or reflexive types of research are being published in environmental education journals. (p.174)]

Similarly, Connolly (2008) argues that researchers and the research process cannot be separated, which means that researchers “need to be critically reflexive – in other words recognizing the role they have played in informing and shaping the research process and thus the data and findings that result” (p. 174). To address these recommendations, my voice as author is present throughout this thesis, and I have included an autobiographic narrative of my personal ecological identity construction in Chapter Four.
Transcription

I transcribed all interviews for this thesis except one student interview (See Table 2), which was completed by a Landed Learning research assistant. Careful transcriptions were made to include as many nuances as possible in terms of language, sighs, laughs, interruptions, etc. since these utterances are considered key in narrative analysis (Merriam, 1998, p. 157). To improve readability, quotes included in the thesis were modified slightly by removing excessive disfluencies (um, uh, yeah, well, etc.), interviewer prompts, and using four dots (…) to indicate that a section of the interview was removed; however, nuances like laughter, sighs, significant pauses, and general grammatical structure were left as in the original transcription.

It is important to note, however, that quotes used in the thesis from adults often appear significantly different than quotes from children. Since young children generally do not speak in long, cohesive phrases when participating in an interview setting with an adult, I felt that I could not simply erase my voice from their quotations. Thus any longer quotes from children included in this thesis reveal the dialogic nature of the researcher-child research participant relationship. While the prominent position of the researcher is one of the drawbacks of conducting one-on-one interviews with children (Freeman & Mathison, 2009), maintaining the researcher’s voice in children’s quotations ensures that the co-constructed nature of the research relationship is explicit.

Analysis

Analysis of the interviews was conducted by developing a classification scheme that emerged while I read and re-read the interviews, starting during the initial
transcription period (e.g. Merriam, 1998, p. 164; Seidman, 2006). Initially, themes that illustrated children’s relationship with the environment were noted as comments on the original transcriptions. Once the interviews were completely transcribed, I developed a document that systematically clustered all themes from all the interviews into broad categories. Since this research was exploratory and based on complex relationships and multiple viewpoints, the classification process resulted in 41 categories. These categories included: Child, Father, Mother, Grandparents, Gardening experience, Talk/language, Environmental concerns, Environmental care, Influence of peers, Farm-based learning, Food culture, Play, Organic agriculture, etc. These broad categories were broken down into various subcategories. For example, the category of Child included the subcategories: Unique, Caring/generosity, Ability to work with others, Computer use, Child as teacher, Immigration experiences, and Influenced by parents and the subcategory Talk/language was broken into sub-categories of: Conversations regarding farm/environment at home, Explicit conversations as teaching tool; Conversations with Farm Friends, and Language barriers. Secondary data sources such as students’ work, photographs, and participant observation notes recorded in my researcher journal were compared to the classification scheme that emerged from the interviews to corroborate findings and reveal new information11.

At this point in the research process, I returned to the literature to help me reduce and focus my analysis. Literature on the emerging social studies of childhood oriented me to recognize that significant themes such as children as teachers, conversation, play,

11 In particular, I found the photographs helpful in providing visual and emotional reminders of each child’s “essence” while engaging in activities at the Farm, something I felt was lost when audio recordings of children’s voices were reduced to letters on a page. These images became important touchstones in writing the garden though poems of each child.
freedom, and environmental care were telling me a story about children’s agency in the context of their families, their experiences at Landed Learning, and even broader societal, economic and ecological transformations.

I used my findings to create ecological identity narratives for the five children in my study. According to Stevenson (2004), qualitative case studies lend themselves well to narrative presentation, an increasingly popular way of presenting research that he attributes perhaps “to the recent revival of interest in storytelling and indigenous knowledge as means of communicating local knowledge constructed from people’s experiences. Storytelling has a long tradition in education…” (pp. 39-40). I framed each of the children’s ecological identity narratives around four common elements that allowed me to illustrate the interplay between children’s agency, their family context, and their experiences at Landed Learning. Included in each of the narratives, therefore, is a description of the child’s *family context* (parents’ employment, culture, socio-economic details, housing, siblings, gender relations); *daily routines* (child’s experiences at school, after school routines, play, homework, hobbies, friendships, food culture); *relationship with nature and environment* (perceptions of environment/nature/organic agriculture, direct, indirect and vicarious experiences with nature (Kellert, 2002), ethic of care); and the *interplay between the child, the family, and Landed Learning* (child as teacher, conversations, changes in child/family as a result of Landed Learning experiences). By drawing from my data set in these four areas and including direct quotes from all the research participants in each case (child, mother, Farm Friend, teacher, and my participant observation notes), the narratives present the complex influences co-
constructing children’s ecological identity, rather than a definitive account of each child’s ecological identity.

Since a narrative approach is based on the study of experiences through stories and the language people use to tell stories (Merriam, 1998, p. 157), I attempt to retain the participants’ voices – through the use of extensive direct quotes – throughout the narratives (Eden & Fingerson, 2003, p. 48). Although Seidman (2006) stresses the importance of writing profiles in the first person, my decision to interview children as well as their mothers, Farm Friends, and teachers made this impossible. My greatest challenge in presenting these case study narratives was in selecting relevant quotes and establishing the appropriate “voice” with which to tell each child’s unique story. Inevitably, some of the richness and detail of each child’s life has been lost. A creative attempt at resolving this challenge of interpreting another’s ecological identity was to write a series of short poems written to reflect the perspective of the garden itself.

In this thesis, poems allow me to summarize my experiences with the child at the garden in a few words. They also provide a creative way of giving the garden a voice in this research project and, in doing so, helped me address my concern that this major sphere of influence could not be interviewed and, therefore, risked being “silenced.” Poems also allow me to address O’Connor’s (2001) question, “How do we extend our imaginations to connect with people whose experience is very different from our own?” Her response: “One way in which I move from ignorance, or a paucity of experience, into some type of awareness, is through writing poems. Even if that awareness is partial, flawed, or awkward, it is the beginning of dialogue. All poetry is a form of inquiry and a way of knowing” (p. 83-84). Since I am not a poet, I have called these interludes “garden
“thought poems” to position them more on the side of thinking out loud than literary works.

**Research Ethics**

Research with children requires careful consideration of research ethics. All components of this research were reviewed and passed by the University of British Columbia’s Behavioural Research Ethics Board (See Appendix F). As a result of Landed Learning’s comprehensive yearly research, all children, Farm Friend volunteers, and teachers were invited to sign consent forms before the beginning of the project and before any research was conducted (children provide assent and parental consent, see Appendix G). Since this research also involved children’s parents, additional parental consent was sought for semi-structured interviews with parents (See sample consent form Appendix H).

In order to protect children’s anonymity, all names (children, parents, Farm Friends, teachers, and school names) in this research are pseudonyms. Additional documents (photographs, student work) contained in this thesis do not reveal children’s faces or names. This is particularly important when presenting qualitative case studies, since the narrative structure used to portray research findings can make it difficult to ensure that participants remain unidentifiable (Hill, 2005).

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12 There is an unresolved debate in the literature around how to handle research ethics with children. On the one hand, children are viewed as active participants in the research process and yet, most ethics boards require only parental consent. To provide children with a voice about their role in research many agencies and researchers are moving to a form requiring children’s assent (Hill, 2005, p. 79).

13 Since in September 2007 I had just begun my master’s research, my name was added later to the list of co-investigators.
Limitations

The methodological choices I have made in designing and conducting this study imply a number of research limitations. Although case studies allow for descriptive and exploratory analyses of specific situations and experiences, they do not provide generalizable claims that can be extended to other situations, individuals, or populations. However, the need to demonstrate that findings from qualitative research methods (particularly case studies) are generalizable has received considerable criticism (Merriam, 1998). Guba and Lincoln (1985) suggest measuring the quality of the research according to the “dependability” or “consistency” of its results (cited in Merriam, 1998). To ensure that results are consistent with the data, Merriam (1998) recommends (1) explaining the investigator’s position, (2) collecting and analysing data through triangulation, and (3) leaving an audit trail. These measures have largely been addressed above in terms of the importance of conducting reflexive research, using multiple data sources, and explaining how data was analysed. In terms of the audit trail, all transcriptions are available from the researcher, as well as the coding scheme for analysing interviews.

Other research limitations include that the study was not longitudinal (the effect of Landed Learning after, for instance, one year was not considered); pre- and post-program interviews with the children were not designed specifically for this research; I was not able to personally conduct all pre-program interviews with the participating case study children; pre-program interviews were not conducted with children’s parents; and all the mothers interviewed for this research participated in Landed Learning’s Family Day (a voluntary special event for children and their parents on a Saturday in June at the UBC Farm), indicating that all mothers interviewed may have had a higher degree of
commitment to Landed Learning and other facets of their child’s education. Finally, the greatest limitation of this research is in attempting to interpret children’s experiences, particularly from a cross-cultural, adult-centric perspective.
In this chapter, I present the ecological identity narratives of Stephanie, Simran, Michael, Aaron, and Frida. These narratives provide a thick description (Merriam, 1998) of each child’s family context, daily routines (focusing particularly on their school experiences and routines after school), relationship with nature and the environment, and the interplay between Landed Learning, the home context, and the child. Ultimately, as much as I struggled against this, the structure of the narratives echoes the prevailing view that children’s identities are largely shaped by their families. Including the children as co-authors in the writing process may have helped overcome this inconsistency between a theoretical and methodological framework that ostensibly values children’s agency and voice, and a narrative structure that tends toward a linear view of children as products of their environments.

This challenge is complicated by my theoretical commitment to understanding agent and context, which led, methodologically, to multi-layered data collection through semi-structured interviews with the children (pre- and post-program), their mothers, teachers, and Farm Friend volunteers, as well as photographs, samples of student work, and participant observation. The challenge, therefore, in maintaining the child at the centre of each story, respecting each participant’s views and voices, and still creating a narrative that balances detail and complexity with coherence and structure was largely beyond my skill as a writer. Therefore, while it is my hope that each story resonates with
its own unique music, an element of cacophony is likely present throughout the following sections, reflecting my lack of writing skill combined with the undeniably messy nature of individual lives. For this reason, the narratives are introduced by a “garden thought-poem” which I wrote—from the perspective of the garden itself—to capture salient elements of each child’s ecological identity.

In addition, consistent with calls for greater reflexivity in research, particularly research with children (e.g. Freeman & Mathison, 2009; Sauvé & Berryman, 2003), I have also included an autobiographical narrative outlining some of the experiences I feel have played an important part in shaping my personal ecological identity. Moreover, this narrative helps to delineate the themes that have salience in my personal journey toward exploring my ecological identity, and which may act as lenses to create biases in how I view other people’s experiences. In particular, I recognize that family, culture, education, and nature play important roles in co-constructing my ecological identity; I am still searching to better understand how my agency fits into this process.

In Chapter Five, the themes from the narratives are explored in greater depth in terms of developing an environmental ethic of care; children as teachers; opportunities for direct and indirect nature experiences; the role of vicarious nature experience (especially through books and information/computer technologies); the influence of peers; and the significance of conversations.
Ecological Identity Narratives

Stephanie

You speak of
berries, plums, and mushrooms, your grandma’s lore.
Pigtails flying, you laugh and hug and hide behind
dramas and layered intrigues,
and walk, with wonder,
home.

In her Grade 5 year, Stephanie (age 10), her older sister (age 13), and her parents moved into the close quarters of her Croatian grandmother’s house, while their small historic home underwent massive renovations. Daily routines in Stephanie’s family have been upset by the renovations at their house. Instead of playing with neighbourhood friends in the alley and with her sister in their playroom, Stephanie is now discovering and helping in her grandmother’s large garden, cooking traditional Croatian dishes, taking public transit, and experiencing more TV than her cable TV-free ‘normal’ life would ever have permitted. Stephanie’s parents, Claire (born in Vancouver) and Chris (third generation Iowa-born), met on British Columbia’s west coats while Claire was kayaking and Chris was passing through on a bicycle trip around the world. Although they lived in Seattle for a brief period, Claire could not imagine living in any other city than Vancouver, and it is here that they settled. Stephanie’s mother worked as a nurse until she took a leave for health reasons a number of years ago, and her father has a degree in math and does computer software at a Canadian high tech firm.

Stephanie attends Hollingsworth Elementary, a local neighbourhood school, and enjoys math, gym, and art. Her teacher describes her as a bright kid who can “certainly

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14 Stephanie (SL), mother (Claire), father (Chris), teacher (Andrew Brown, AB), Farm Friends (Elizabeth and Anastasia)
handle everything that’s coming her way, no problem at all.” Her parents made a very conscious decision not to send Stephanie to French Immersion simply because it would mean having to drive to another neighbourhood: “That’s why we go to the neighbourhood school because I wanted my children to walk to school, that was the number one thing. Like, a lot of the Caucasian families in our neighbourhood send their kids to French Immersion, where you have to drive, and I rejected that because I want them to walk” (Claire, Interview). As Claire’s comment suggests, this decision also means that Stephanie is a visible minority in a school that serves a largely southeast Asian community.

According to her mother, Stephanie does not have much homework; however, Stephanie explained that she has some light chores around the house (Pre-program interview). Mostly, she plays imaginative games with her older sister or they play outside (Pre-program interview). Playing outside is an important family tradition. Stephanie’s mother remembers how, as a child, she would hang out with her multicultural friends in the alley, and how Stephanie’s father played for hours in the woods behind his childhood house. Since these experiences were so pivotal for her parents, Stephanie’s parents have ensured that their children continue to enjoy the freedom of playing in the alley in a time when this type of activity is becoming increasingly rare. However, this is only possible because Stephanie’s parents encourage it. According to her mother, “they do have that freeplay because we both had it and we want them to have it, so we work at it. You gotta work at it! I know, it’s crazy.”

A key figure in shaping Stephanie’s ecological identity is her grandmother. Stephanie’s grandma (Claire’s mother) emigrated from Croatia, where she lived a
subsistence lifestyle in a rural village. The family grew all their own food, including the wheat for flour that they milled in a nearby town, and sewed their own clothing. In Canada, she continues to live a simple life. She walks everywhere, cultivates a large garden, and cooks and preserves much of her food in the traditional Croatian ways. Claire attributes her own connection with nature and her values regarding walking and a simple way of life to her mother. Moreover, Claire feels that her own efforts to “train” her daughters (especially by encouraging walking) have played an important role in shaping her daughters’ connection to nature.

Both Stephanie and her mother talk about how walking to school is a transformative experience. According to Claire, “That walk to school was probably one of the best things that we did. Because we had to walk through all the seasons, all weather, you know, you watch the trees go through the changes. I mean, everything, it was just so important and I’m so glad that we did it (laughs).” Stephanie associates walking with something that her family does that is “good for the environment”:

SL: We try to walk instead of taking cars. We live kind of far away from the school so we have to drive (whispered). But when we move back into our other house we can just walk to school. And at our grandma’s house we don’t actually have a dishwasher, and we have some fluorescent light bulbs. And we get organic food…

JO: Do you like walking?
SL: Yeah, yes. Cause you see different stuff. We see like birds’ nests, and we meet lots of people (whispered). (Post-program interview)

By cultivating a practice of walking, Stephanie’s mother feels that she has prepared her children well for the future and instilled in them an ethic of care: “they walk. I know I’ve accomplished something….Cause it also forces you to see the things around you and when you do that you appreciate the things around you and you take care of it….But it’s going to take work.” Stephanie also speaks of taking care of the land, with specific
reference to the UBC Farm; however, in our conversation she demonstrates some reticence in talking about these issues.

JO: Do you think we learned about the environment at the farm?
SL: A little bit, yes
JO: What kind of things would you have learned at the farm?
SL: Like, I don’t know…something
JO: What about, when you look out and see like nature, or trees and things, how does that make you feel?
SL: Good
JO: Good? And I wonder like, do you think feeling good about nature is some way of helping nature? Helping the environment?
SL: Yeah then you want to make (unclear) more nature and less pollution and stuff. You want to make everything “more natural” (spoken artificially like a TV advertisement)
JO: Do you think – what have you learned about caring for the land this year?
SL: Well, first I’m learning they might get rid of the UBC Farm! And then we have to try to like stop them…. And if you just try to get rid of everything then you’ll have no more plants left. And you won’t be able to do anything (whispered)
JO: Why do think that people don’t understand that? What is it they don’t get?
SL: I guess that maybe there’s an endless supply of plants everywhere….And also, you lose the home for many things, like birds and the bees that are at the farm, and stuff.

In April 2009, Stephanie, along with her teacher and a number of her classmates, attended the Great Farm Trek, a rally held at the University of British Columbia to support the UBC Farm’s future at its current location and size (24 hectares). She and her classmates proudly carried a red Landed Learning banner for the length of the march.

Stephanie’s own summary of her most important memories of a year at Landed Learning draws out a central element of her identity and one that was reiterated throughout my interviews – namely her strong connection with people. When asked what she remembers from the farm, she mentions, “all the plants!” followed with equal enthusiasm, “Our farm friends!” (Post-program interview). It appears that Stephanie learns through her relationships with people; however, at times she socialized with
friends to such an extent that her adult Farm Friend worried that perhaps she was not paying attention to the tasks and learning at hand. To ignore this social facet of Stephanie’s identity would be to ignore a large part of who she is, and who she is becoming. Her teacher describes Stephanie as “very, very social. And also socially conscious. Very aware….She has a great sense of humour. Loves to joke, loves to have fun….But very aware of other people’s feelings.” However, it is becoming increasingly difficult for adults to connect with Stephanie (AB, Interview; Elizabeth, Interview; Researcher Journal, April 23, 2008), and it appears that Stephanie is entering a somewhat treacherous phase of maturation, when “girls’ culture” becomes increasingly “painful” and “confusing” (AB, Interview). Though Stephanie’s teacher is somewhat concerned, he is confident that Stephanie is “not the mean girl….she didn’t really join in on that [mean behaviour] as much. She’s got a very strong family, with really clear ethical and moral forces driving their behaviour.” Stephanie’s heart-felt thank you at the end of the year to her Farm Friends also helped alleviate doubts that they had not been able to connect with her (Elizabeth, Interview).

