

ENVIRONMENTAL LITERACY: THE ABC'S OF BEING A GREEN SCHOOL

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B.Ed., University of Lethbridge, 1984

A Project
Submitted to the School of Graduate Studies
of the University of Lethbridge
in Partial Fulfillment of the
Requirements for the Degree

MASTER OF EDUCATION

FACULTY OF EDUCATION
Lethbridge, Alberta

April 2015

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Dedication

I dedicate this work to
all of the students and staff at Lindsay Park Elementary School,
whose dedication and devotion to keeping
education real and close to home is dear to my heart.

I also dedicate this work to
Robin Bright and Leah Fowler,
who inspired and supported me.
Without their words of wisdom and encouragement,
I would not have been able to finish this project.

Abstract

In recent years there has been a push toward getting children outside and learning more about nature. At the elementary school in which I teach, Lindsay Park Elementary School, in Kimberley, British Columbia, using nature to teach all disciplines, and literacy in particular, has been a strong focus over the past 12 years. My inquiry question for this project is: How are the literacy skills developed in a kindergarten through grade-three school using an environmental approach to teaching across the curriculum? This project was initially conceived as an action research project to be conducted in my elementary school, however, due to a prolonged and embattled province-wide strike during the research (April to September, 2014), the timeline of the project was modified from the fall of 2014 to the spring of 2015; another modification included adding personal reflections to the project in order to document this process as accurately as possible. Due to the strike, the action research that was initially planned was unable to take place yet many different activities occurred throughout the research period. These activities enriched and strengthened children's literacy skills and further expanded their knowledge about the environment. Moreover, this project brought to light how the strike had an impact on teachers' abilities to work collaboratively on school wide projects while attempting to build safe and caring classrooms. However, the school had some motivational environmental teaching moments that were facilitated singlehandedly by a teacher or educational assistant. This project shares how the school provided environmental literacy learning in the aftermath of the strike.

Acknowledgements

To my husband Eric—who supported me throughout this whole process of getting my Master’s degree by letting me escape for the summer while he dealt with teenagers and young adults and kept the household in tip top shape.

To my daughters Kristen and Heather—who inspired me to be a better teacher by challenging my thinking and pushing me to understand more about how one learns.

To my sons James and Blake, and son-in-law Rob—who inspired me to be a better teacher by being more in touch with students, especially boys, who do not like to learn in a traditional manner, yet are just as literate as the next person.

To my dear friend Michelle—who kept me going, even on the days that I questioned my abilities and thought everyone would be better off if I just quit. Thank you for making me laugh and see things in a different light and for just being by my side through this whole program.

To my professors, Robin Bright, Cynthia Chambers, Erika Hasebe-Ludt and Leah Fowler—for inspiring me to pursue life writing, validating my passion for teaching from one’s place and reminding me that it’s okay to think outside of the box and to challenge the status quo.

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Introduction: My Educational Journey

July 2012 marked the beginning of an amazing adventure that has challenged my thinking and made me more passionate about being a teacher and a part of educating young minds in a non-traditional manner. From the outset of my program, the *Masters of Education: Literacy in the Globalised Canadian Classroom*, I knew I would pursue researching and validating the enriching and experiential environment of the school that I have been teaching at for 11 years. This introduction is an account of the journey I have taken in the Master's program and introduces the professors who were instrumental in my decision to pursue this project, as well as summarizes the courses and significant concepts I was exposed to that influenced my passion regarding the importance of environmental learning. Moreover, as the project unfolded, the importance of including my personal reflections around experiential and environmental learning along with the barriers I had to overcome became apparent to support the research that I was doing. The practice of daily writing was instilled in me by Dr. Cynthia Chambers and Dr. Erika Hasebe-Ludt, therefore my personal insights are my way of “us[ing] my own life as a site for inquiry” (Chambers, 2004, p. 1).

Dr. Chambers and Dr. Hasebe-Ludt also instilled in me the importance of learning about ‘our place’ (Chambers, 2008) and of needing to learn to use what we have, where we are from, and what we know in order to create a learning environment that is valuable, therefore central to making learning meaningful. In Chamber's (2006) article, *The Land is the Best Teacher I Have Ever Had: Places as Pedagogy for Precarious Times*, she wrote, “I set four challenges for Canadian curriculum theorists: write from this place; write in a language of our own; find interpretive tools that arise from and fit for this

place; and create a topography for Canadian curriculum” (p. 30). In primary school, we call this type of learning, ‘connecting’, and Chamber’s words inform others that learners are more successful when they can connect to what is being taught.