Stephanie entered the Landed Learning project in September 2007 with some of the basic concepts and, more importantly perhaps, practices of environmental care well ingrained in her everyday life. Her experiences at Landed Learning reinforced these values in a formal educational setting. According to her mother, although Stephanie was already very “hands-on in the soil” because of her grandmother’s connection to food production and gardening, the project helped to reinforce these skills and values. Her family was also very supportive of Stephanie’s experiences at the Farm. Her mother voluntarily came out to the Farm to attend a Landed Learning school visit (she was one of
the few parents to observe and participate in a regular visit), and her entire family (parents, sister, and grandmother) not only attended Family Day but also participated in a composting workshop that I held because they recognized that Stephanie was very excited about composting (See Figure 1).

**Figure 1: Stephanie (Left) and her friend fearlessly and enthusiastically shovel compost**

Stephanie’s experiences at the farm also entered the family sphere through extensive conversation. According to Stephanie, she shared every detail of her visits at Landed Learning with her family (Post-program interview). Her mother in particular appreciated these conversations, since she was keenly interested in Landed Learning and Stephanie’s experiences at the Farm and also because she realized that she – as part of a generation that is disconnected from the food system – could learn from her daughter who was more connected to food growing activities.

The most significant conversations, however, about Stephanie’s experiences at the farm were between Stephanie and her grandmother. Through Landed Learning, Stephanie and her grandma’s relationship deepened. According to Stephanie’s mother, “[Stephanie
will say, ‘Oh, we learned this at the farm’ and she’s always talking about it. And then also for my mother it’s great because then she has something to talk about with Stephanie, because my mother’s very much into [gardening]. So, my mother will always say, ‘What did you do at the farm today?’ So there’s always that connection.” As Stephanie explained, she learns about gardening from her very knowledgeable grandmother because, “She tells me all about it” (Post-program interview).

Through these conversations and her family’s visits to the farm, changes have started to take place at home and even the local community. Stephanie has become much more involved in helping her grandmother in the garden and the kitchen (Post-program interview), and her mother has become more dedicated than ever to local food and gardening. In fact, Claire is leading an initiative to pair Hollingsworth Elementary school with a new community garden that is being planned in the neighbourhood to bring school gardening to more students. While Stephanie appears to be entering the adolescent phase when connecting with nature becomes less apparent (Kaplan & Kaplan, 2002), her own fearless enthusiasm, clear-sighted commitment to solving environmental issues, and strong family support will likely be sufficiently resilient to weather the period of change Stephanie is on the brink of entering.
Simran

You gaze
delicate neck bent
dark eyes intent
seeking to understand (meticulously, precisely, confidently)
owls, snakes, insects
names and numbers.
But then, suddenly, your imagination ignites,
and you plunge – fully and freely – into
life.

Simran (age 9, Grade 5) lives with his younger brother (age 7), little sister (age 2) and parents (Priya and Manvinder) in a duplex they are renting while they build a new house a couple of blocks away. Simran’s mother is an impressive woman. When I arrived for our 10:00am interview, she answered the door sleepy and surprised – she had worked a night shift in a group home with mentally and physically challenged clients and had forgotten about our scheduled interview. However, Priya recovered quickly, and was ready to continue with the interview, which I conducted with Simran’s baby sister playing on our laps and nourished with Priya’s delicious chai and roti. According to Simran’s teacher, his mother is “a complete live-wire. She’s about solving problems,” an energy I sensed in our interview and must certainly be required to look after three children and work irregular hours, while Simran’s father works 12-hour shifts driving a taxi cab and "isn't really too involved with the school stuff" (Priya, Interview).

According to both Priya and Simran, Simran and his siblings have little contact with their father. They do, however, have regular contact with their maternal grandparents, who live in the duplex adjacent to theirs. As the youngest daughter in her family, Priya’s parents have always lived very close by. When Priya moved to Canada

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15 Simran (SC); mother (Priya); father (Manvinder); teacher (Andrew Brown, AB); Farm Friend (Alice)
from India when she was ten, her parents followed and came to live with her in
Vancouver. Cultural transition is a common theme in the family, particularly in terms of
food and language. Simran’s father is concerned that his children do not eat enough
Indian food, which is why he often cooks one Indian meal a week (Priya makes
“Canadian” food the other days) because, according to Priya, he thinks, “‘Oh my god,
they’re going to forget about our culture.’ But, I always tell him, it’s not like they’re
ignoring it but – if they’re not eating properly then I would be just worried….So, just
leave them.” For her part, Simran’s mother would like a bit of Punjabi to “stick in their
brains,” especially since Simran and his siblings already have a hard time communicating
with their grandparents; however, Priya feels that even though they try to speak Punjabi
at home, “we don’t really get anywhere.”

At school, Simran is a serious student: self-motivated, neat, an excellent reader
(he reads widely in fiction and non-fiction), and quite intellectual. Interestingly, even
though Simran’s teacher has never met his father, Andrew Brown imagines that he is
intellectual "because Simran seems that way." Due to the lack of male role models in
Simran’s life, Priya was very enthusiastic about having Simran in a male teacher’s class,
and his experiences in Andrew Brown’s class were very positive. For instance, Simran’s
teacher described how Simran organized a classroom visit from O.W.L. (Orphaned
Wildlife Rehabilitation Society), and how this leadership experience was one of Simran’s
most significant academic (and environmental) achievements during his Grade 5 year.
Bringing O.W.L. to his school fulfilled Simran’s passion for birds, since, according to his
teacher, “He loves birds. He lives and breathes them.” Apparently, Simran was
introduced to the bird rehabilitation program through Priya’s work, and it was a trip out
to see the birds with her clients that, she feels, inspired Simran’s love of birds. Simran himself explains that his interest in owls originated from a favourite fantasy adventure novel series based on owls called *The Great Ga’hoole Tree*.

Simran’s routines after school are relatively unstructured and self-directed. After school, Simran explains that, “if I haven’t finished my homework I’ll do that. Or I’ll play games with my sister or on the computer. Or I’ll just go outside and play, with my dog. Or bike…. I just like to go and get some fresh air. Just walk around and – mostly the cousins are there [in the alley]” (Pre-program interview). When no one is around to play with, Simran goes outside, “and if my grandpa’s out he just tells me a little bit about gardening and stuff. So I help him” (Pre-program interview). However, even though Simran is aware of composting and knows many of the vegetables growing in his grandfather’s garden, according to Priya, it seems like Simran’s involvement in his grandfather’s garden is limited, especially “if he’s fertilized or something like that, you better not touch that! He’ll like tell us right up there, ‘OK guys, don’t touch this.’ If the ball falls in there, oh…[you’re in trouble]!” Before supper, Simran and his brother can have one hour of “computer time” (Priya, Interview), and, afterwards, both children read until bedtime, an activity that Simran enjoys.

School evidently plays a prominent role in shaping Simran’s ecological literacy. For Simran, the word environment brings to mind “plants and animals”, a concept that seems to have been shaped by experiences in earlier grades and his peers in class:

SC: Yeah, like wildlife, like trees around, or a rainforest where there’s animals going around and stuff
OB: It looks like a lot of animals, wildlife, trees, right? Anything else?
SC: Like flowers, and insects, and all those things, and (long pause)
OB: Different things…. And, why do you think about plants and animals? Is there a reason for that?
SC: It’s mostly because in the other grades we used to talk about environment or we had to draw something about it. It was always about like animals and plants, nobody else drew something different. They all drew like that. (Pre-program interview)

Even after being involved in Landed Learning for nearly 10 months, Simran continues to emphasize school learning over farm learning as a source of information on environmental issues (Post-program interview), and his vocabulary is very scientific and factual. For example, Simran explained that “[t]he way I remember spotted owls is two spots on its back. But they’re endangered – there’s only like 15 left in the whole of Canada” (Post-program interview). However, while his knowledge can be surprisingly detailed and accurate, sometimes it is simply false, although spoken in a self-assured manner. Nevertheless, Simran’s description attests to his interest in studying animals (Post-program interview), as well as his excellent observation skills, inborn sense of curiosity, and the profound way he appears to be affected by the environment (Alice, Interview).

Simran balances his scientific relationship with nature with a keen imagination and a caring disposition. Simran’s sense of adventure and imagination were fuelled at Landed Learning. In his journal he writes vividly of “The Great Escape,” when he and a couple of other boys helped to rescue escaping chickens (Figure 2). In his final entry, instead of following the teacher’s instructions to write about nutrition, Simran writes about an expedition in the forest to keep the coyotes away from the chickens: “we heard something moving. ‘The coyote!’ R. yelled. We all grabbed sticks and patrolled the area.

16 Pre-program interview conducted by Oksana Bartosh (OB), Landed Learning research assistant
17 The first part of this statement is inaccurate, since spotted owls have cross-shaped markings on their underparts. The second part, sadly, is quite true. While transcribing I was unsure if Simran had said 15 or 50 so I checked the Internet. Apparently, there are 11 mating pairs known in Canada, all in southern BC. The spotted owl is Canada’s most endangered bird – largely because it requires continuous old-growth forest to survive (Northern Spotted Owl, n.d.).
then a twig snapped. We turned around and I heard movement, like running, but it faded away. We were all scared now but didn’t drop our sticks” (Simran, Student work, June 4, 2008).

Figure 2: Simran (Right) catching escaped chicken

(Photograph by student)

Both Priya and Simran’s Farm Friend comment on his caring and empathetic nature; however, for Priya this can at times be a source of frustration. One particular instance where Simran and his grandfather attempt to rescue a wounded pigeon drove her “nuts”: “I was worried about my night shift and he overdid it, he wanted to rescue it. Well, my dad fed it and he fed it…. But it's a wild bird and we shouldn't be feeding it.... So let it be. There's a circle of life, you know.... And then he came and gave me attitude after.”

Simran’s enthusiasm for Landed Learning and the Farm is contagious, and his younger brother already longs to join Mr. Brown’s class so that he can attend the project. His mother also expressed an interest in sustainable agriculture, environmental issues, and saving the UBC Farm. For instance, although she found organic food too expensive to buy regularly, Priya would prefer to eat organic food because it has “no herbicides and pesticides, blah blah, you know, all that.” Her ideal solution would be to own a small farm.
The long-term solution for our type of family, the way we are, we would like a little farm area. Just a little acreage where we could just do everything ourselves…. my husband, he did a lot of farming in India, too, so he knows quite a bit. So it’s not a – that’s long term [solution].

It is unclear whether this dream is recent and influenced by Simran’s experiences in Landed Learning or one that has been entertained by the family for years. Certainly, the family cares about environmental issues. For instance, Priya describes her husband as “quite environment-friendly….even in India,” and both Simran and his father worry about saving electricity and care about having “greenery around” (Priya, Interview). Living in India and experiencing the pollution, habitat destruction, and electricity shortages there seem to have had a major impact on Simran’s parents’ ecological identities.

School also appears to be playing a prominent role in bringing environmental issues, especially regarding individual actions to mitigate environmental problems, into the home. For example, when Simran learns about the problems associated with idling at school, he not only nags at his mother when they are driving but he also comes home and talks to his family about how idling destroys the ozone layer\(^\text{18}\): “[His younger brother] doesn’t really get it fully yet, but Simran knows, so we tried to explain to him that in the future, it might get so hot we may not have…protection from the sun, future generations are going to suffer, there may not be enough food, and blah blah, you know” (Priya, Interview).

Simran recognizes that he educates his family about environmental issues (Post-program interview). Simran’s wish is to bike between home and school instead of driving the couple of blocks to Hollingsworth Elementary, their neighbourhood school. However,

\(^{18}\) In the interviews, students and their parents frequently confound idling, destruction of the ozone layer, and global warming. Global warming is frequently depicted in apocalyptic terms.
while Simran understands how biking to school can reduce pollution (Pre- and post-program interviews), and he takes an active role in sharing this information with his family, his mother’s fears and her busy schedule continue to interfere with Simran’s desire to bike:

So we were talking about [global warming] the other day and, he wanted to bike and stuff, and I said, ‘I would love for you to bike’ but the things is, I’m already taking the car that way, and I’d rather have that peace – you know, next year you can do whatever you want but I’m going to work that way and I need you to be at school so that I can be with a clean slate and say, ‘Yeah, I dropped him off’. … It is awful, I think, because you hear so many bad things happening. (Priya, Interview)

Although Priya is nervous about allowing Simran to bike to school, she fervently believes that this generation of children are already important players in what she perceives as a gradual shift to greater societal awareness regarding environmental issues.

You know what? I find kids are the teachers now. Seriously, about environment because what they learn at school they bring home. But, I think some parents might ignore it. I can see that happening. So I, it depends on time, I guess, because I never went to the farm until the family day. I wish I could’ve but…. It wasn’t feasible for me. Well, it was just because of my work and stuff…. So, I think it depends on time. I think a lot of parents want to be more involved anyways. (Priya, Interview)

Simran talks about the Farm after every Landed Learning visit, mostly to his mom because his father is working. However, Priya admits that the Landed Learning newsletters help her understand the project and what Simran does at the Farm because sometimes she is too tired to really listen, “Like sometimes my brain is fried by evening time and Simran’s talking about it, and I’m going, ‘Uh huh, uh hum, yeah.’ And then he brings it on a piece of paper and it’s like, ‘Oh yeah, that’s what he was talking about’” (Priya, Interview). Nevertheless, it is clear that an environmental discourse, particularly around issues of global warming, food security, and farming, permeates conversations at
home. Simran and his family are also committed – in theory at least – to making environmentally-sound lifestyle changes; however, although “Simran is a kid who isn’t impoverished at home” (AB, Interview) it currently appears to be difficult for Simran and his family to “walk the talk.”

**Michael**\(^{19}\)

> My cousin remembers you
> amidst the jiu cai and tomatoes
> with your grandfather.
> She asks if you are happy in your new home, and
> I say, “It is difficult to tell. He has too little time
> to stand still.”

Michael (Grade 5) was born in China and moved to Canada when he was five (according to Michael) or six (according to his mother). His connection with China remains strong through frequent visits with his grandparents and because his father, a businessman, returned to Beijing when he found it difficult to find work in Vancouver due to his lack of English (Nancy, Interview). This means that Michael and his mother, Nancy, live alone for most of the year, except for brief periods when his father returns to visit.

I met his mother in their modern and sparse apartment. Well-dressed, in the latter part of a pregnancy, and rushing between commitments, Michael’s mother, at the time, was working for a delivery company and a local immigrant and refugee settlement service agency. Her formal training and work previous to moving to Canada was as a university researcher and professor in Material Sciences but, since she was unable to find work in her field in Vancouver, she has made raising Michael her top priority instead.

\(^{19}\) Michael (SW); mother (Nancy); teacher (Dave Ptok, DP); Farm Friend (Vera)
Gender roles are clearly defined in the family, particularly in terms of the culture of food preparation. Both Michael and his father expect women to prepare food, though Nancy herself comments on the tension this creates when Michael’s father visits and expects traditional Chinese meals, which take longer for her to prepare and interfere with her busy work schedule:

But when his dad was here he always liked congee, some Chinese stuff for breakfast. Actually, more complicated. I don’t like it, but sometimes, I was in a rush, ‘I have to go to work!’ And he wants something else. And he was complaining about the breakfast. It’s just simple! He’s like, ‘Ew, look at Michael’s breakfast – just like dog food!’ (laughs)"

Unlike his father, Michael eats mostly Canadian food for breakfast and lunch, and Chinese food for dinner. However, like his father, Michael already has a clear idea that his future wife will prepare his meals (Post-program interview).

Michael is a quirky, playful, and imaginative child; however, according to his teacher, friendships are “hard for him…he doesn’t have a lot of social skills” and he is not without his share of learning needs. Both his teacher and Michael’s Farm Friend wonder whether Michael may have a learning disability, though neither could ascertain where to draw the line between learning disability and the inevitable challenges faced by an ESL (English as a second language) student. His teacher recognizes that Michael has “a lot of stuff going on in his home life” and that these impact his learning at school:

He’s a kid with some pretty big learning needs, too. He comes from a family where dad spends a good portion of his time in China, working. And it became pretty evident with Michael that he missed his dad immensely, and was very connected with his dad.

Michael also participates in a seemingly endless series of after-school activities such as swimming lessons, piano lessons, hockey, and power skating, even though his mother is aware that Michael frequently complains of being too busy and tired. Although Nancy is
a somewhat fearful mother, she feels that their neighbourhood is safe enough for Michael to play outside alone with the local kids in the park. It is soccer that Michael truly loves to play, particularly because it also his father’s favourite sport, and his teacher commented that Michael is a very athletic boy.

George Brown is Michael’s fourth Canadian school, and, although Michael states that he does not understand the word “environment” (Pre- and post-program interviews), he associates the word “nature” with what he learned at his previous school in science class: “Nature is about coyotes, and bears and other animals. Especially at the forest” (Pre-program interview). This view persists even after his participation in Landed Learning, when Michael states that he is unaware of any “problems in nature”: “No, not at all. Birds are chirping and other animals are there” (Post-program interview) and remains unsure of the meaning of the word “environment.”

Michael’s experiences at Landed Learning nevertheless appear to reveal that a caring and empathetic relationship with the land was cultivated, particularly through his relationship with his Farm Friend Vera (Figure 3).

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20 The pre-program interview was conducted with Landed Learning research assistant Oksana Bartosh (OB). I conducted the post-program interview. It is also important to mention that interviews with Michael were particularly difficult. His responses clearly challenged the conventional adult questions/child responds relationship through his use of humour, dramatic sound effects, and tangential comments, though the subversion is subtle and at times confusing.
When I ask him about Vera’s interests, he replies that she is “into plants”:

JO: Did she tell you that or did you just watch her and you knew that?
MW: Watch her!
JO: Yeah? Can you – paint me a picture with words as you watched Vera working in the garden?
MW: Well, I was there feeding the chickens and Vera was like feeling the plants, rubbing them, and I think there was a kind of caring feeling inside of her
JO: And what – why was she rubbing the plants?
MW: I don’t know. Some kind of connection or something (Post-program interview)

Michael’s empathetic ability to relate to Vera’s caring feeling for plants is consistent with his mother’s comment: “He’s nice. He’s very nice to people, to animals, to, you know, everything, and he’s very easy to get moved by things, you know, from the outside.”

While Michael evidently displays empathy and caring, he also has a difficult time connecting and collaborating with his peers. According to his Farm Friend, “There’s always a change in the kids;” however, she didn’t think Michael’s “interest in our own little patch was more than the other kids’ in the group”, and she also felt that he was kind of different and separate from the other kids in the group. This concern was also raised by Michael’s teacher, as well as some of Michael’s classmates during the school’s final
Landed Learning visit: “The other boys in the group, particularly J., are challenged by him. Early in the day, one of them mentioned something about Michael not expressing emotions (being unreadable?). J. also said that Michael kicked him. That he bumped into him ‘on purpose’” (Researcher Journal, June 11, 2008). According to his teacher, Micheal’s social difficulties, such as his immaturity and competitive nature, can be attributed in part to his socialization. Michael’s aggressive side also came out when he talked about taking care of the earth. His idea, perhaps intended to be a silly response, was that he “kills weeds [such as dandelions]….I kick them. I’ll cut them in half” (Post-program interview).

From the time of Michael’s first Landed Learning visit to the end of the project, Michael connected his experiences at Landed Learning with his memories of his grandfather’s garden in China (Pre- and post-program interviews). According to Vera, the thing that I noticed about him the most though was that he often mentioned his grandpa who had a farm – a garden…. That was my feeling, that he really missed his grandfather. Now, I don’t know how much of a connection he had with his grandfather but it felt that it was a really close connection that he was missing. He spoke about him a lot.

The connection between the two gardens was so seamless that Michael, in our post-program interview, switched topics from the UBC Farm to his grandfather’s garden in China so quickly that he confused me as the interviewer:

MW: Yeah, I just love the farm.  
JO: That’s great!  
MW: Mostly I just talk about China (laughs)  
JO: What’s that?  
MW: China  
JO: What about China?  
MW: Well, my grandpa is a farmer but he doesn’t plant very much  
JO: Have you gone to your grandfather’s farm?  
MW: Yeah, it was beautiful.
In my interview with Michael’s mother, I learned more about her father’s garden in China. While Nancy was growing up in rural western China, the family’s garden provided them with all their vegetables. Although she did not use the word organic, her detailed descriptions of her father’s farming techniques, for instance, in terms of making “fertilizer” (compost) and “switching fields” (crop rotations), indicate that his practices were consistent with the principles of organic agriculture.

Notwithstanding her detailed memories of plants and farming practices, Nancy feels that she cannot teach these things to her son: “I couldn’t teach him, you know, my knowledge is so limit.” For this reason, she feels that Landed Learning is there: “just to help kids to know more about the nature, about….things because we – as a parent, I can’t teach him. I can’t teach him because I don’t have too much knowledge about that. And also teachers, I think, I believe they don’t have those much experience to do that.” By the end of Landed Learning, Nancy feels that “now he knows more than me!”

Although Michael’s knowledge of plants and gardening has expanded through his experiences at Landed Learning, it appears that the actual gap between Nancy and Michael is in their ability to communicate. According to Nancy, when she asks Michael what he did at the farm, “Some he told me in English and I don’t understand (laughs). Sometimes I ask him some Chinese name and he doesn’t understand. So that’s a problem (laughs).” Michael’s view of the situation is a bit different:

**JO:** What do you tell your mom about the project, about the farm?
**MW:** (laughs) Remember I didn’t tell my mom part?
**JO:** You didn’t tell her anything?
**MW:** Yeah
**JO:** So you were serious. You didn’t tell her *anything* about the farm
**MW:** Well, if she asked, if she asked I’ll be – in the parents like
**JO:** What’s that?
**MW:** It’s a way to get out of it when she was asking something
JO: And what would you say?
MW: I’ll just say, “Oh, look at the time! You can meet me up in my bedroom” (mutters second part)
JO: (laughs) So, from September until Family Day you never ever told your mom about the farm.
MW: Yeah, until she goes like, “Michael, Michael, piano!” (laughs)
JO: You play piano?
MW: Yeah (unenthusiastically)
JO: So you have lots of things to do at home?
MW: There’s no free time (Post-program interview)

Possibly linked to the issue of language and living in an unfamiliar geographic place is the theme of his mother’s fear of poisonous plants, mushrooms, and snakes.

Michael is well aware of this fear, which I also witnessed while Michael was showing Nancy the garden during Family Day:

MW: I was eating a plant and my mom was like, “Huh!” (Breathing heavily)
JO: Why was she making that sound?
MW: That’s because she thinks you can’t eat plants!
JO: And what did you tell her?
MW: Of course you can eat them! They’re yummy.
JO: (laughs) Which plant were you eating?
MW: Uh the co – the kale.
JO: And was she surprised that you like eating kale?
MW: She was freaking!
JO: So she was just worried. Do you eat kale at home?
MW: No kale at home

Living in Vancouver means that Michael’s mother cannot directly apply the knowledge she has from her own parents’ garden and her local Chinese geography to the plants found at Landed Learning. This, combined with the language barriers between her and Michael, erodes her own confidence in teaching Michael about plants, learning from him, and may cause her to be overly protective and nervous. The result for Michael is that he is constantly being pulled between China and Canada, as places and cultures: “Back and forth, back and forth, back and forth (big sigh). Makes me so tired” (Post-program interview).
Aaron

*Listen, relax, slow down*
*Shut off your brain*
*Take off your gloves*
*You feel my life – but dimly*

Aaron (Grade 6) lives with his parents and their friendly dog in a small house surrounded by trees, bushes, and small vegetable gardens. The tension in his backyard between having a secluded, forested yard and a sunny backyard for growing vegetables mirrors Aaron’s parents’ general ambivalence between their longing for a home on the Gulf Islands and the reality of their city-based jobs as filmmakers. Aaron’s mother feels that living on an island by the ocean is “a perfect life;” however, she and Aaron’s father, have this flip thing. What are we going to do? … [Our yard] is sort of…. our attempt to pretend we’re in the woods…. My fantasy is to live on the Island, Bowen Island or something, and have a garden and stuff like that. But I haven’t, we haven’t figured out…. and it’s hard to make the leap. Cause our jobs are relatively urban. (Nora, Interview)

Although Aaron’s parents long to get out of the city, they are both from Vancouver and have spent most of their lives, including the years spent starting university degrees in Film Studies²³, in and around this city. Aaron’s mother grew up in the suburbs, and she remembers how “we did the classic suburb thing in the summer. We went to the lake every summer…. and I remember often walking alone in the woods, and I’m sure I was seven or eight. And I always remember that because I used to go pick lilies, tiger lilies and they were always in the woods, in the shade. And that’s just a different experience than kids get now.” She also vividly remembers her own grandmother’s large and

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²¹ Aaron (AC); mother (Nora); teacher (Barb Taylor, BT); Farm Friend (Alice)
²² No pre-farm visit interview was available for Aaron.
²³ Neither parent completed their university degrees, though Nora is currently attempting to finish her courses.
bountiful garden, which contrasts starkly with Aaron’s grandparents’ yard that Nora described as having nothing growing in it except a bit of rhubarb, a few tomatoes, and some flowers.

As a very gifted student, school has been both a pleasure and a challenge for Aaron. Although he is very bright and enthusiastic about learning things that interest him, Aaron can be difficult to work with for teachers and his classmates. His Farm Friend, teacher, and mother all commented on how hard it is for adults to keep up with him. Nora attributes some of his behavioural challenges to his asynchronous development: “he really has an incredible mind in terms of analytical, making connections and stuff….he’s kind of been emotionally behind….Which is classic, they say with gifted kids. They’re asynchronous.” In his first school, a French Immersion program, his mother described how Aaron “really had a horrible time and it kinda got….worse and worse and worse and worse until we finally went, ‘Ah! This is terrible. We have to pull him out or do something drastic.’ So I just pulled him out. And his little self-esteem was kinda gone and he just got kinda beaten up.” After this experience in French Immersion, Aaron’s mother put aside much of her own work in order to homeschool him for two and a half years. Through homeschooling, which included extensive outdoor field trips with other homeschoolers, Aaron was able to “get reconnected with the things he likes to do” (Nora, Interview). His Grade 6 year was his first year at Salmo Elementary, and, according to his mother, the year was “phenomenal” and allowed Aaron to calm down and gain a lot more confidence.

Since Salmo Elementary is not in his neighbourhood, Aaron needs a ride to get to school, something that bothers Nora since she would like to drive less in the city.
Although his mother recognizes the environmental problems associated with driving, she appears reluctant to allow Aaron to bicycle to his friend’s house a couple of blocks away. Unfortunately, according to his mother, Aaron also does not have any friends living in his neighbourhood. Aaron’s laptop is a constant companion, though his parents try to limit computer time: “we do have a rule about only an hour a day computer…. that gets broken but we still try to enforce it” (Nora, Interview). He uses his computer occasionally to play games but mostly he multi-tasks and listens to podcasts, like Quirks and Quarks\(^\text{24}\) and Stewart MacLean, while working on projects like the website he designed for his baseball team (Aaron is an avid baseball player), a stats program (he was trying to get people to hire him to do their stats) or his imaginary utopia called, according to his mother, the Kids Intelligence Agency.

According to Nora, Aaron’s Kids Intelligence Agency is an island for kids (though his parents have been invited to live there, just not participate in decision-making) that he has been designing for years. Conversations at home and at Salmo about environmental issues, combined with ideas gleaned from his subscription to *Popular Science* have led Aaron to include environmental issues and solutions in the island’s elaborate architectural drawings he has created on his computer: “Like how do we heat it, how do we make it sustainable….On some island somewhere where they’re going to produce all their own food” (Nora, Interview).

\(^{24}\) “I was just listening to Quirks and Quarks….On Sunday, I think. And there was a really cool episode – it was on a podcast – and it was a really cool episode about really sustainable places. There was a place in Germany that um, an engineer there had made such sustainable houses that they were actually carbon – (JO: Neutral?) No. They actually produced power. They actually produced more power than they consumed. And also, it’s good for the people too (speaks with animated voice) because the power companies [could sell it] at eight times the market value….And, so the people get a lot of money off it (Aaron, Post-program interview)
Aaron expresses his enthusiasm for the topics that interest him very clearly through animated talk. His frequent sighs and yawns during our post-program interview led me to believe that, while Aaron clearly understood the importance of farms and had a detailed knowledge of environment issues, these topics did not inspire him the same way as, for instance, more technology-oriented conversation.

JO: And, do you think being at the farm has taught you anything more about the environment?
AC: (sigh) Yeah, the fact that, you kind of have more feeling for it because you’ve actually seen it.
JO: What about – what do you mean about feeling?
AC: Well, you respect if more, you have more, you feel more that you have a reason to try to save it.
JO: Do you think that’s an important part of learning about the environment?
AC: Well, I think, now because of global warming, everybody should have at least some, there should be some way for everybody to feel that they have some reason to try to save the environment. (Post-program interview)

Aaron was noticeably more enthusiastic when he talked about sustainable technologies: “the UBC Farm is pretty sustainable so we learn a lot about sustainability just from what they've already done at the UBC Farm. (JO: Do you have an example?) Well, they didn't use it a lot when we were there, but it's pretty cool, they have a solar oven outside” (Post-program interview). This fascination with science was particularly evident when he talked about global warming and why reports from scientists may inspire large-scale changes in people’s behaviour:

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25 “My mandala represents me because I [the inside star] reflect my thoughts [by talking] outwards [green and blue patterning on the outside of the inside star] to others [the outside star] and the world [the black background]” (Aaron, Sample student work)
26 Although the solar oven rarely gets used in the Landed Learning program, Aaron went on in the interview to describe how solar ovens could be used by large companies in the summer to, for example, bake bread.
27 The topic of global warming arose when I asked Aaron what he thought the main thing is that the farm is trying to teach. “Teach people about the environment. Because that’s also important because of things like global warming. Actually, I heard on the radio today that today was the 20th anniversary of the first global warming study (spoken slowly), shown to the congress in the US.” (Post-program interview)
AC: Well, everybody’s like, [scientists have] been studying this topic for four or five years in a university or whatever, so they should know what they’re talking about.

JO: What about a farmer who’s been farming for forty years and knows the land?

AC: People won’t believe that as much because – probably because they don’t have – well, unless they have a doctorate, but (laughs) then they probably wouldn’t be farming, would they?

JO: Interesting. Interesting assumption. (laughs)

AC: Well, they might have not – unless they were in the department of agriculture but people tend to believe scientists more because they know what they’re talking about. Basically they have something on their wall that says, ‘You know what you’re talking about. You’ve passed certain [standards]’ (Post-program interview)

Aaron’s mother and Farm Friend also sensed that Aaron is largely uninterested in connecting with the natural world. Aaron’s mother compared him to a boy that she knows:

Nora: nature’s like everything for him…. It’s just that deep connection that some kids have

JO: Would you say that Aaron has a deep connection? (pause)

Nora: Not really. Not in that – I mean, because he’s so into technology and learning and information.

However, Nora struggles with this characterization of her son as disconnected from nature, explaining, “He’s completely in it when he’s in it, right? But sometimes he’ll complain, ‘Do we have to go for a walk in the woods?’ And then I’ll bring a friend and two hours later it’s like they’re oblivious cause they just walk and they talk…. But they’re kind of in their own heads.” Aaron’s Farm Friend provides another view regarding Aaron’s connection to nature, which she feels is important for maintaining a balance between head, heart, and hands:

I think that's grown. I don't think it was a burning issue when he came but I asked him today and he said he's really enjoyed coming out here….It's possibly not going to be his great thing in life....We were talking today about keeping a connection with the outdoors. Because I said if he's going to be doing really academic things, don't forget the outdoors....because you need that balance.
In comparison, his teacher noticed that Aaron did appear to have a strong connection with nature:

He thought [carrying the heavy pumpkins] was the neatest thing there was this side of the earth.... That is where his forte is. He really needs *To Be Doing*. He’s very intellectual but he really needs to be doing. He really connected with the land and having that opportunity....To be doing things that were meaningful....So, for him, it’s definitely the connection with nature, the meaning behind it.

**Figure 4: Meaningful physical work, Aaron and his Farm Friend shoveling compost**

![Photograph by research team](image)

This emphasis on meaningful work (**Figure 4**) resonates with Aaron’s own response to my question regarding how he feels about the physical work associated with farming:

“(audible inhalation) It’s ok if (spoken slowly) it has a purpose. Like if you’re feeding other people, or yourself, then I think that’s ok” (Post-program interview).

Aaron’s home life supports and fosters nature connections. His mother attributes herself and Aaron’s father (particularly as a result of Aaron’s participation in environment-related documentary film shoots with his father) as sources of Aaron’s ecological awareness, and the family eats organic food and has a small garden.

Nevertheless, the excited conversations at home about Landed Learning that one might expect given these fertile grounds never appeared to emerge. When I met Aaron’s mother
at Family Day, she told me how Aaron did not talk about the Farm much. According to his mother, “I'd ask him, and he'd say, ‘Oh yeah, our group made this’ or something…. but he didn't really talk about it that much….I mean, he'll talk endlessly about the stuff that he's totally interested in. It's a sign that he's not really that —.” Aaron corroborates that conversations about the Farm were limited: "If my parents ask me I will probably tell them a bit of what I did (Post-program interview). Aaron explains his reticence in talking about the farm due to the fact that, "I think I've explained them a couple things but they knew already a lot because of the garden we already have…. I didn’t teach them a lot. I told them a lot but they knew quite a bit already" (Post-program interview).

It is perhaps not surprising that Aaron’s mother could not recall whether or not Aaron had changed (or if things had changed at home) during the September to June period that Aaron attended Landed Learning. When I asked Aaron’s mother if Aaron might have been more influenced by the project if it had included more high tech solutions to environmental issues (e.g. a wind generator), she responded, her voice filled with enthusiasm, “Oh, that would’ve been, he would’ve been right there. Yeah, yeah. If it was to do with energy and technology in that way.”

Aaron appears to have enjoyed the physical aspect of Landed Learning; however, its impact on his connection with nature and other people was subtle. Even though his teacher struggled with Aaron in her class (she had to send him home once from Landed Learning because of behavioural issues), she felt privileged getting to know him, and that “the farm was really, really important in the building of [their student-teacher] relationship.” His teacher observed how Aaron felt he was superior to his classmates, “but on the farm it equalizes you”, and “one of the things he really needed to know and
learn was how to work with others…. [and] the farm gave him that opportunity. And I think I really saw a difference between the beginning of the year and the end.” Aaron’s mother also noticed a few subtle changes:

just little tiny things lately and it might just be a developmental thing with Aaron, but, like, he was outside and he came in, ‘Mom, mom, you have to come look at the sky, you have to come look at the clouds!’ And he’s usually not – he’s usually so in his head that I thought, ‘That’s a good sign, like it’s a real connection with the beauty around him.’ And whether that’s developmental, his age, or – I think this year’s been really good for him. (Nora, Interview)

Aaron and I also shared a moment while standing together shoveling compost where I felt that he was getting out of his head and profoundly sensing the wonder of life. We had been having a philosophical conversation about language when I encouraged Aaron to take off his gloves and plunge his hands into the steaming warmth of the compost. Reluctantly, he tried, and was deeply impressed by the living quality of decomposing food and garden waste. Apparently, this is one of the experiences that he did go home and share with his parents.