This is the first personal reflection in this paper and is a response to the reading, “*Stalking*”, by Dillard (1974). It demonstrates my passion for environmental learning.

The ‘big idea’ that I took away from this reading is that we need to slow down and take in the world around us. We live in a fast paced society and taking the time to ‘stalk the muskrat’ would require a lot of discipline and time. But I think that it is important because humans are social creatures and need to realize that having a quick visit over the staff room table is not enough. Humans need to get out and look, really look, at nature and realize what an amazing world we live in and that we need to take care of it by just letting things be for a while. It is a topic that I am passionate about, as well as teaching literacy in a non-traditional way. (Sharpe, personal journal, July 2012)

My passion for learning more about teaching from ‘our place’ and using the environment around us grew as I went from course to course and professor to professor on my journey through the Master’s program. I recall sitting in a circle during the first face to face meeting with Dr. Leah Fowler and sharing what we thought we would do for a final project or capstone. Most of the cohort did not have a concrete response but I did. I stated that I could see myself heading in the direction of learning more about teaching, learning and using the environment, or ‘our place’ to educate the students who live in Kimberley, B.C. I knew that I wanted to do a project using the school that I teach at, Lindsay Park Elementary School (LPES), because of the beautiful area in which we live.

We have abundant resources that are nature based and the school is deemed an Earth School by the Society, Environment and Energy Development Studies (SEEDS) program. The SEEDS program was developed in 1976 by members of the Alberta oil and gas industry because they recognised the importance of educating children about energy issues, which included environmental concerns. It was recognised that there needed to be curriculum materials provided to schools so energy and environmental education could be offered. In 1991, the program expanded to encourage schools to be involved in environmental projects, to teach sustainability and conservation to all grade levels. To earn the status of Earth School, a school must have completed 1,000 documented environmental projects over an accumulated time span, earning different statuses at different levels, beginning with 100 projects and the level Green School.

I knew that I wanted to show how being an environmental school and teaching literacy were intertwined. I shared this with my colleagues and friends during that third course of the Master's program. Following Dr. Fowler's course was Dr. Pamela Winsor's course, *Language Learners in Contemporary Classrooms*, in which my interest and passion focused on my community and what it offered to learners so that they could be educated in 'their place'. My thinking was challenged, my writing and research was questioned, but in the end, I felt I had learned so much about 'my place' and what the community of Kimberley had to offer in conjunction with the public school system to make learning a meaningful experience. I also learned at this time that it was okay to be questioned and to be pushed beyond where my thinking was. I had started to recognize that understanding theory and knowing the work of educators from the past would support the research that was ahead of me.

The courses I took in the second summer of the Program exhilarated me and challenged my thinking even more. Dr. David Townsend helped me question my abilities to lead and to be led during the course, *Understanding Professional Practice and Professional Development*. He introduced me to the writings of Freire, Giroux, Hattie, Robinson, Senge and others who helped guide my thinking about why I teach, what I teach and the purpose behind my skills regarding how I affect the learning of my students. I discovered that my non-traditional style of thinking as an educator was not mine alone and that I was a follower of sociocultural theory, which is rooted in Russian psychologist Vygotsky's research in the early 20th century about how children learn. Sociocultural theory "is the idea that child development is the result of interactions between children and their social environment" (Tools of the Mind website, "Vygotskian Approach", para. 4). Contemporary interpretations of sociocultural theory maintain that children's education should focus on activities and interactions that are most meaningful and relevant to them (<http://www.toolsofthemind.org>, "Vygotskian Approach"). The second course of the summer, *Canadian Literature*, delivered by Dr. Robin Bright and Amy Bright, excited me so much that I returned to LPES and encouraged the use of more Canadian literature in all subject areas. Again, my passion for learning about 'my place' and how I would incorporate it into the everyday teaching of literacy skills was ignited and fueled by the questions and ideas that I had swirling around in my head. Chambers (1999) encouraged Canadian curriculum theorists to "create curriculum languages and genres that name the sociopolitical, geophysical and imaginative landscape in which Canadians live now" (p. 137) to help Canadians understand who they are and where they live. Canadian literature plays a crucial role in the development of curriculums that are

written for all Canadians by introducing meaningful and relevant information that will educate students in the 21st century about Canada and more importantly, specifically about who Canadians truly are. Chambers (1999) states:

my interest is precisely to cultivate a new kind of curricular imagination that not only honours the multitude of ways the Canadian landscape shapes how Canadians “see” things, but, more importantly, that explores how such shaping itself is an active process that cannot be simply described through the Eurocentric instrumentalities of previous generations. (p. 142-143)

In the course, *Canadian Literature*, the novel I defended was *Alice, I Think* by Susan Juby, who at one time lived in Smithers, B.C. and wrote the fictional story based in ‘her place’. These are my thoughts on what I discovered about making connections between two small towns.