Frida

Child environmentalist,
head full of knowledge –
symbiosis, global warming, solar energy, metaphor.
Hands embracing computer keys, books.
And heart?
You long for forests and wilderness.
Self-sufficient. Alone.

Frida (Grade 6, age 11) moved from a suburb of Vancouver into the city when she was six, and now lives with her parents and younger brother in a housing co-operative. Her mother, Michaela, is a graduate student and poet, with interests in the intersections

28 Frida (FE); mother (Michaela); father (Connal); teacher (Barb Taylor, BT); Farm Friends (Jane & Emily)
between poetry, language, nature, and education, and her father, Connal, works as a computer engineer. Frida’s mother accepted that her capacity to earn money would be peripheral to that of her husband’s, which is why she “gave away ten years” (Michaela, Interview) to be primarily at home with Frida and her younger brother. Neither of Frida’s parents were born in Canada. Her mother was born in Bulgaria but spent the majority of her childhood and adolescence in Nigeria with her horticulturalist parents, and her father grew up in the United States, where he “moved around a lot” (Michaela, Interview). Although her parents met in the States, Michaela never felt at home there, and Connal was happy to move to Canada because, according to Frida’s mother, “[he didn’t] feel comfortable raising a child in a place where it’s easier to get a gun in school than a hot lunch.”

According to Frida’s mother, the family attempts to spend evenings and weekends together, whether for candle-lit family dinners or long bike rides around Vancouver. A powerful source of joint inspiration for the family is their dream to live on the land, a dream initiated by Frida and her brother when they set aside $500 of their own allowance toward a piece of land in the Kootenays. The land is now purchased and Frida and her brother have created detailed plans for the cob house, alternative energy sources, food gardens, and connections with the local farming community (Frida, Post-program interview; Michaela, Interview) that will sustain them.

This was Frida’s first year at Salmo Elementary. Since the school encourages individualized learning, Frida’s personal research interests in environment and sustainability were part of her Grade 6 curriculum and also contributed to the course content of her entire class (Frida, Post-program interview; BT, Interview). Frida’s teacher
describes her as a bright child, independent, a focused worker, very creative, very artistic, very articulate, self-empowered, and a gifted student. Before Salmo Elementary, Frida attended a number of schools, including a private school, but her experiences were not very positive. According to her mother, “there was a very crucial grade three moment where if we hadn’t pulled her out of that school she would probably be a very different person….Because that’s Frida now in her element [at Salmo and Landed Learning] and I can recognize my child.” Frida is very excited about the opportunities Salmo Elementary provides to have a very fluid relationship between what she does at school and her personal interests and passions that she pursues and researches at home, like writing, drawing, and conducting computer research (Pre-program interview). One of the challenges that Frida’s teacher identified repeatedly is her difficulty collaborating with peers, especially if they have different learning styles or interests. Frida seems to have an easier time communicating with adults such as her Farm Friend Emily. Emily described their relationship as, "We're teacher to teacher. Like, she's taught me and - I feel I have a good relationship with her.”

At home, Frida helps with light chores, though her mother recognizes that Frida is often too busy to help her with meal preparation. In fact, Frida’s research into environmental issues and her personal environment website allow her to circumvent a house rule. According to her mother, computers and electronics are limited to one hour a day; however, because of Frida’s computer research, her parents are more flexible with her than with her younger brother. Although Frida’s parents strongly encourage reading books and engaging in creative and imaginative play (the family does not watch television and only recently started to watch movies together), Frida and her brother are
active computer users. After school, Frida and brother frequently play computer games and do computer programming together (Pre-program interview).

Frida is an environmentalist. She writes letters to the Premier of British Columbia about current environmental issues, maintains an environment-related website and blog, and writes nature poetry:

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domes of flowers
curving above me
this organic cathedral
sunbeams dance
through stained glass windows
I look up
at this shelter
protecting me (Excerpt from “The Eternal Garden” by Frida)
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Where this almost religious interest in nature and passion and commitment to environmental issues originates is unclear. Although Frida recognizes that she has “always enjoyed being in nature” (Post-program interview), she thinks her interest in nature and the environment comes from her parents and peers: “Probably mostly my parents….and then I guess some people in my school, at my school I used to go to before I came to Salmo” (Post-program interview). The two students she mentions are a girl that she claims to have not really liked that much who initiated the idea of a website on coral reefs and a boy who “did his research project on global warming, which was the first I ever heard of it, and I was in grade four, which is kind of sad” (Post-program interview).

According to her teacher, Frida’s connection with nature is more innate: “I think it’s just her. I think there are some children it’s just them, a deeper level of awareness, and I think it’s always been her, I think it’s something that just draws her.” In comparison, her mother’s thoughts on Frida’s relationship with nature are more convoluted and complex, though initially they echo her teacher’s:
I’m curious how she took on, I think she has always had, approached the outside with – when she was little we didn’t, she didn’t get dirty a lot, she had this thing, maybe cause I was too scared of her getting dirty or whatnot, I don’t know, but then there was a moment where…it just like nature was such a prevalent thing in her.

Though the roots of Frida’s powerful relationship with the natural world are unclear, forests and wilderness capture Frida’s imagination profoundly, and have inspired her to pursue readings in survivalism for the past four or five years.

She came to me one day and said, ‘I’ve been reading all these outdoor survival books for like five years now, I have to start doing it. I cannot do.’ I mean, she’s telling me she’s reached this barrier…. (JO: And what is the barrier for her in her daily life?) That she doesn’t have access to that. We try but we’re so busy still, like, we play on the playground but that’s not the woods…And she’s so frustrated because when she sees paved paths, ‘That’s not the woods, that’s not wilderness.’ …. She wants to go off the path, and she really thinks that wilderness is not where we have marked the paths to be, and she’s done that ever since she was little. (Michaela, Interview)

The forest was one of Frida’s key recollections from her experience at the UBC Farm.

JO: And why was the forest important for you?
FE: Because that’s like my main, I’m interested in forests and wild stuff
JO: And how does the forest make you feel, when you go in the forest?
FE: Uh, I never really thought about that
JO: Imagine you’re stepping into the forest, what do you think about when you go there?
FE: Um…that it’s peaceful
JO: That it’s peaceful?
FE: That it’s peaceful and (long pause)
JO: That’s the main thing?
FE: Yeah.
JO: And is that a different feeling than you have on a regular day?
FE: Yeah! (laughs)
JO: And how do you usually feel?
FE: Kind of busy.
JO: And how often do you get to have that feeling? Let’s say, in a week or in a month?
FE: Maybe once in a month (Post-program interview)

Frida is a very busy eleven-year old living in a busy family. Combined with her environmentalist convictions and hopes, this means that Frida regularly has to deal with
elevated levels of stress and disappointment at a young age. Frida’s vulnerability to “activist’s burnout” and bullying was palpable to all of the people whom I interviewed. Her teacher and Farm Friend partially attributed her vulnerability to Frida’s own naïveté and lack of diplomacy in working with other people. According to her Farm Friend Emily,

I just enjoy her personality…. I feel a little bit worried about her because of the potential vulnerability. Because sometimes she feels a little innocent or – you know what I mean? Whether you’re going to be ridiculed. And then she talked about the bullying thing, I don’t know so much about that but that makes me, like her mother, worried about how do you sustain her interest.

Sustaining Frida’s interest in the environment is a key concern expressed by her mother, Farm Friends, and teacher. And yet, although these people in her life worry, they all feel that Frida will persevere and overcome her challenges. For instance, her Farm Friend Emily thought that, “you don’t have to be an environmentalist to enjoy nature, you know? She can still do her – I think she’ll always have her love for nature, or well, let’s hope so. She will. She will.” Her teacher was also confident that Frida – with her parents’ support – would be able to sustain her interest: “Oh, I know she will. I know she will. Her family is very supportive of it, too. She wants to be an environmentalist. Her secret passion would be to learn how to live off the land, study native plants, that kind of thing….And her family’s lifestyle would support that.”

For Frida and her family, Landed Learning in many ways was preaching to the converted (Michaela, Interview). Frida’s teacher also recognized this congruence: “There was definitely a match between what they value at home and what’s valued at the farm.” Although Frida began Landed Learning already self-identifying as an environmentalist, the project touched Frida in ways that learning about environmental issues in school
could never have, through hands-on learning experiences (Post-program interview) and, in particular, through adult support, adult role modelling, and leadership training opportunities. When I asked Frida’s mother what she thought the purpose of Landed Learning is, she replied,

Make my daughter happy? (laughs) I was very happy when I heard about the Landed Learning Project and all of a sudden I thought, there’s one thing that Frida’s really going to love, and it will give her a chance to be out, and just the space…that will keep her going. That was my first thought. And then, the excitement that comes home.

Working with Farm Friends was a “source of hope for Frida” (Michaela, Interview) because these were adults who, for example, cared for the land more than they cared about money.

Other benefits for Frida were learning to collaborate. According to her teacher, “I think she learned some things she didn’t know before. She started working with people in ways she hadn’t necessarily worked before. I think the farm was a very good experience for her. Just the cooperation, the collaboration kinds of things that were happening there.” Her Farm Friend Jane described Frida as a “very high achieving child, who likes to be star centre and have all the answers” and who was still “a child who hadn’t learned to restrain herself with her peers (laughs).”
However, Jane felt that by the end of the project, “[Frida had] softened in her relationships with others” but whether this was because of increasing maturity or the experience of working in a group at the farm she was unsure.

Landed Learning also allowed Frida to be a learner on equal and similarly new terrain with her peers. Although Frida had some gardening experience as a young child and her outdoor wilderness experiences were extensive compared with her peers, in the garden she was “probably as engaged as any of them are” (Emily, Interview), suggesting that Frida perhaps has a more theoretical connection with nature and still has a lot to learn in terms of hands-on skills and increasing her comfort with touching the soil. Her choice of clothing at Landed Learning corroborates this discrepancy. Although Frida was very prepared for outdoor adventure (photographs depict her wearing, for instance, a Tilley hat, quick-dry pants, comfortable T-shirts, and Blundstone boots), her clothing did not indicate a greater comfort level with getting her “hands dirty.”

Frida’s experiences at the Farm led to some changes at home, particularly in terms of Frida’s increased sense of adventure in trying new (especially green) foods that
she had grown at the Farm. Her mother spoke repeatedly of the challenges, fears, and feelings of guilt she had encountered almost since Frida’s birth in encouraging Frida to eat certain foods. She was thrilled that Frida was starting to cook at home and eat more courageously. Conversations also shifted at home:

JO: Has being on the farm taught you anything more about the environment?
FE: Yeah, it has. For some reason I can’t recall exactly what right now but
JO: OK. What about caring for the land?
FE: Well, it has taught me how important that is. Well, I sort of knew that it was important before
JO: Maybe it teaches you in a different way
FE: It also taught me a bunch about sustainable agriculture and stuff
JO: What was an example of sustainable agriculture that you learned?
FE: Well, also the farm kind of gave my dad opportunities to tell me things about sustainable agriculture that he wouldn’t have told me otherwise
(Post-program interview)

Frida and her family have embraced the objectives of Landed Learning and the UBC Farm as a place worth preserving and a place where lifelong learning and training occurs. Their engagement with the project and the UBC Farm is extensive: Frida blogs about the UBC Farm and her various engagements at the Farm on her personal environment website; she volunteered as a Farm Friend during the 2008 garden-based summer camp program to gain leadership experience and share her knowledge with younger children; she encouraged a group of her Landed Learning alumnus classmates to come to the Farm at 7:00am on a rainy November morning for a television interview where she spoke eloquently about the importance of saving the farm; she attended, with her mother and younger brother, the Great Farm Trek in April 2009; and she and her mother came to the UBC Farm to hear Michael Pollan speak about sustainable agriculture and nutrition. Through these experiences and Frida’s leadership, the entire family has
maintained their relationship with the UBC Farm far beyond the scope of the Landed Learning project.

**Julia: Narrating my ecological identity**

My parents recently asked me where my interest in gardening and growing food comes from, perhaps a bit mystified by the path that has led to my engagement in farm-based environmental education. Immediately, a tangled web of possible storylines sprang to mind (the pear trees in a favourite German children’s story, my grandparents’ garden in Degerloch, our family gardens, the way my eye has always been attuned to the presence of plants, encounters with friends who farm, my growing intellectual awareness of the convergence of a food security crisis, ecological destruction, and global inequality, etc.) and I realized that these stories were hard to unravel into an explanatory narrative. If I could not make sense of my own path toward an ecological identity that included gardens and growing food, how would I make sense of diverse children’s stories? I will use Thomashow as my guide to help focus my memories into a personal narrative about ecological identity. These reflections, therefore, will include “childhood memories of special places, perceptions of disturbed places, and contemplation of wild places” (Thomashow, 1995, p. 7).

As a child, when I was asked what my earliest memory was, I remember answering, “Sunlight through rain, the way it was in Germany.” I begin with this image because it is, oddly enough, one of the few things I remember about my first five years of life in Germany. And, although it is not a memory of a special place, it is a memory of

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29 Modified from an oral presentation at the 5th World Environmental Education Congress (Baker & Ostertag, 2009).
what has become a special element, almost a leitmotiv, in my life: water. Water connects us to our local place but it also connects us to global systems and cycles.

My family (my German father, Canadian mother, two younger siblings, and our dog) left Germany when I was five and came to Canada by immigrant ocean liner, across a wild and stormy Atlantic. Eventually, we settled on the poorer East side of a small, conservative city on Georgian Bay in Ontario. Since we continued to speak German at home until I was around ten, my family and I were considered “exotic” and strange, though perhaps this was also influenced by the fact that my father was our primary caregiver and that we bicycled and walked everywhere, among other more “alternative” activities. As I left middle childhood, I stopped playing tag in our neighbourhood park. For this abandonment I believe my younger sister resented me for years. She thought that I had become “too cool for the park,” when in reality, I preferred exploring the tangled wilderness of the Niagara escarpment that ran behind our house (though it meant yearly poison ivy outbreaks), gazing out across the Bay – that taut belly of water meeting the sky, and reading too many novels.

During high school I developed increasingly feminist and left-leaning political views. These ideological orientations came naturally, considering my parents’ work as music therapists, my mother’s role as director of a Women’s Shelter, my father’s work in a Men’s Program, an educational program to help men who have been abusive toward women, and our entire family’s active political engagement. Throughout this period we continued going on family canoe trips – four kids (my youngest sibling was born in Canada), our large dog, my parents, and a growing number of cousins and relatives.
Since leaving home to go to university, I have resisted homesickness by carrying with me as much of my identity and connection to place as possible. I feel happiest by water – I went to Queen’s University on Lake Ontario, Lakehead University for a Bachelor of Education specializing in Environmental Education on Lake Superior, and, finally, the University of British Columbia on the Pacific Ocean. My violin came everywhere, as well as my old blue bike, even while I studied for three semesters in southern Germany. The feminism took a back seat, only to flare up now and again to confront professors who taught courses without reference to female scholars, though my critical perspective was sharpened by formal university courses. One in particular stands out, a cultural geography course in which I encountered the concept of “Blut und Boden” (blood and soil), the Nazi ideology that, scarily for me, can echo certain elements of place-based education by drawing essentialist links between culture and place. As a nomadic young person, I started to learn how to “reinhabit” (Gruenewald, 2003; Orr, 2004) my new homes though farming and growing food. This started with an organic farming apprenticeship in southern Ontario, and is currently the focal point of my student activism through my engagement with the UBC Farm.

According to Thomashow (1995), “Love and loss. Wonder and doom. These are some of the feelings that emerge through ecological identity work” (p. 13). Working to save the UBC Farm has provided me with powerful lessons about the importance of and potential pain associated with deepening our connections to place. I have reflected on emotional connections to landscape, and described the emotional responses to destructive landscape change as akin to a form of ecological harassment (Ostertag, 2008). Part of me suspects that connecting to place emotionally through education is potentially a highly
subversive act, which perhaps explains our schools’ and universities’ love for “technological-fixes” and individual consumer changes rather than deep-seated cultural transformation. In my personal experience, I have witnessed how people who know and learn to love their local places will be deeply committed to preserving them, which was evident in the 2,000 people who attended the Great Farm Trek 2009 to save the UBC Farm.

Woven deeply within this ecological identity narrative, therefore, are my strong roots to my family and place. As I write this thesis, however, swimming within my body is another life, and my own sense of “family” is shifting daily. I wonder what my role will be (or has already been) in shaping this child’s ecological identity, and how much this child will transform my own ecological identity in the years to come.
Chapter 5: Discussion

With Stephanie, Simran, Michael, Aaron, and Frida’s unique ecological identity narratives still resonating in our hearts and minds, I would like now to reflect in more detail on how these cases respond to my original research question:

*How does the interplay between children’s agency, their family contexts, and their experiences in an environmental education project co-construct children’s ecological identities?*

Recalling that ecological identities include both a way of relating and identifying with the natural world and of acting out of an inclination to protect the environment, in the first part of this analysis I will consider the project’s influence on children’s ecological identities, with a focus on how participation in Landed Learning contributes to an ethic of care. These considerations will be prefaced with a few words regarding an element of this research that, since the project’s inception, has only become increasingly pronounced; namely, the incredible uniqueness of each child participant.

In the second section, I will look more closely at children’s agency as environmental citizens, and how children’s expressions of ecological identities reveal how “the global child citizen is positioned in overlapping spheres of dependence and independence” (Lee, 2001, p. 34). Drawing on findings from the research, I characterize children’s independence as their freedom or agency to expand, explore and enact their ecological identities. The findings from this study indicate that this includes respecting children as teachers, creating the freedom and space to play and exercise independence, and providing adult support and role modelling to help maintain children’s emerging ecological identities. Children’s dependence I consider in terms of constraints that limit children’s agency and erode their ecological identities, and examples of these constraints
include parental agendas, increasing urbanism, safety, language, and broader social and ecological changes. Both factors that constrain and facilitate the co-construction of children’s ecological identities are considered in light of Kellert’s (2002) findings on the significance of direct, indirect, and vicarious nature experiences for children. I conclude the section with a reflection on the role of conversations as significant pedagogical tools in co-constructing children’s ecological identities.

**Co-constructing ecological identities**

**Each child is unique**

My first encounter with the children participating in Landed Learning as a research assistant opened my eyes to the incredible uniqueness and diversity of these children’s lives. Although the statement that each child is unique may be self-evident, it forced me to re-evaluate the purposes and pedagogies of environmental education in the context of our current understanding of childhood in an “age of uncertainty” (Lee, 2001, p. 2), and, more specifically, to question how Landed Learning both adapts to and meets such diverse participants’ learning needs. Coming from a critical pedagogy of place perspective, I was attuned to the possibility of oppression resulting from an uncritical stance toward race, gender, culture, class, etc.; however, I had not considered childhood itself as a distinct “category” potentially open to oppression and discrimination. In addition, and as the case narratives illustrate, it is important to remember that although childhood is distinct from adulthood, children’s experiences of childhood are not homogeneous but differentiated by age, class, race, gender, and other social identities (Gutman & de Coninck-Smith, 2008, p. 2). In my portraits of children’s ecological identities, I attempted to respect what Anandalakshmy, Chaudhary, and Sharma (2007)
consider to be the three factors of prime importance in researching with children and families: “the complexity of human beings, their widely varied cultures and communities, and the uniqueness of every person” (p. 8).

As the case narratives reveal, although each child had powerful learning experiences at the Landed Learning project, these experiences were very diverse, often very subtle, and not always what might be anticipated from an environmental education “intervention.” However, according to Max Van Manen (1990), “[w]e need to be reminded that in our desire to find out what is effective systematic intervention (from an experimental research point of view), we tend to forget that the change we aim for may have different significance for different persons” (p. 7). Some examples of these different, possibly unexpected outcomes of the Landed Learning project for each child include: Stephanie’s closer connection with her grandmother; Simran’s expanding sense of wonder, independence, and assertiveness; Michael’s exploration of his feelings regarding his family members still in China; Aaron’s growing ability to “slow down”; and Frida’s increasing ability to work collaboratively with her peers and access adult support for her pro-environmental actions and values. These various changes validate James, Jenks and Prout’s (1998) finding that “it is the specificity of childhoods which emerges as a predominant theme through comparative analysis” (p. 132 cited in Qvortrup, 2008, p. 71).
An ethic of care in children’s ecological identities

While each child’s experience at Landed Learning was unique, the five children’s cases viewed as a whole also reveal examples whereby Landed Learning appeared to influence the child’s environmental ethic of care. For example, Stephanie drew a parallel between feeling good or caring about nature and wanting to make “less pollution….make everything more natural,” and save the UBC Farm (Post-program interview). Unfortunately, as the interviewer I did not question her use of an unnatural tone of voice while making these comments. It is my feeling that although Stephanie believes in the importance of environmental issues, she was uncomfortable talking about these topics in a one-on-one interview setting. Simran’s ethic of care combined elements of adventure and fantasy. This was evident in samples of his schoolwork, in which he wrote enthusiastically about “rescuing” (i.e. returning) chickens to their enclosure and patrolling for coyotes. Michael recognized and identified with “a kind of caring feeling inside” of his Farm Friend when he observed her “feeling the plants” (Post-program interview). Aaron provided a clear, though somewhat unenthusiastic, rationale for why having “more feeling” for the UBC Farm gives you “a reason to try to save it” (Post-program interview). Ironically, while Frida is the most “environmentalist” of all five cases, her ethic of care is the most difficult to ascertain from the interviews, largely because her responses focused on her environmental actions and factual, more scientific knowledge of environmental issues. Caring for the environment appears to be so self-evident for Frida that it was hard to engage in in-depth conversation with her on the topic; however, her sustained commitment to environmental issues and saving the UBC Farm in many ways speak for themselves.
These examples reveal the capacity for Landed Learning to co-construct children’s ecological identities based on expanding an ethic of care to include caring and affiliating with nature. Nevertheless, it would be simplistic and overly linear to propose that Landed Learning increased let alone initiated children’s capacity to care for the natural world. Pre-program interviews with the children’s parents may have helped to gain a perspective on how or whether this ethic of care changed over the course of the school year. Nevertheless, children’s parents, Farm Friends, or teachers alluded to examples of children’s ethic of care outside the context of Landed Learning, indicating that, for these five cases, caring was already a part of their identities. For instance, Stephanie’s teacher refers to her as someone who is “very aware of other people’s feelings.” Simran’s mother describes him as very caring, and gives as an example Simran and his grandfather’s attempt to rescue a wounded pigeon. Michael’s mother indicates that Michael is very kind to people and to animals, a kindness that she feels was captured by a question Michael asked her once: “If you see a boy down the street what would you like to do? Give him hundred bucks or bring him to home?” Although Nancy herself was uncertain how to reconcile financial difficulties and ethical considerations, the answer was clear for her son: “He said, ‘Oh mom, I would bring him to home.’” Aaron’s teacher recognizes that Aaron, despite the challenges she encountered in working with him, is a caring person: “He’s got a good heart – once you get past the veneer. He’s a really caring person.” Frida’s mother interprets Frida’s reflection (made when Frida was around five years old) that, “maybe the reason there are no faeries is because nobody cared to take care of their eggs,” as an early indicator of “these environmental issues coming up, like if
we don’t care about something it’s going to disappear, and I was kind of shocked to see how early those things…came.”

While Landed Learning – as a pedagogical approach, a beautiful place, and a group of committed adults – cannot take credit for introducing an ethic of care into children’s identities, it is nevertheless effective in supporting and maintaining children’s ecological identities based on caring feelings of identification with the human and more-than-human worlds (e.g. Milton, 2002; Savestoski, 2003; Wilson, 1984). This was particularly evident for Frida who, without positive reinforcement and adult support for her environmental actions and values, is potentially vulnerable to experiencing bullying and burnout. Without these social supports in a world based largely on social relations, children’s ability to explore and enact their ecological identities is limited and these significant elements of one’s self-concept can become increasingly marginalized.

Factors that facilitate and constrain expressions of children’s ecological identities

With the rapid social, economic, political, and ecological changes occurring as a result of globalization, adult identities, especially in terms of employment, family structure, gender roles, and sense of place, are becoming more fluid and uncertain (e.g.: Lee, 2001). These changes have also impacted our understanding of childhood and the position of children in families and society. If adulthood is no longer stable and representative of independence in thought and action, then childhood can also now no longer be understood solely as a time of “human becoming” (Lee, 2001; James et al., 1998) and dependence. Increasingly, we are experiencing what Ulrich Beck (1998) refers to as “the democratization of the family” (p. 65 cited in Lee, 2001, p. 19), “which
suggests a future in which children as much as parents may become actively involved in shaping their families through negotiation and participation in decision-making” (Lee, 2001, p. 19). However, the democratization process that Beck describes is not complete, nor is it uniform across families of all classes and cultures (C. Purdon, personal communication, August 17, 2009). Children co-construct their ecological identities and are encouraged to become empowered environmental stewards within contexts that both promote and hinder children’s agency.

Environmental education promotes children’s agency by encouraging children to become environmental citizens; however, this is based on educators’ hope that, by teaching children about environmental issues and solutions to environmental problems, they are accessing a population that is both malleable and capable of influencing their relatively difficult to change parents. This perception that children’s identities can easily be influenced is prevalent throughout educational discourse and, more specifically, Landed Learning’s pedagogical goals (Mayer-Smith, Bartosh, & Peterat, 2007) and the discourses of the project’s participating teachers and parents. For instance, Dave Ptok at George Brown is committed to teaching his students and bringing them to Landed Learning because he knows he can “reach children. They’re my priority. They can change” (Researcher Journal, February 18, 2008). Similarly, Simran’s mother feels hopeful about the future because she thinks, “[t]hese kids are the ones who are going to make the change, really. I think adults are kind of set in their ways, and they’ll teach us a thing or two” (Priya, Interview).

While Andrew Brown at Hollingsworth recognizes that, “[t]he kids] have a lot of power, they don’t always know it” (Researcher Journal, Teacher Meeting, June 9, 2008),
parental choices can dramatically constrain children’s agency in expanding and enacting their ecological identities. From this research, it is apparent that frequent moves (to a new country or new neighbourhoods), gender roles (e.g. lack of male role models), parental relationship status, language differences, employment (e.g. busy schedules), economic situations, and education are all shaped by decisions that parents make that can facilitate or constrain how children’s ecological identities are co-constructed. While these parental decisions are largely out of children’s control, it would be unfair to place the entire burden of facilitating children’s expression of their ecological identities on the parents themselves, for parents’ decisions are made within or limited by the context of the rapid globalization of our current political economy (Orr, 2002). I return to this question of redistributing burden and blame in the following chapter.

In reviewing the five children’s ecological identity narratives in light of how they reveal children’s agency or lack thereof, I am mindful that a complex system has no clear delineation between a context and an agent. As Davis and Sumara (2006) suggest, “[f]or complex systems, agents are necessarily parts of their environments. It is not always possible (or useful) to determine with certainty which components are part of the system (i.e., “inside”) and which belong to the setting (i.e., “outside”)” (p. 15). According to Davis and Sumara (2006), “the project of formal education cannot be understood without considering, all-at-once, the many layers of dynamic, nested activity that are constantly at play” (p. 28). The layers of dynamic activity that I consider in the following section are: children as teachers; children’s direct, indirect, and vicarious nature experiences

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30 Kellert classifies children’s experiences with nature in three ways: direct, indirect, and “vicarious” or “symbolic.” Direct experience refers to physical contact with environments largely outside of human input and control, indirect experience includes physical contact with environments under human management.
(Kellert, 2002); and the influence of peers. Conversations, I conclude, are a powerful pedagogical approach that allow for this interplay between layers of nested activity to occur in a manner that expands the expression of children’s ecological identities.

**Children as teachers**

One of the most significant indicators of children’s growing freedom to influence their families and society is the frequent reference to *children as teachers* by the children themselves, their teachers, their Farm Friends, and their parents. Frida was the most vociferous in recognizing that children are capable of educating both adults and children. For example, in response to my question, “Why do you think Farm Friends come to the project?” Frida replies: “I guess because they want to teach kids and they also want to…maybe learn from kids as well?” (Post-program interview). Frida also considers her environmental website a form of educational outreach, and includes her educational activities as examples of environmental actions. Barb Taylor from Salmo Elementary commented at a Teacher Meeting that, “kids mentor other school children” (Researcher Journal, February 18, 2008), indicating how her teaching style and the Montessori curriculum create the space for children to become teachers in the classroom. Emily, Frida’s Farm Friend, describes her relationship with Frida as: “we're teacher to teacher.” Furthermore, Anastasia, Stephanie’s Farm Friend, felt that she learned from Stephanie and the other children in her group: “It’s interesting, you learn from each other. Like I am learning from them, too.” In addition, Simran’s mother observes that, “kids are the

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such as gardens, domesticated animals, etc., and vicarious or symbolic experience is an absence of physical contact with the natural world (books, computers, art, legends, stories, etc.) (Kellert, 2002, pp. 118-120)
teachers now. Seriously, about environment because what they learn at school they bring home” (Priya, Interview).

This role of children as teachers has particular significance since many parents see themselves as uninformed regarding environmental issues and solutions. While Simran and Michael’s mothers clearly express their personal lack of knowledge, Stephanie’s mother refers to it in more general terms as a generational gap between grandparents who understood where food comes from and a generation of parents who only know processed food. Accepting that children may know more than adults is a radical reversal of the idea that “children are dependent, protected and cocooned, everything the child can say can be said better, more completely, by an adult” (Lee, 2001, p. 89), a perspective that has contributed to the silencing of children’s voices.

While children are becoming increasingly empowered to shape their parents’ ecological identities, two examples from the interviews reveal the subtle nature of how parents’ choices and attitudes constrain children’s agency. The first relates to a discrepancy between the amount of organic food that children believe their families consume compared with that reported by their mothers. Through their participation in Landed Learning and classroom lessons with their teachers, children learned about the benefits of organic food and food production in terms of improvements to personal and ecological health. Stephanie takes an active role in teaching her family about the importance of organic food:

**SL:** [My mom] tries to buy [our food] like local food and stuff
**JO:** And why do you think she cares about those things?
**SL:** Cause it can make me sick and stuff. *She doesn’t want that* (whispered)
**JO:** And how do you think your mom learned about these things?
**SL:** Some from me…and, I don’t know how she learned it. She just knows it (Post-program interview)
In their post-program interviews, Stephanie, Simran, and Frida over-estimate the amount of organic food purchased by their parents and consumed at home. For instance, Frida believes she eats “mostly organic” at home and that her parents buy organic food because “they think it’s important to eat healthy and to be good to the earth (voice getting progressively quieter).” According to Frida’s mother, however, although she says she buys organic food “quite a bit” she qualifies this by explaining,

> When I can I buy organic but again, budget is always the main thing but you play with it and, you say, ‘OK, well these tomatoes are on sale, they’re organic and I can get them for reasonably good.’ You know, same with that meat. You want to know where it comes from. Not always possible. So it is quite an effort. (Michaela, Interview)

Similarly, while Stephanie and Simran thought that their parents bought organic food, conversations with their mothers indicated that organic food was only rarely purchased (or grown, in Stephanie’s case). While Simran, Michael, and Frida’s mothers refer to cost as the limiting factor in their decision not to buy more organic food, none of the children make this link. Frida specifically refers to a lack of education as a possible explanation for parental choices regarding organic food: “I don’t know, cause like, maybe their parents, the people don’t know about it that much, or they’re not aware that it’s a better option” (Post-program interview). From my own experiences as a young adult trying to change my parents’ food consumption culture, I can conjecture what the impact is on children’s relationship with their parents and their internalization of Landed Learning lessons when they are faced with a lack of congruency between their knowledge (acquired through their experiences at school and at Landed Learning) and their parents’ choices regarding organic food purchases and consumption. My worry is that it can lead
to feelings of apathy and powerlessness regarding solving environmental problems, and may even undermine how children perceive the legitimacy of environmental education.

A second example relates more specifically to parents’ attitudes. In a few instances during my interviews with children’s mothers, I sensed a contradiction between parents’ verbal statements supporting children’s expanding ecological awareness and empowerment and their non-verbal resistance. Although Stephanie’s mother is entirely supportive of environmentalism, the following scenario hints at Claire’s resistance to being taught/told what to do by her daughter:

I mean, Stephanie, she goes around and turns off lights in the house, and so she’s had a very wonderful year, for her. One, between the Farm and Mr. Brown, I’m so happy because I know those values are solid for her. She says, “Who left this light on?” (both laughing quietly). I say, “Not me, it’s your father” (both laugh). Wham! You know? (Claire, Interview)

Simran’s mother has a similar response when Simran catches her idling: “he goes, ‘Mom, that’s idling.’ (JO: small laugh) And I go, ‘OK!’ (drawn out). Like, you know? So he’s, they’re aware” (Priya, Interview). In both instances, the mothers’ subtle non-verbal communication seems to express a mixture of irritation, guilt, and condescension at being caught doing something “wrong” and perhaps a growing sense of awe regarding their children’s expanding ecological awareness and assertiveness. From a parental perspective, however, having their children question their behaviour undermines perhaps a deep-seated need to be respected and seen as responsible and knowledgeable. The fact that I laugh with the mothers during the interviews could imply a degree of complicity between us as adults, laughing together over the quaint earnestness of these young, at times annoying, environmental police.
King (1995) describes how parents can feel bullied, shamed, harassed, tormented, and proselytized by their green police, ecotyrant children (p. 22). According to King (1995), children are aware that they are being presented in contradictory terms by rhetoric that simultaneously elevates and demonizes environmentally active children (p. 27). Her critique is that, “[c]hildren are encouraged to be aware of global environmental problems, are provided with simple lifestyle solutions, and then are roundly criticized for demanding the most minor of changes in patterns of family consumption” (p. 27). The underlying concern here is that these efforts place too much emphasis on changing consumer habits rather than gaining the knowledge required to become politically empowered at the scale necessary to truly address current ecological crises (King, 1995).

In terms of children’s ecological identities, encouraging children to become teachers and shape their parents’ environmental actions and values increases children’s agency and expands their ecological identities by granting identification with nature greater relevance in society. However, ultimately, parental choices or situations (e.g. financial constraints limiting the purchase of organic food) limit children’s agency and the efficacy of intergenerational teaching and learning from child to adult. Careful consideration is also required to understand the emotional and psychological impacts on children when children assume adult roles to address environmental problems beyond the scope of children’s responsibilities.31

31 This role reversal shares similarities with parentification (J. M. Ostertag, personal communication, September 10, 2009), when children or adolescents assume adult-like roles. While some degree of parentification is natural, in certain circumstances the effects on children can be very negative and can be considered a form of child neglect: “Parentification traditionally interrupts or interferes with childhood development, resulting in poor relationships, attachment issues, and poor differentiation of self from family of origin in childhood and later in adulthood” (Hooper, 2007, p. 217). It is not within the scope of this research to consider how children’s changing relationships vis-à-vis their parents through intergenerational (child to adult) environmental education could be considered a form of parentification, though this could be an important area of future research.
Direct and Indirect Nature Experiences

Parents’ willingness to learn from their children is a shift toward encouraging and supporting children’s empowered ecological identities. This parental support is also expressed when parents create the conditions for children to have direct (e.g. wilderness experiences) and indirect (e.g. independent, free play in local neighbourhoods) experiences with nature (Kellert, 2002). In this study, the only two children whose parents consciously ensured that they had access to direct nature were Aaron (e.g. walks in the woods, canoeing, camping) and Frida (e.g. camping trips and her family’s purchase of land in the Kootenays). However, Frida clearly indicated that her experiences in wilderness were insufficient, and that most “natural” areas she did visit were too manicured and not truly “wilderness” experiences. Although Michael does not appear to have any direct or indirect nature experiences, Michael’s mother expressed how she was inspired by Landed Learning, and that “probably next year or later we will try to go outside to find out the, you know, outside nature. Not only about the veggie, about everything.” Michael’s mother makes a distinction between the farm as an example of indirect nature experience and the need for her son to have direct nature experiences in a more wilderness setting; however, she does not see this as a priority and will likely wait a year or more before arranging the space for this type of experience to take place.