I discovered the similarities and differences between my hometown Kimberley, B.C. and Juby’s hometown, Smithers, and I understood without a doubt the importance of making connections to one’s place. Juby’s writing made me laugh and cry as she took me on 16-year-old Alice’s adventures in Smithers. The landscape and description of the town was easily visualised because I was familiar with it. Although Smithers is in northern B.C. and Kimberley is in southern B.C., it still resonated with me as a place that I could connect to, Small Town, British Columbia. (Sharpe, personal journal, July 2013)

Often I wrote of my newfound knowledge about Canadian literature as it excited me. I knew that I would strengthen my teaching by combining Canadian literature with my passion of learning about the place that we live.

This morning's class was enlightening and I learned that there are A LOT of Canadian authors that I am not aware of. So I have my work cut out for me if I want to do more teaching in my classroom using Canadian Literature. But it was also kind of fun to discover authors I use and enjoy who are Canadian and I just did not know it! I love the list of authors that Robin provided for us and will be accessing it to figure out where to go with my plans. (Sharpe, personal journal, July 2013)

Upon my return to LPES, it was a wonder that I could talk coherently at times because I was so excited to share my newfound knowledge. It just amazed me that what was happening right under my nose at LPES was exactly what I was being taught to think about and reflect upon. My passion for environmental learning was now complimented by the use of Canadian literature, which would surely support teaching literacy in a meaningful way. Publishers I used to purchase new literature were Orca Book Publishers, Annick Press, Owl Kids Publishing and Second Story Press. An excellent online resource for Canadian literature that supported my quest Canadian environmental literature for grades two and three is www.publishers.ca/topgrade.

The seventh course, which I did not think would further my research regarding the relationship between the development of literacy skills in young children using an environmental approach, actually turned out to be the one that set me on a path of figuring out which direction I wanted to take my teaching and my pedagogy. *The Foundations of Modern Educational Theory and Practice* was one of the most difficult courses that I took in my program. Nonetheless, it introduced me to additional theorists, such as Coiro, Cole, Cope, Fairclough, Gee, Janks, Kress, Lankshear, Leu, Rosenblatt,

Street, and Yancey, and made me reflect on critical pedagogy, critical thinking and critical literacy. This course introduced me to Street's (1984) work, whose ideological model of literacy is one that I support and implement daily in my classroom and will discuss more, later in this paper.

In *The Foundations of Modern Educational Theory and Practice*, I was asked to journal my thoughts on critical pedagogy, thinking and literacy. This response makes me think about how important it is to get students out into nature and to teach them how to read their environment.

Of the three terms, critical literacy is the one that I practice the most in my primary classroom although there is a definite connection between all three. I would say critical literacy and critical thinking are the two that my students weave together. Many times when working with a text, a 'teachable moment' will come up and we veer off into critical thinking to answer the blatantly honest (although not always appropriate!) questions that seven and eight year olds want the answers to. It is very important to me to teach these children to question much of the media that they are being exposed to. (Sharpe, personal journal, September 2013)

Toward the end of *The Foundations of Modern Education Theory and Practice*, once again, I came to understand the importance of making connections to what one is learning in order to have a meaningful lesson. I reflected upon this during the fall 2013 semester.

I cannot help but wonder if I was introduced to all of the theories back in the 1980s when I did my degree at the U of L but have no recollection of them! At

that time, none of the theories or theorists would have meant a darn thing to me as I had no experience as a teacher, therefore, nothing to connect or relate to. So in one ear and out the other, I would say! But now, after 29 years of being in the education field, all of the theories were resonating with me and I could sit back and think about how I taught and I could make connections to beliefs of educators that meant nothing to me 30 years ago. (Sharpe, personal journal, November 2013)

Sociocultural historical theory, for me, is a way of learning and teaching that involves recognizing that a learner is not a 'blank slate'. By embracing the fact that children have relevant skills and knowledge ingrained in their being that they have learned from their surroundings, which includes their culture, community, traditions and the people around them, can be built upon to develop further skills and knowledge. After reading *Tracing Trajectories of Practice: Repurposing in One Student's Developing Disciplinary Writing Processes* by Roozen (2010), I learned how his subject needed to pull on prior knowledge and skills such as organization, repetitive writing and visualization in order to be successful in writing a graduate level paper. This supports sociocultural theory because she used the skills of prayer journaling that she acquired socially and culturally starting at a very early and repurposed them for her current needs.

Roozen's (2010) study reinforces that it is important to recognize that prior knowledge and skills are important in one's learning and also how they are taught. By building on skills and strategies that are already learned, one can

develop and recreate those skills into more productive or useful ones, depending upon the need.

This information is important to me because it reinforces that it is important to recognize that prior knowledge and skills are important in developing writing processes. By building on skills and strategies that have already been learned, one can develop and recreate those skills and strategies into more productive or useful ones, depending upon the need. (Sharpe, personal journal, September 2013)

Curriculum Studies in Cosmopolitan Classrooms, led by Dr. Erika Hasebe-Ludt, became the course that made me question my abilities to be in this particular Master's program. It also made me question my own abilities and life choices. It was during this particular course that I developed a skin rash that can only be attributed to stress. The stress that I was having was pouring my heart out in writing for this course and having to come to terms with my inner angst. This course supported my passion for teaching using the environment because I wrote about my own environment, which should have come easily to me, and some of it did. The good memories of growing up on a farm, having fun at the lake, and going for Sunday drives in one of my dad's old cars were easy to put into words. Yet, writing about some of the more difficult situations that I was dealing with, such as having my last child move out and realizing that my husband and I had little to say to each other at the time plus writing about the anger and dysfunction that can happen over the inheritance of farm land caused me much anguish and physical discomfort. Nonetheless, as much as I struggled with some of the writing for this course, it enabled me to be able to write for this project as my reflections are written from my heart. I found

this course strengthened my ability to put my thinking onto paper in a more meaningful way.

As I headed into the 2014 summer courses of the program, I had already pursued the direction that I had to go to work on the final project to complete my program. I was still passionate about environmental education and desired to pursue my interest in knowing more about how one's place in the physical world and traditional literacy skills complement one other.

I was still struggling with my emotional angst from the previous course and also felt beaten down as an educator due to the B.C. Teacher's Federation (BCTF) conflict with the B.C. government. This conflict resulted in a full-blown strike starting on June 16, 2014. It was on the picket line that the teachers and I tried to keep our spirits up by planning out the things that we would do to support my project, *Environmental Education: The ABCs of Being a Green School*. Ideas, such as teaching a learning sequence around the book, *Winston of Churchill* by Jean Davies Okimoto as a whole school environmental project, flew forth as we came up with the activities and alphabetical words (Appendix A) that I could put into my writing. We discussed becoming involved with the SEEDS program again, as we felt that it was important to start documenting all of the projects that we planned to carry out. One teacher chose to do an activity called Earth Flags while another wanted to do a Bat study. Other projects and activities that were brought up included building habitats in the outdoor classroom, quilt making, aboriginal studies, teaching children to be bear aware, supporting Take Me Outside Day (www.takemeoutside.ca) and an apple study. As we stood our ground, fighting for kids and what we thought was a good cause, we were optimistic and thought

we would be back to work before the end of June. We truly believed that good would come out of this embittered battle. Sadly, the battle continued and it greatly affected my motivation and attitude towards schooling in general.

The summer courses evoked deep emotional anguish in me and I cried every time I thought about the strike, my students, my school and my career because I felt an intense heartache. My students were ripped from the womb of LPES without a proper farewell and therefore, had no closure. It seemed more intense for me because I had grade three and those students move to upper elementary for grade four, which is in a different school. All of the year-end and team building activities that we prepared for the students so that they had a smooth transition were not completed due to the strike. I began to question why I was in education when it appeared to have such little value to others. I took the strike personally and I was aware of the effect that it was having on me but my emotions were out of control and I was having a very difficult time reining them in. I had lost my passion to research what I originally thought was a wonderful path to pursue and I struggled with this knowledge immensely. How was I going to work on a project that I no longer felt passion for? Was this just a passing phase due to the intensity of emotions that accompanied being on strike? Would I get my passion back when the strike was over? These were questions that were burning in my mind as I tried to continue the quest to carry out my project and think positively about my work as a teacher.