Playing outside is an opportunity for children to explore indirect nature, social relationships, and their growing independence (e.g. Louv, 2008; Kellert, 2002). Supported by her parents’ convictions and efforts, Stephanie spends considerable time playing outside in the alley with her sister and other children from the neighbourhood. Simran, who similarly attends Hollingsworth and lives nearby, also frequently plays in
the alley with his cousins. Michael, who attends George Brown and lives in an apartment building, frequently plays soccer and other games with local children in the neighbourhood park. Both Stephanie and Michael’s mothers feel that their neighbourhoods are safe enough to let their children play without direct supervision (I have no data regarding whether or not Simran plays unsupervised).

In terms of providing access to indirect experiences with nature, Stephanie’s mother indicated that creating the opportunity and space for free play is “work,” a statement which resonates with the research literature and comments made by other mothers regarding parents’ fear for their children’s safety, decreasing natural play areas in urban settings (Kellert, 2002; Louv 2008), and the sense that both children and adults’ lives are increasingly busy and highly structured (Louv, 2008). Louv (2008) cites studies revealing how, “between 1981 and 2003, children during the typical week lost over nine hours of discretionary time (that is hours not spent in school, childcare, and so forth)...computer use doubled...Children between the ages of eight and eighteen years old spent an average of nearly 6.5 hours a day plugged in electronically” (p. 119).

Parents’ fears force them to act against what they know (intuitively and from their own childhood memories) to be important play experiences for their children. For instance, Frida’s mother recognizes that children need to have unstructured time to play:

ME: And then we pad their playgrounds with padding....And tell them this is how you play....So we are really suffocating them.

JO: Do you think the world has changed more in their generation than in your generation?

ME: Well yeah. I would never have left my kids outdoors and save a cornfield and fight fire [experiences Michaela had as a child growing up in Nigeria].... I think that we do not, I don’t know, with this whole insurance policy (JO: Liability?) Liability. It kills. I mean, we had to fight for that playground [in our neighbourhood], they wanted to just leave it, you know. There’s so much to fight for, for that freedom. (Michaela, Interview)
Michaela’s allusion to fighting for their local playground and her children’s freedom is consistent with the findings that childhood is being shaped by “a general trend towards having children removed from streets and other open areas and their being confined to limited spaces protected by fences, walls, etc” (Qvortrup, 2008, p. 73). Increasingly, adult interests dominate urban environments, especially in terms of economic activity and productivity. This has meant that “children’s life worlds are squeezed, their degrees of freedom reduced and their opportunities for autonomous explorations more and more beyond their reach” (Qvortrup, 2008, p. 73).

Stephanie and Simran are the two children with the most freedom to play, especially in the alleys around their houses and during their summer vacations. They are also the two children that appeared to have the least structured days and suffer the least from excessively busy schedules. Frida and Michael in particular are very busy children. Frida described her summer plans as, “I have a really busy summer, being myself (laughs). I’m probably doing [a circus camp for kids], I’m doing the summer school future problem solving, I’m going camping in multiple places” (Post-program interview). Although she laughs, Frida’s largely self-imposed schedule causes her to experience stress and burnout. According to her mother, “there are days where [Frida] almost doesn’t want to do the [environment-related] research because it’s too, it’s too stressful. And so she, there’s this pull and push with her, and I sometimes fear she’s growing up too fast,

32 Although none of the cases demonstrated a wide range of class differences, class belonging has been identified for another source of variation in children’s experiences of place. For instance, an older study by Newson and Newson (1976) with children’s parents indicated that, “working-class children were more likely to play out in the street than middle-class children” (cited in Scourfield et al., 2006, p. 17).
and why burden her with all these problems?” (Michaela, Interview). Unlike Frida, Michael’s activities are clearly directed by his mother.

As these findings indicate, children’s freedom to explore, expand, and enact their ecological identities through play and experiences in direct and indirect nature is constrained by numerous barriers. Louv (2008) describes these barriers as cultural or institutional (e.g. litigation), structural (e.g. the way cities are shaped), and personal or familial (e.g. time pressures and fear) (p. 115). Landed Learning, as a yearlong environmental education project with full-day visits at the Farm, may provide an antidote to these constraints. Although unstructured play is not an official element of the curriculum, Landed Learning staff, Farm Friends, and the participating teachers value its importance and attempt to create space for free play. While the morning section of the children’s visits at Landed Learning tends to be very busy (this is when children plant, weed, harvest, cook, participate in workshops with their Farm Friends, and participate in explicit teaching/learning activities to make curriculum connections), children play around the gardens during lunch and often have more unstructured activities (e.g. walking in the forest) in the afternoon with their teachers.

**Vicarious experiences: Books and Information/Computer Technology (I/CT)**

Children also have the freedom to expand and enact their ecological identities through vicarious experiences with nature. Books and Information/Computer Technologies (I/CT) provide a window to the natural world that Simran, Aaron, and Frida use extensively. These children love to read books and spend hours on their computers playing games, or, more commonly, conducting “research” or working on personal projects. For example, Simran explained that he “studies” animals, especially snakes,
owls, and chickens (he wanted to raise a chicken from the UBC Farm as a pet) by conducting Internet research (Post-program interview). He also plays computer games. Aaron accesses CBC podcasts, plays some computer games, works on a baseball statistics website he created, and designs his Kids Intelligence Agency. Frida has a personal environment website where she posts her extensive research into environmental issues, such as cutting carbon emissions, coral reefs, global warming, rainforests, local environmental/political concerns, etc., and blogs about her environmental actions and more philosophically-oriented reflections regarding nature. She also does computer programming and plays computer games. Frida reads a wide range of literature, often books recommended to her by her mother (she was reading *The Secret Life of Plants* at the time of our post-program interview).

Through the Internet and their comfort using computers, these children are able to access information directly (not mediated nor controlled by adults), direct their own learning, and speak with greater authority on topics that interest them. My findings support Lee’s (2001) claim that information/computer technology has the potential to increase child-centred education and shift the perception of children’s dependence/independence. Through their access to I/CT and their growing confidence in conducting research, children are participating in a process that is decoupling adult’s authority over education, and, “increasingly casting the pupil as an active participant in their own learning” (Lee, 2001, p. 84). In addition, I/CT is encouraging and requiring learners to become lifelong learners. Unlike the traditional education model that prepared children for a fixed future, “children are being taught so that they can *continue* to learn and to change after school, so that they are ready to adapt to future unpredictable
demands and circumstances” (Lee, 2001, p. 84, emphasis in original). Learning to become lifelong learners will be key in adapting to the changing social, economic, and ecological contexts brought about by globalization and global environmental change.

While I/CT and books may increase children’s empowerment, it appears that more research is needed to fully understand the broader effects of the use of computers and the Internet on children’s social and ecological relationships. According to an early study, “greater use of the Internet was associated with declines in participants’ communication with family members in the household, declines in the size of their social circle, and increases in their depression and loneliness” (Kraut, Patterson, Lundmark, Kiesler, Mukopadhyay, & Scherlis, 1998, p. 1017). Although a recent review of this research by Kraut, Kiesler, Boneva, Cummings, Helgeson, and Crawford (2002) revealed that the negative social effect had dissipated, the researchers still warn that that Internet use magnified social outcomes (for better and for worse), indicating that social outcomes improved for extroverts with strong social support and declined for introverts with less support. Although the following comment by Aaron’s mother describes Aaron while he reads, it is highly likely that this behaviour is consistent whether he is reading a book or reading and working on his computer: “He’ll just read wherever he can. And you can’t even really hardly talk to him. That’s one of his issues that we have to work on cause he zones out.” This asocial “zoning out” children experience while reading or working on their computers may have serious implications for their capacity to develop and maintain social and ecological relations.

According to Kellert (2002), a mix of direct, indirect, and vicarious or symbolic nature experiences are important for enhancing children’s emotional, intellectual, and
values-related development. However, the findings from these cases are consistent with Kellert’s (2002) finding that various trends in modern society are decreasing the quality and quantity of children’s experiences of the natural world (p. 146). In addition, Kellert (2002) fears that “possible increases in children’s indirect and vicarious contact with nature do not appear to offer an adequate substitute for diminished direct encounters in ordinary and accessibly natural environments” (p. 147). Certainly, Frida would agree vociferously with Kellert’s position, though I personally remain wary of hierarchically positioning wilderness as a more pure form of nature than, for example, gardens, since this discourse may serve to widen the chasm between human and nature relationships.

**Influence of peers**

Although conducting focus group interviews with the five children in the context of their peers was not within the original scope of this research, it is widely understood that peers play a significant role in shaping children’s identities. According to Corsaro (1997),

> children do not simply imitate or internalize the world around them. They strive to interpret or make sense of their culture and to participate in it. In attempting to make sense of the adult world, children come to collectively produce their own peer worlds and cultures. (p. 24 cited in Christensen & Prout, 2005, p. 50)

The traditional approach, however, in environmental education and environmental education research has been to focus on the role of adults in transforming children’s ecological identities. This perspective is reflected in the frequent references to Rachel Carson’s (1956) words from *The Sense of Wonder*: "If a child is to keep alive his [sic] inborn sense of wonder…he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in" (p.
Even without recourse to focus group interviews with children or specific interview questions regarding the role of peers in shaping children’s ecological identity, a number of references were made to the role of friends that indicate how peers can both support and limit children’s freedom to develop their ecological identities.

In terms of examples of peers’ positive influence on children’s ecological identities, any visit to one of Landed Learning’s participating schools indicates the project’s enormous popularity among the students, as current and past participants greet Landed Learning researchers and staff with enthusiastic warmth. Stephanie also reveals how her friends both approve of Landed Learning and how she feels comfortable talking with them about her experiences:

JO: Do you talk about the farm to friends?
SL: Uh hum
JO: And what do they think? What’s their response?
SL: “That’s great!”
JO: Do they wish they could go to the farm?
SL: Yeah
JO: Have you taught them things and then they might change what they do, or no?
SL: Yeah
JO: Do you have an example of something like that?
SL: Like about the local food and stuff, about pesticides and stuff (Post-program interview)

Two references to the negative influences of peers by Frida and Michael indicate, however, that more nuanced research into peer-group responses to environmental education is required. For instance, Michael refers somewhat obscurely to “some cool people call them geeks, and some geeks love science and nature stuff” (Post-program interview), and Frida shared with me that while she finds most girls’ conversations boring
because they are about fashion, they probably find her commitment to environmental issues “geeky”:

FE: Well their conversations are mostly about what’s in fashion and stuff, so…
JO: And what do you think about those conversations?
FE: They’re boring. And I’m not interested in that at all
JO: And what do they think about when you talk about Gateway?
FE: I don’t know. They think that I’m like some geeky person.
JO: (laughs gently) That’s a funny place to be, eh?
FE: Yeah, but I don’t care about that (Post-program interview)

While environmental issues are considered relatively tame topics in education compared with issues such as racism and homophobia (King, 1995), a lack of congruence between children’s peer culture and environmental education discourse must be considered carefully in terms of the potential for bullying or alienation as a result of children enacting empowered ecological identities within unsupportive peer cultures.

Environmental education should empower children’s ecological identities within their peer cultures, not increase their vulnerability to bullying for appearing different or geeky.

The following table (Table 3) summarizes the findings presented above in terms how each child’s agency and context (family, school, Landed Learning, and peers) interplay to co-construct their ecological identities.

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33 Although Frida expresses an example of negative peer pressure that could limit her ecological identity, her ecological identity narrative refers to two students at a previous school that played a pivotal role in directing her attention to environmental issues and environmental action.
Table 3: Between agency and context - co-constructing children’s ecological identities

<table>
<thead>
<tr>
<th></th>
<th>Stephanie</th>
<th>Simran</th>
<th>Michael</th>
<th>Aaron</th>
<th>Frida</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child as teacher of environmental issues &amp; solutions</td>
<td>Yes – at home, at LL</td>
<td>Yes – at home, at school</td>
<td>Limited – possibly at home</td>
<td>Limited – possibly at school and at home on non-LL related topics)</td>
<td>Yes – at LL, school, home, and beyond (FE sees her website as a teaching tool)</td>
</tr>
<tr>
<td>Direct nature experiences</td>
<td>ND</td>
<td>ND</td>
<td>No – mother indicates maybe in the next few years</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Indirect nature experiences (free play in neighbourhood)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Limited</td>
<td>Limited</td>
</tr>
<tr>
<td>Vicarious nature experiences (computers, books)</td>
<td>Limited</td>
<td>Yes</td>
<td>ND</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Influence of peers on ecological identity</td>
<td>Positive</td>
<td>Limited</td>
<td>Somewhat negative</td>
<td>Somewhat positive (planted artichoke with friend)</td>
<td>Mixed</td>
</tr>
</tbody>
</table>

*ND (no data) (Since the examples did not arise in any of my multiple interviews about and with each child, the process of triangulation would imply that no data available may indicate an absence of this condition)

**Conversation**

Many of the research participants – both children and adults – emphasized that conversations are key in negotiating the interplay between place, people, and pedagogical project in co-constructing ecological identities. Bowers (2001) critiques public schools and university classrooms for their inability to teach “the knowledge, skills, and patterns of social interaction that contribute to participation in intergenerationally connected and morally responsible communities” (p. 20). As this research indicates, however, conversations are a powerful pedagogical tool that can nurture these social interactions, provide support for children’s growing ecological identities, and empower children’s agency as social and environmental actors. When children return home from their farm
visits and talk about their discoveries at Landed Learning, they not only reinforce the learning that occurred at the farm, they are teaching their families possibly new ways of being in the world. Stephanie, Simran, and Frida are all children who, through conversation, share in detail and with exuberance their experiences at the Farm with their families. Aaron, while he talks less about his experiences at the farm, nevertheless talks extensively about sustainability and other areas of personal interest. In Aaron’s narrative, he shares his reticence in talking to his parents about Landed Learning because he feels they are already very knowledgeable about organic gardening and environmental issues. This corroborates Uzzell’s (1999) finding that children’s catalytic effect (in terms of children influencing their parents) is reduced if the “parent has a high level of pre-existing knowledge about environmental problems” (pp. 407-408). The effect on the child is that he/she feels uninfluential because the parent regards him/herself as the ‘expert.’ Michael explicitly avoids conversations with his mother, possibly as a result of language and cultural barriers, as well as significant pressures from his mother to excel in school, music, and sports.

Conversations depend on respect, trust, and the ability to listen. By ensuring these elements are present, conversations about learning at the Farm can become transformative experiences for both children and adults. Frida’s mother eloquently expresses the importance of conversations with children, revealing extensive experience in conversing with her children and reflecting on the significance of these conversations: "That notion that if I don't listen now this will give her the sign that what she has to say is not important" (Michaela, Interview). Through these conversations, which Michaela describes as “following their wonder,” she realized that "the more I thought about it, the
more I cannot separate me from [Frida] or [Frida’s brother] because we are kind of mutually building on each other's thoughts” (Michaela, Interview). This blurring of the boundaries between the identities of mother and child is profound, and indicative of the kind of transformation that is possible when the dichotomy between child and adult identities is broken down. Speaking from her own experience, however, Simran’s mother makes it clear that not all parents have the time or energy to engage in this kind of conversation with their children.

The volunteer Farm Friends recognize the power of conversations with children as a way of connecting with each child and making the learning experience more meaningful. Not all Farm Friends, however, feel equally comfortable delving into personal conversations. Whereas Aaron’s Farm Friend Jackie felt strongly that a way to improve the Landed Learning experience would be to "keep up the dialogue, you know. It's really important to get to know each [student],” Michael’s Farm Friend Vera felt reticent in talking to Michael about his personal life: “I didn’t think it was my place to talk a lot about that. So I would just encourage him to have those feelings about his grandpa but I didn’t ask him questions about that.” Also, Simran’s Farm Friend Alice simply felt too busy in the garden to engage in personal conversation: “we’re so engrossed in the garden that we're usually talking about that.”

While negotiating the line between getting to know each student and overstepping the bounds of privacy is a grey zone, students’ family contexts and their unique sociocultural histories and contexts provide a rich source of conversation topics to connect Landed Learning with students’ previous experiences and strengthen their ecological identities. In particular, conversations with recent immigrant children can elicit
children’s knowledge of agriculture, food, and the environment from diverse cultural backgrounds. Without these openings, children’s experiences and multicultural ways of knowing and living sustainably could be lost as recent immigrant children and families attempt to integrate into Canadian society and develop new place-based connections. As one of the participating teachers, Dave Ptok, indicates,

DP: Most of the kids that I know that come from the Philippines had growing experience – or even from Mexico or South American countries. They know plants. They know how food grows. They have, I think, probably a more connected experience to land and growing things. Definitely.

JO: Do you think we could bring that out more in Landed Learning?

DP: I think we could have discussions around that. It would be interesting to see. I think we can have that sort of discussion with them about their connectedness with their past. And I think that’s kind of an interesting discussion to begin with almost. Just the realization that some of these kids do have some background knowledge, they do have an understanding of the land and growing. And where does that come from? Even finding out where that comes from. Because you don’t know unless you ask.

Without these conversations that connect to children’s pasts, rich sources of knowledge (e.g. Michael’s grandfather’s traditional, organic farming techniques), ways of being (e.g. Stephanie’s grandmother’s simple lifestyle) and important facets of children’s identities are not included in official educational settings. Instead, other discourses (white, middle class, adult-centred) become the dominant modes of learning in general and, more specifically, learning to relate to the natural world.