It was at this point that I decided not to ignore the impact that the strike had on me and my research but take the time to acknowledge it and describe how the project continued.

Inquiry Question and Sub-Questions

My central question arising out of my experiences and developed by my deep interest is: How are the literacy skills developed in a kindergarten through grade-three school population using an environmental or green approach to teaching across the curriculum?

Related sub-questions also drew my attention, such as: Is there a connection between being a Green School and learning traditional and environmental literacy skills through participating in environmental projects? Is the definition of literacy different in the context of environmental learning? Does learning about the environment using environmental projects demonstrate collaboration between the school and community? Do these projects teach the children to become literate in a traditional sense but also environmentally literate?

Rationale

The purpose of this inquiry was to discover what literacy teaching and learning looks like for the students in one elementary school with an environmental focus. Through an action research approach, my project was to primarily examine the learning community of the school I teach at, LPES, in Kimberley, B.C. A kindergarten through grade three school, LPES has been deemed an environmental school for the past 13 years and is listed as an Earth School through the SEEDS program. The SEEDS Foundation of Canada's (2014) mission is "to develop and provide environmental sustainability and energy education resources to support Canadian educators as they promote student literacy and encourage their students to take personal action and societal responsibility for energy, sustainability, and the environment" ("About Us", para. 3). It is through this

mission and LPES's beliefs that I intended to explore the relationship between being a practicing environmental school and the development of literacy skills.

I am a reflective practitioner (Sagor, 2009b) and reflect on what I have taught and how it was received by the students in order to plan for further instruction. I constantly analyse the way my students learn and modify my instruction to make my lessons and classroom environment a rich learning place. Through this research, it was my intention to build a collaborative project that would combine the gifts, time and energy of a dedicated group of individuals, the staff whom I work with, to create learning sequences and programs that used 'our place' (Chambers, 2008) to teach traditional literacy skills, which are imperative at the kindergarten through grade three level. I truly felt that "no activity [was] worth doing unless it promise[d] to make the central part of teacher's work more successful and satisfying" (Sagor, 2009b). LPES was already committed to environmental practice, and examining research linking the environment and literacy in order to understand my own practice in a new and meaningful way was the basis of this research.

Literature Review

Literacy

The article, *A Pedagogy of Multiliteracies: Designing Social Futures* (Cazden, C., et al., 1996), written by a group of researchers called The New London Group, was my first foray into discovering aspects of my own experiential teaching was supported by the work of others. The researchers who comprise The New London Group validated the direction I was heading regarding my professional development and that of the teachers I mentor. The New London Group affirmed my belief that teachers should always be

‘rethinking’ their literacy pedagogy by recognizing that each student may have a different learning style and that all children have the right to an education. They recognized that it was time to “rethink the fundamental premises of literacy pedagogy in order to influence practices that will give students the skills and knowledge they need to achieve their aspirations” (Cazden, C., et al., 1996, p. 63). It is from this work that I developed an understanding of ‘multiliteracies’ and realized that it applied to my own literacy pedagogy in that I believed in introducing my students to different ways of learning. The term multiliteracies, conceived by The New London Group (1996), speaks to teaching literacy in the 21st century, where learning to read and write in a traditional manner cannot be the sole focus of the educator. With increasing exposure to a variety of text forms and the availability of digital technology, students need to be educated in different ways, using different means. Additionally, multiliteracies refers to how meaning making in different cultural and social situations can vary and the shift in the ability to communicate worldwide has expanded our knowledge regarding ways to teach using various methods.

The ability to use the natural environment that surrounds my school, as well as remembering that as 21st century learners the requisite to implement technology into the classroom, were important factors in creating different learning environments. Primary school (grades K-3) has a strong focus on oral, visual, and tactile methods as well as continuous exposure to text in different forms, including digital. The six design elements that The New London Group (1996) advocates for successful meaning-making are: linguistic meaning, visual meaning, audio meaning, gestural meaning, spatial meaning and multimodal meaning, which all support and connect to each other to create a

meaningful educational experience for students. The four pedagogy components The New London Group (1996) suggests are situated practice, overt instruction, critical framing and transformed practice. These components scaffold each other by starting with experiences students have and building and transforming their knowledge by teaching them how to be critical thinkers. This introduction to multiliteracies and the process of creating a successful meaning-making environment was the first building block that I established as I formulated in my mind a way to research and discover how using environmental projects and the natural spaces within and around LPES supports the teaching of traditional literacy skills to our young charges.