Rapid urbanization around the world means that fewer and fewer children are growing up with a connection to food growing activities. I was surprised, therefore, that four of the five children (Stephanie, Simran, Michael, and Frida) all talked about their grandparents still maintaining a close connection with agriculture and growing food. Moreover, for Stephanie and Simran, whose grandparents live in Vancouver and not in China or Bulgaria like Michael and Frida’s, Landed Learning deepened their
intergenerational connections with their grandparents. According to Stephanie’s mother, however, other children who participated in Landed Learning also experienced a transformation of their intergenerational relationships with their grandparents:

Another mother was telling me that too. Her mother-in-law is from India and she has been growing a lot of vegetables in their garden and now the granddaughter, who is Stephanie’s friend, also has that knowledge. So again, you know, it’s that – I know one of the things is that intergenerational transfer of knowledge, or whatever. So it happens with the grandparents now and the kids! So she’s said the exact same thing, I said ‘Same with my mother!’ (surprise and wonder in voice) But that, again, that’s the way they were raised, they had to grow their own food. (Claire, Interview)

These conversations, which create the space for multicultural and intergenerational relationships and knowledge to be validated, are cause for great hope in a time when children’s ecological identities are constrained by increasingly limited direct and indirect experiences with nature. Furthermore, they resist the homogenizing effects of globalization and standards-based education, and potentially help to conserve marginalized and rapidly disappearing traditional place-based knowledge (Gruenewald, 2003).
Chapter 6: Summary and Conclusions

In this chapter, I revisit the question that guided my research process and summarize my findings from this qualitative case study conducted at the Intergenerational Landed Learning on the Farm for the Environment project with five children, their mothers, teachers, and Farm Friends. I conclude with recommendations for environmental education – specifically in the terms of community-based environmental education, and propose a number of areas for future research.

Summary

Placing children at the centre of the hopes of environmental education has become an increasingly prevalent approach for bringing about the social and cultural transformations considered necessary in order to mitigate current ecological crises. Not all environmental educators, however, espouse the view that children should become empowered and committed to solving environmental problems (e.g. Sobel, 1996). Their goal is largely to provide developmentally appropriate contexts and experiences that will nurture children’s sense of wonder regarding the natural world. Nevertheless, especially from a program evaluation perspective, promoting children’s agency – particularly at the level of children teaching their parents how to make consumer or lifestyle changes at home – can be interpreted as a sign of an environmental education program’s success. For instance, in an article on U.S. President Obama’s children enrolling in a green school, a representative of the U.S. green building council’s school sector considered this good news, “Not because of the media coverage, but because the children will ‘communicate these real-life lessons in sustainability to their parents’” (Goffman, 2009, para. 15).
Similarly, David Suzuki (2009), Canada’s foremost environmental advocate, in a presentation to University of British Columbia teacher education students, stated that he increasingly recognizes that children are one of the most powerful routes to influencing their parents, and, by extension, an adult society that he perceives as highly resistant to change. While these examples highlight how “children are being conceptually liberated from passive dependency on adults and elevated to the status of social actors” (James & Prout, 1990 cited in Brannen & O’Brien, 1996, p. 1), they do not delve into the complex and diverse social, cultural, and economic contexts of children’s families, nor do they consider the broader societal and ecological changes that are transforming our human-nature relationships.

This study begins to address these concerns by researching how children’s ecological identities (Thomashow, 1995) are co-constructed through the interplay between their agency, their family contexts, and their experiences at Landed Learning, a farm-based environmental education project. My research design and analysis of the findings were informed by a critical pedagogy of place, which Gruenewald (2003) suggests combines “[c]ritical pedagogy’s emphasis on the dynamics of race, power, and place” (p. 5) with place-based education’s concern with the “ecological contexts in which all human, and non-human, communities are rooted” (p. 5). In addition, the new social studies of childhood, which seeks to understand and promote children’s agency and voice in society, provided important considerations for research design and analysis of diverse children’s agency as social and ecological actors. These theoretical considerations, combined with my participant observations of three classes of Grades 4 to 6 students at Landed Learning, led to the design of an in-depth qualitative case study research project.
based on the experiences of five diverse children and their parents (only mothers consented and were available for interviews), Farm Friends, and teachers.

The findings from the research demonstrate that, while each child’s ecological identity is unique and highly complex, the co-construction of these identities is facilitated and constrained by individual, familial, societal, and ecological considerations. I chose to organize findings from the research according to children’s roles as intergenerational teachers, and their access to direct, indirect, and vicarious experiences with nature (Kellert, 2002) to illustrate the interplay between the children’s agency and context in co-constructing their ecological identities.

Consistent with previous research (e.g. Sobel, 1996), my research indicates that developing an ethic of care – or feelings of affinity, love, empathy, and responsibility – for nature emerged as central in co-constructing of children’s ecological identities. Landed Learning provided the place and the pedagogical context for these ecological identities to expand. Nevertheless, children’s experiences were unique and significantly shaped by their family contexts and broader socio-cultural and ecological transformations. Varying levels of direct, indirect, and vicarious experiences with nature appeared to play important roles in facilitating or constraining children’s agency to explore, expand, and enact their ecological identities. The findings from my research indicate that significant experiences include: access to wild nature; the freedom for unstructured, unsupervised neighbourhood play; freedom from parental fears; free time (both parents’ and children’s); and access to computers and Internet for environment-related research. Peer influence also emerged as an important – and under-researched – factor in both facilitating and constraining ecological identities. I concluded with the
importance of conversations as pedagogical tools, particularly in encouraging children to assume the role of teachers in their families and communities. However, not all children talked about their experiences at Landed Learning, and children who did engage their families in conversations about their learning at the farm were confronted with conflicting realities. On the one hand, parents were highly supportive of their children’s experiences at Landed Learning and indicated that they had learned from their children, a finding consistent with research on children’s intergenerational influence as environmental educators. On the other hand, however, children were confronted with numerous barriers to effectively influencing adults, such as parents’ busy schedules, economic considerations, and subtle power struggles in which parents resisted their children’s influence.

**A community-based approach**

Identifying how children’s ecological identities are shaped by conditions encouraging or limiting their capacity as social actors reminds us that, since ecological identities are co-constructed, then the burden of ecological destruction must also be shared collectively through broad-based collaboration, not in isolation (Fullan, 2007). Environmental education that focuses solely on children’s responsibilities to change personal, familial, and societal human-nature relationships has major limitations. Beyond the inevitable delay that will occur before children can effectively implement many of the goals of environmental education, children lack agency in an adult-dominated society, and should not be expected by adults to have the capacity and willingness to shoulder these serious burdens, especially in light of children’s rapidly decreasing connections to nature based on regular experiences and feelings of wonder and care.
Scaling up, it is also unfair to assign teachers and schools with this responsibility. As school effectiveness research since the 1960s has demonstrated, “school education cannot compensate for society and that in making high demands of teachers and raising our expectations of schools we must have scrupulous respect for the evidence of socio-economic inequality and the changing nature of family and community life” (MacBeath & Mortimore, 2001, p. 2). Furthermore, while my research validates how families and parents have an influence on children’s ecological identities, we must proceed carefully in considering how adult responsibilities are distributed. Woodhead and Faulkner (2008) state that, “[r]espect for children’s status as social actors does not diminish adult responsibilities. It places new responsibilities on the adult community to structure children’s environment, guide their behaviour and enable their social participation in ways consistent with their understanding, interests and ways of communication, especially in the issues that most directly affect their lives” (p. 35). Though I applaud Woodhead and Faulkner’s reference to “the adult community,” I am wary of the consequence that women will be most burdened by these responsibilities. As my research indicates, women remain the primary caregivers in all five children’s cases. In a time when childhood is becoming an increasingly researched and constructed experience (consider the billions of dollars spent by companies advertising to children), Walkerdine (1992) makes an important caveat to the enthusiasm behind increasing children’s empowerment. She reminds us that, “women, as teachers and mothers, bear the cost as ‘servant[s] to the omnipotent child, whose needs must be met at all times’” (p. 21 cited in King, 1995, p. 121). Therefore, instead of placing the burden of enacting environmental change on multiple, isolated actors or institutions, King (1995) suggests that we need to
encourage children to recognize and exercise their power but to acknowledge that, “caring for them becomes the responsibility of the entire community, not simply of mothers, teachers, domestic workers, or un-paid nurturers” (p. 121).

Community-based environmental education projects and sites (such as Landed Learning and the UBC Farm) are recognized as potentially effective, though under-researched (Tal, 2004), educational strategies.

Community education provides an alternative and additional opportunity to raise understanding and awareness of environmental problems. It is likely to have a more immediate impact than school education on environmental performances because it can involve all sections of society, including decision makers and those who will be affected by environmental strategies. (Evans et al., 1996, Introduction, para. 4)

School effectiveness researchers are also proponents of school-community collaborations and developing intergenerational learning opportunities in order to bridge the gap between school and home learning. Macbeath and Mortimore (2001) suggest that, “[y]oung people can help with their grandparents’ learning and families and extended families can engage in intergenerational collaborative learning. Members of the community can also be a resource for young people’s learning, in the process helping themselves and extending their own repertoire of skills” (p. 204). Furthermore, Sarason (1996), who has been studying educational change since the 1960s, states that, “the encapsulated classroom in the encapsulated school is a mammoth barrier to capitalizing on children’s interest for their intellectual-educational growth and sense of competence and worth” (p. 275). By positioning learning within communities, education becomes situated within meaningful relationships with multicultural and intergenerational community members, and, most importantly, the natural world.
The opportunities presented by community-based environmental education to encourage children’s agency, support the exploration and expansion of children – and adults’ – ecological identities, and bring diverse voices to the forefront of environmental education are exciting. However, the challenges are also numerous. According to Chalker-Scott and Tinnemore (2009), community-based environmental education programs are threatened by a lack of permanent university funding, the public’s perceptions of universities as, in Weerts (2005) words, “arrogant, out-of-touch, and unresponsive to the needs of society” (cited in Chalker-Scott & Tinnemore, 2009, p. 1132), and the tendency for universities to devalue and marginalize outreach education and practical scholarship. In addition, moving toward community-based education can be challenging for teachers and requires a redefinition of roles and relationships (e.g. between teachers and parents) and a re-conceptualization of pedagogical approaches (Bartosh, Mayer-Smith, Peterat, Sinkinson, 2004; Mayer-Smith, Peterat, & Bartosh, 2007; Tal, 2009).

While Landed Learning is an effective model of community-school-university collaboration and community-based environmental education, it also reflects the unequal distribution of ecological care in our society. For instance, women (primarily white, middle class, and well-educated) constitute the vast majority of Landed Learning volunteers, staff, and university researchers, and the project faces the ongoing struggle of accessing funding in order to provide an accessible environmental education experience for inner-city children. Until these two issues (i.e. diversity and sustainable financing) are addressed, Landed Learning and similar environmental education initiatives will not be truly community-based. Finally, as my experiences at the UBC Farm during the past two
years indicate, *land* – the critical criterion for ensuring community members have access to direct and indirect nature experiences – is constantly under threat, particularly in urban centres. Without the land, we lose one of the most powerful teachers and dimensions in co-constructing ecological identities (e.g. Peterat & Mayer-Smith, 2006).

**Areas for future research**

Landed Learning, with its emphasis on meaningful relationships between people, pedagogy, and place, can serve as an exemplary model of community-based environmental education. Following from my research into the various spheres of influence that co-construct diverse children’s ecological identities, additional research from a critical pedagogy of place perspective is required to understand how community-school collaborations can “connect schools with the social and ecological dimensions of places” (Gruenewald, 2003, p.10), and not tangentially to the curriculum “but as structures and practices that help re-think the classroom as the fundamental site of teaching and learning” (p. 10). Central to this research should be an effort to increase the voice of multicultural and multi-age communities in community-based programming. Building on a critical pedagogy of place framework, this future research can question how “humanity’s diverse cultures attempt to live well in the age of globalization, and what cultural patterns should be conserved or transformed to promote more ecologically sustainable communities” (Gruenewald, 2003, p. 9). In part, this research could consider exploring how gardens and farms are defined and experienced cross-culturally, and what cultural contexts are being represented or marginalized by environmental education when gardening is conducted largely within the dominant (e.g. Western/European) culture’s agricultural traditions.
Furthermore, future environmental education research should consider children’s agency in the research process itself and as social and ecological actors in a changing world. This research can be informed methodologically and theoretically by the new social studies of childhood, and contribute to findings from researchers studying the intergenerational influences (child to adult) of environmental education programs. Longitudinal studies, which continue to explore children’s unique position as agents of ecological change and social actors within the complex, over-lapping spheres of their families, schools, and broader human and more-than-human communities, should be conducted to gain deeper insight into the long-term effects of environmental education programming on children’s ecological identities and their families, communities, and society. Longitudinal studies could contribute research into understanding how farm-based environmental education shapes children’s future career decisions, an area of particular relevance considering the aging population of Canada’s farmers and my finding in this research that, for various reasons, all five children could conceive of themselves as gardeners but not as farmers. The children’s garden of the Intergenerational Landed Learning Project located on the UBC Farm, enclosed by a buffer of forest, and situated within a large and culturally diverse North American urban centre, is precisely where this future research can take place.
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Appendices

Appendix A

Project: Cultivating Environmental Stewardship in Young People
Through an Intergenerational Landed-Learning Experience on UBC Farm

Guiding Interview (Student) 1 Questions LL Project 2007-2008

Initial (Pre-farm visit) interviews
The purpose of these interviews is to gain a sense of students’ experience with nature, the
environment, and their experiences with caring for living things.

Introductory questions
1. Tell me about yourself and your family.
2. Do you have any siblings? Older, younger? Do you take care of them at all? Do
you have grandparents?
3. Have you ever had a family pet? How did you care for it?
4. What kinds of things are you expected to do around the house? Do you help out
with any chores?
5. Have you ever planted or grown anything before coming to the UBC farm? What?
When? With whom? Did you like the experience? What did you do? Do you have
plants in your house? On a balcony? Do you have a yard? A garden? Do you look
after any of these plants? What do you do? Etc.
6. What types of places do you find special to you? Where (how) do you like to
spend time that you have to yourself?

Farm questions
7. When you think about a farm, what do you imagine? (If I ask you to draw me a
picture of a farm, what would you draw?)
8. Have you ever visited a farm before this project? Tell me about your experience
9. Are farms important? To whom? If so, how, why?

Environment/Food questions
10. If I ask you to draw a picture of the environment what would you draw? Why?
What would you include in your picture? What other things could be there?
11. What sorts of issues in nature / environment have you heard about?
12. Please tell me about your favorite foods? Do any of these come from a farm? [or
are they connected in any way to a farm?]
13. What kinds of foods are healthy? Can you name any? Do you like those? Do
you eat those at home or at school [often, occasionally?].
14. Have you ever heard the word “organic”? When/ where have you heard this
term? What does it mean? Have you ever heard of ‘organic farming’? Can you
describe what that is?
Appendix B

Project: Cultivating Environmental Stewardship in Young People
Through an Intergenerational Landed-Learning Experience on UBC Farm

Guiding Interview Questions LL Project 2007-2008
Student interview 2

1. Now that the farm project is finished, is there anything that stands out in your mind? Something you will really remember? What? Why?
2. What part of activities at the farm did you like most of all? Least of all? Why? What job/s do you prefer to do?
3. Tell me what you know / think about farms and farming now? What have you learned about farms from this project? What about farming and farmers?
4. Do you think you’d ever like to work on a farm in the future? Why? Why not?
5. Is there a connection between what you do at the farm and what you do in school? Do you think that going to the farm has helped you in school? Do you do any school subjects at the farm? What have you learned at the farm/ at school? about science? Math? Art? Other subjects? Could you give me an example….?
6. What have you learned about environmental issues? Has being at the farm taught you anything more about the environment? Examples?
   a. What have you learned about caring about the land? E.g. caring for the soil (why? How?)
   b. What solutions to environmental issues have you learned by being at the farm?
7. Tell me about your farm friend. Did you enjoy working with them? What did you like or dislike? What did you learn about them? What did you learn from them?
8. What are/is your favourite food(s)? Did being at the farm introduce you to any new food? What was your favorite thing to taste/eat at the farm?
   a. What did you think about the cooking? Was that a new experience for you? Do you cook at home now? More than before? What do you parents say about this?
   b. Do you eat anything new at home since going to the farm?
   c. Do you eat organic food at home?
9. What did you learn about organic agriculture?
10. Do you talk about the farm project at home? What do you tell them? What do they say/feel? What would you tell your friends about working on a farm project?

11. What else have you learned during your visits to the farm?

12. Do you have any other questions?

**Additional questions for case study**

13. Do you have a garden at home? If yes, has going to the UBC Farm changed what you do in this garden? How? If no, would you like to have a garden at home? Why?

14. Would you like to grow your own food in the future? Why? Why not?

15. If this hand is “I don’t care at all about the environment” and the other hand is “I care a whole lot”, where would you place yourself? Why? Where would you place your parents/your friends?

16. Did your parents go to Family Day? What did they think? What did you do?
Appendix C

Parent(s)/Guardian(s) Semi-Structured Interview Guide

Purpose: The purpose of this interview is to gain a better understand of the impact of this project on children’s environmental learning and to understand what factors may be influencing children’s learning about the environment at the Landed Learning project. Both parents/guardians are invited to attend the interview together. If both are present, these questions will be directed to both parents/guardians. Translation will be provided if necessary.

Introduction: The purpose of this interview is to understand what your child has learned about environmental education through their participation in the Landed Learning Project and to understand what factors may be influencing your child’s learning about the environment. When I ask these questions please share only as much as you are comfortable with. You do not need to answer every question. If you want to skip a question please let me know and I’ll move on.

Information from your interview and information from other interviews that I will be conducting may be used for my master’s thesis. Your real name will not be used.

Do you have any questions before we begin?

Part One (establishes the context of the participants’ experiences)

1. Prop: World map/map of Canada/map of British Columbia
   a. How long have you lived here?
   b. Where was your son/daughter born?
   c. Where were you born?
   d. What did this region look like when you were a child?
   e. What does this region look like now?
2. Connection to agriculture, gardens, food production, food culture
   a. Did you have a garden or a farm when you were growing up?
      i. If YES, Can you reconstruct any experiences at the farm/garden?
         Who was responsible for the garden/farm? Did you help? How?
      ii. If NO, did you ever visit farms/gardens? What happened there?
   b. What kind of food did you eat when you were growing up? Who prepared this food? Did you help? How?
3. What does nature mean for you? (Describe nature as though you were drawing a picture)
4. Can you think of an adult that you knew when you were a child that helped you connect with nature in some way? What was your relationship with this person? What did you do together? Can you tell me a story about an experience with this person?
   a. Do you think that your son/daughter has a similar role model?
5. Education/Employment
   a. What is your educational background?
   b. How do you earn your living?

**Part Two** (concentrate on the concrete details of the participants’ present experiences)

1. Reconstruct a typical school day/work day – ask for details pertaining to food preparation, meals, conversations/interactions with child/children, activities (esp. outdoor), emotions
   a. How are weekends/holidays different?
2. What kinds of activities do you or your family do that might be considered “good for the environment”?
3. Do you talk about environmental issues at home? With your child?
4. Where does your food come from? Who buys and prepares your meals? What is important when you buy and prepare food? Why?
   a. How would you describe your child’s eating habits?
   b. Do you buy organic food? Why? Why not?
   c. What do you think organic agriculture means?
5. Do you have a garden? When you see gardens in the city, what do you think of? Would you like to garden? Why? Why not?

**Part Three** (participants reflect on the meaning of the Landed Learning project)

1. What do you think is the purpose of the Landed Learning Project?
2. What was your initial response to Landed Learning? Has this changed? Why? Why not?
3. Do you ever talk about this project at home?
   a. If yes: What do you talk about?
   b. What has _____ told you about Landed Learning? Positive? Negative?
4. Do you think that _____ has changed in any way because of the farm? Why? Why not? Examples? (gardening, food/eating habits, school, relationships with community members)
5. What kind of an influence has your child’s participation in Landed Learning had on how you do things at home? Examples (eating habits, activities, conversations)?
6. Is there anything that you would like to see changed at the Landed Learning project?
7. Do you think that parents should be more involved in the Landed Learning project? In which ways?
8. What do you wish for your child’s future?
   a. Describe what you think the life will be like when your child is an adult (colours, smells, sounds, textures, tastes).
   b. How does this picture make you feel?

Do you any further questions or comments for me?
Appendix D

Farm Friend Semi-Structured Interview Guide

Purpose: This interview will provide a unique insight into children’s ecological identities through their participation in the Landed Learning project, as seen through the eyes of the student’s Farm Friend.

Interview Guide

1. Describe the student (behaviour, learning, environmental attitudes, interests, hobbies, likes and dislikes, etc.)
2. Describe your relationship with this student
3. Describe the student’s connections to the land. Examples? Stories? Do you feel that you have influenced this learning in any way? How?
4. Does the student’s family environment influence his or her learning at Landed Learning? How? Has the student talked about his family at all? In which ways?
5. What might have helped this student attain more through the Landed Learning project?

Appendix E

Teacher Semi-Structured Interview Guide

Interview Guide

1. Describe the student in general, as a learner (at school), their family/home life.
2. Describe the student’s learning at the farm. What are this student’s strengths and weaknesses? Is there a difference compared with the classroom?
3. Describe the student’s environmental learning. Were there any changes over the course of the year? What factors do you feel influenced this learning?
4. Are there any anecdotes that you’d like to share with me that describe a significant moment for this child at Landed Learning?
Appendix F

CERTIFICATE OF APPROVAL - MINIMAL RISK AMENDMENT

PRINCIPAL INVESTIGATOR:  Jolie Mayer-Smith
DEPARTMENT:  UBC/Education/Curriculum and Pedagogy
UBC BREB NUMBER:  H02-80400

INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:

<table>
<thead>
<tr>
<th>Institution</th>
<th>Site</th>
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<tbody>
<tr>
<td>NA</td>
<td>NA</td>
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</table>

CO-INVESTIGATOR(S):
- Stacy Friedman
- Ilene Costi
- Jada Astorga
- Cesha Bartosh
- Tashal Luieta
- Laura Estrada
- Linda B. Peterat

SPONSORING AGENCIES:
- Social Sciences and Humanities Research Council of Canada (SSHRC) - "Cultivating Environmental Stewardship in Young People through an Intergenerational Land-Learning Experience on UBC Farm"
- UBC Hampton Research Endowment Fund - "Cultivating Environmental Stewardship in Young People through an Intergenerational Land-Learning Experience on UBC Farm" - "Educating for the Environment Through Intergenerational Community Learning"

PROJECT TITLE:
Educating for the Environment Through Intergenerational Community Learning

Expiry Date - Approval of an amendment does not change the expiry date on the current UBC BREB approval of this study. An application for renewal is required on or before: October 3, 2009

AMENDMENT(S):

<table>
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<tr>
<th>AMENDMENT APPROVAL DATE:</th>
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<tbody>
<tr>
<td>July 31, 2009</td>
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The amendment(s) and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.

Approval is issued on behalf of the Behavioural Research Ethics Board

Dr. M. Judith Lynam, Chair
Dr. Ken Craig, Chair
Dr. Jim Rupert, Associate Chair
Dr. Lauren Ford, Associate Chair
Dr. Anita Hu, Associate Chair
Consent Form for Student/Parents

Project: Educating for the Environment through Intergenerational Community Learning

Principal Investigator: Dr. Jolie Mayer-Smith, Assoc. Professor, Faculty of Education, Department of Curriculum Studies, University of British Columbia, Tel 604-822-5293, email: jolie.mayer-smith@ubc.ca

Co-Investigators:
Dr. Linda Peterat, Professor, Faculty of Education, Department of Curriculum Studies, University of British Columbia, email: linda.peterat@ubc.ca
Ms. Oksana Bartosh, Ph.D. Graduate Student, Faculty of Education, Department of Curriculum Studies, University of British Columbia, email: ksenia_brt@yahoo.com
Ms. Stacy Friedman, Project Coordinator, Faculty of Education, Department of Curriculum Studies, University of British Columbia, email: ycats77@yahoo.com
Ms. Tathali Urueta, M.A. Graduate Student, Faculty of Education, Department of Curriculum Studies, University of British Columbia, email: tathaliu@yahoo.ca

Purpose: Your child’s class is part of an environmental education project that is investigating how educators can promote environmental awareness and concern for the planet earth. Specifically, the project is exploring what conditions and experiences contribute to the development of environmental stewardship in young people. For this project elementary grade students and their teachers from Vancouver schools will work with community elders who have a farming history to plan and carry out small agricultural growing projects on a city-based farm on UBC campus. This project will contribute to an understanding of environmental stewardship by providing information on educational and life experiences that can foster a caring relationship with the earth.

Procedures: We are seeking your permission to include your child in a study of environmental awareness being conducted with teachers in the Vancouver School District. The environmental project activities will take place during school hours in classrooms at Vancouver schools and outdoors at UBC Campus Farm. School coordinated activities include students working on a farming project with other students from their class who will be teamed with community elders who have volunteered to help with the planning and the outdoor activities.
If you provide written consent for your child’s participation by signing this form, your child will take part in the data collection portions of this study which include: up to four class learning activities, completion of a short (5 minutes) Student Interests Questionnaire at the beginning and the end of the project, three audio-taped 20 - 30 minute interviews, and informal conversations with the researchers who are observing the farming project. We also seek your permission to collect photocopies of your child’s work that pertains to this project. Activities of the project will be documented on videotape and with photographs. Selected photographs and video segments may be used in presenting research reports at conferences and in communicating about the project and the research. The classroom and farm activities and data collection procedures will fit within the timeframe of regular school instruction. The total expected time for all meetings, interviews, and visits to the farm will be approximately 48 hours from September 2007 to June 2008, or an average of 6 hours per month of your child’s time. Your child’s participation in the project’s data collection procedures is entirely voluntary and will not affect their participation in the classroom or farm activities in any way.

Confidentiality: By agreeing to participate, please be assured that:

1. All data collected will be confidential with the researchers listed at the beginning of this form and through the following procedures.
   - Your child’s name will not appear in any written documents of the project. In addition any reference to your child’s school will remain strictly confidential.
   - For any work that is collected, your child’s name and any identifying features will be removed if it is used in research reports or published articles.
   - All data will be kept in a locked space accessible only by the researchers.
   - You may review the video and audio-tapes and the data collected that pertains to your child at any time.

2. You may refuse to allow your child to participate or withdraw your child at any time, without prejudice, even if you sign this letter of consent.

3. At any stage in the project you may request clarification on any issue regarding this study. This project will NOT involve risk of any kind.

If you choose not to allow your child to participate in this study, your child will continue to participate in regular classroom activities, however her work will not be collected and she will not be interviewed. Your child’s grades, her relationship with the teacher, and her relationship with the school will not be affected in any way if you choose not to allow her to participate in this study.

Contact: If you have any questions or desire further information about this study, please contact the principal investigator, Dr. Jolie Mayer-Smith, at 604-822-5293, or by email at jolie.mayer-smith@ubc.ca. If you have concerns about your rights or treatment as research participants, you may contact the Director of the UBC Office of Research Services at 604-822-8598.
Consent: If you are willing to permit your child to participate in this project please complete the consent form on the next page. Please keep the project information pages for your own reference. Thank you.
FOR PARENTS TO SIGN

TO PARTICIPATE IN THE EDUCATING FOR THE ENVIRONMENT PROJECT, PLEASE RETURN THIS COPY OF THIS CONSENT FORM

Please check the box indicating your decision

☐ I CONSENT to my child’s participation in the above stated project and agree to the photocopying of my child’s work and their participation in audio-taped meetings, interviews, photographs and videotaping of project activities. I have read the attached form and understand the nature of my child’s participation in this project. With my consent I acknowledge receiving a copy of the project information.

☐ I DO NOT CONSENT to my child’s participation in the project activities described in the attached form.

Child’s Name (please print): ________________________________

Parent/Guardian Name (please print): ____________________________

Signature: ___________________________ Date: ________________

(Please return this consent form to your child’s teacher Ms./Mr. _______, at _________ School who will forward the form to the principal investigator Dr. Jolie Mayer-Smith at UBC).
FOR STUDENTS TO SIGN

TO PARTICIPATE IN THE EDUCATING FOR THE ENVIRONMENT PROJECT, PLEASE RETURN THIS COPY OF THIS CONSENT FORM

Please check the box indicating your decision

☐ I CONSENT to my participation in the above stated project and agree to the photocopying of my work and my participation in audio-taped interviews, photographs and videotaping of project activities. I have been informed about the project activities by my teacher and the project researchers and understand the nature of my participation in this project. With my consent I indicate that I have received a copy of the project information.

☐ I DO NOT CONSENT to my participation in the project activities described in the attached form.

Your Name (please print): ________________________________________________

Signature: ______________________________ Date: ________________

(Please return this consent form to your teacher Ms./Mr. _______, at _________ School who will forward the form to the principal investigator Dr. Jolie Mayer-Smith at UBC).
Consent Form for Student/Parents for Use of Photos and Video Segments
Project: Educating for the Environment through Intergenerational Community Learning

Principal Investigator: Dr. Jolie Mayer-Smith, Associate Professor, Faculty of Education, Department of Curriculum Studies, University of British Columbia, Telephone 604-822-5293, email: jolie.mayer-smith@ubc.ca

Co-Investigators:
Dr. Linda Peterat, Professor, Faculty of Education, Department of Curriculum Studies, University of British Columbia, email: linda.peterat@ubc.ca
Ms. Oksana Bartosh, Ph.D. Graduate Student, Faculty of Education, Department of Curriculum Studies, University of British Columbia, email: ksenia_brt@yahoo.com
Ms. Stacy Friedman, Project Coordinator, Faculty of Education, Department of Curriculum Studies, University of British Columbia, email: ycats77@yahoo.com
Ms. Tathali Urueta, M.A. Graduate Student, Faculty of Education, Department of Curriculum Studies, University of British Columbia, e-mail: tathaliu@yahoo.ca

Please check the box indicating your decision

☐ I CONSENT to the use of photographs and videotape segments of my child in the research reports and communications about this project.

☐ I DO NOT CONSENT to the use of the videotape segments and photographs of my child in the research reports and communications about this project.

Child’s Name (please print): _____________________________________________

Full Name (please print): ________________________________________________

Signature: _________________________________________ Date: ________________

(Please return this consent form to Dr. Jolie Mayer-Smith, Department of Curriculum Studies, Faculty of Education, 2125 Main Mall, UBC, Vancouver, BC V6T 1Z4).
Adult Informed Consent Form

Project: Educating for the Environment through Intergenerational Community Learning

**Principal Investigator:** Dr. Jolie Mayer-Smith, Assoc. Professor, Faculty of Education, Department of Curriculum Studies, University of British Columbia, Tel: 604-822-5293, Email: jolie.mayer-smith@ubc.ca

**Co-Investigator:** Ms. Julia Ostertag, M.A. Graduate Student, Faculty of Education, Department of Curriculum Studies, University of British Columbia, Tel: 604-876-9201, Email: julia_ostertag@yahoo.ca

**Purpose:** Your child’s class is part of an environmental education project that is investigating how educators can promote environmental awareness and concern for the earth. Specifically, the project is exploring what conditions and experiences contribute to the development of environmental stewardship in young people. For this project elementary grade students and their teachers from Vancouver schools will work with community elders who have a farming history to plan and carry out small agricultural growing projects on a city-based farm on UBC campus. This project will contribute to an understanding of environmental stewardship by providing information on educational and life experiences that can foster a caring relationship with the earth.

**Procedures:** You have been invited to participate in this interview because you previously provided written consent for your child’s participation in the Intergenerational Landed Learning project at the UBC farm. To gain a deeper understanding of the impact of this project on children’s environmental learning we are conducting interviews with the parents/guardians of the participating students. These interviews are being conducted by Ms. Julia Ostertag, a Master’s candidate under the supervision of Dr. Jolie Mayer-Smith. Interviews will occur at a time and place that is convenient for you. Interviews will take approximately 60 minutes and will be audio-recorded. After the interview you may be asked if you are interested in participating in a follow-up interview at a later date.

The total time for your participation will be approximately one hour (60 minutes) per interview with the maximum time being two hours if you choose to participate in both the first and follow-up interview. All interviews will be transcribed (written out word-for-
word). Participants have the option to read and identify edits to the transcription of their interviews. In order to ensure effective communication, interpretation services and translated documents will be provided if either you or the interviewer feels that they are needed.

**Confidentiality:**

By agreeing to participate, please be assured that:

4. All data collected will be confidential with the researchers listed at the beginning of this form and through the following procedures.
   - Your name will not appear in any written documents of the project.
   - Any identifying features will be removed if they are used in research reports or published articles.
   - All data will be kept in a locked space or in secure electronic files accessible only by the researchers. After five years, all data will be destroyed.
   - You may review the audiotapes and data collected that pertain to you or your child at any time.

5. You may refuse to participate or withdraw your participation at any time, without prejudice, even if you sign this letter of consent.

6. If you chose not to participate in this study, your child will continue to participate in regular classroom activities. Your child’s grades, her/his relationship with the teacher, and her/his relationship with the school will not be affected in any way if you choose not to participate in this study.

7. At any stage in the project you may request clarification on any issue regarding this study. This project will NOT involve risk of any kind.

**Thesis:** Some of the information from the recordings and transcriptions may be used for Julia Ostertag’s Master’s thesis, which will be submitted to the UBC and become a public document. Your name will not be used in this public document.

**Contact:** If you have any questions or desire further information about this study, please contact Julia Ostertag at 604-876-9201, or by Email at julia_ostertag@yahoo.ca. You can also contact the principal investigator, Dr. Jolie Mayer-Smith, at 604-822-5293, or by Email at jolie.mayer-smith@ubc.ca. If you have concerns about your rights or treatment as a research participant, you may contact the Research Subject Line in the UBC Office of Research Services at 604-822-8598.

**Consent:** Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time. Please indicate your participation by
completing the consent form on the next page. Please keep the project information pages for your own reference.

Thank you.

---------------------PLEASE KEEP FOR YOUR OWN FILES-----------------

TO PARTICIPATE IN THE EDUCATING FOR THE ENVIRONMENT PROJECT,
PLEASE RETURN THIS COPY OF THIS CONSENT FORM

Please check the box indicating your decision

☐ I CONSENT to participating in the above stated project and have read the attached form and understand the nature of my participation in this project. With my consent I acknowledge receiving a copy of the project information.

☐ I acknowledge that I have received a copy of this consent form for my own files.

Parent/Guardian name (please print): _____________________________________

Child’s name: ____________________________________________

Phone number: ____________________________

Email: _______________________________________

Signature: ___________________________ Date: _____________

(Please return this consent form to your child’s teacher Ms./Mr. ______________, at _______________ School who will forward the form to the principal investigator Dr. Jolie Mayer-Smith at UBC).
TO PARTICIPATE IN THE EDUCATING FOR THE ENVIRONMENT PROJECT,
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Parent/Guardian name (please print): _________________________________________

Child’s name: ____________________________________________________________

Phone number: ____________________________

Email: ____________________________________________

Signature: _______________________________ Date: ________________

(Please return this consent form to your child’s teacher Ms./Mr. __________, at _______ School who will forward the form to the principal investigator Dr. Jolie Mayer-Smith at UBC).