As I thought about teaching and how to create an environment that would foster meaningful learning, I recalled writing this journal entry about my thoughts on what education is. The connection to using multiliteracies as means of teaching literacy has always been a part of my pedagogy.

What Education Is ... When I started teaching in the fall of 1984, I wasn't sure of what to expect when I walked into the classroom. I had trained as a PE teacher yet had to teach social studies to grade 4s when not in the gym. In PE, I knew what had to be covered and how to effectively present it to my students but Social Studies? That was nerve-wracking to me and although I had looked at the required outcomes required for grade 4 social studies, I truly had no idea how I was going to teach it. Then I was handed this enormous binder that held the 'curriculum' that I was to cover in the year. Talk about overwhelming. As I looked through that binder, I came to the decision that I would teach the students what I felt was meaningful and relevant to them and make sure that they got

something out of social studies. I had never been one to go ‘by the book’ and I wasn’t about to start. Even in 1984, I knew that all children were different and had different learning styles. I was teaching in a large rural area school—800 students grade one to six. There were five grade four classes, each with 28-30 students. Many of these students had never been out of the area, let alone near an ocean or even to a city. Thus began my ‘education’ on how to be an effective teacher when the ‘curriculum’ does not meet the needs or interests of the students.

Education is learning, no matter where we learn it. It starts from the moment we are born and develops as we develop. It is how we figure things out and know what works and what does not. It is trying out new things, like what will happen when you try to put a bee in a jar, or when you try to copy your neighbour’s work, only to find out they did it wrong! Education is exploring, discovering new things and also making mistakes. It is the opportunity to take what you know and expand it with further knowledge by researching, asking questions and exploring new ideas. Education is what we learn by how we live and our social conditions determine a lot of our education (learning). It is determination that will take the learning to a different level than what is lived, and it has to come from deep within the human being.

Education is not, to me, filling one’s head full of information that can be regurgitated but is not meaningful to them. Today, children have a lot of exposure to media and therefore have a different knowledge base than when I was a child. Growing up on a farm gave me the knowledge base of life and death and how it all works together. Education for me was how to farm and live off the land. I

envied those who lived in town and were able to run to the store at any given time to get milk or eggs. I, on the other hand, had to get milk from a cow and eggs from a chicken. Imagine my surprise when I discovered that there were kids who did not know where milk and eggs truly came from—when asked, they answered, ‘the store’? (Sharpe, personal journal, September, 2012)

Defining Literacy—Traditionally and Today

One point that I have welcomed throughout the *Literacy in the Globalized Canadian Classroom* Master’s program is the belief that the definition of literacy is more than reading and writing. Furthermore, we were informed that even though there is research supporting multimodal literacy skills (Chambers, 1999; Dewey, 1987; Hasebe-Ludt, Bright, Chambers, Fowler, Pollard, Winsor, 2003; Street, 2008; UNESCO, 2006), curriculums and teachers are not changing the way that children are being taught. Knowing this has empowered me because I have spent my entire teaching career as the ‘teacher who teaches outside of the box’. I believe in educating the whole child, not just from the waist up (Robinson, 2006). I appreciate the importance of teaching the ability to read, write and speak because it is necessary to have the aptitude to portray these skills in the 21st century but I also believe that to develop these skills, one must teach multiple literacies to have meaning-making, creating a successful all around learning experience. In the UNESCO (2004) document, *The Plurality of Literacy and its Implications for Policies and Programmes*, the following statement explains that what teachers offer to students in the form of literacy has changed for 21st century learners. The UNESCO motto, Literacy is Freedom,

reflects the fact that over the past few decades, the conception of literacy has moved beyond its simple notion as the set of technical skills of reading, writing and calculating—the so-called “three Rs”—to a plural notion encompassing the manifold meanings and dimensions of these undeniably vital competencies. (p. 6)

Literacy has taken on different meanings as it can be applied to different situations. By teaching multiple literacies, one demonstrates they understand that there are various ways of acquiring and applying literacy in daily life—whether at home, in the classroom, in the workplace or elsewhere in the community—mean[ing] that there is no single method or approach that is uniquely valid and that fits all circumstances. (p. 15)

So what is literacy in today’s terms compared to the traditional definition?

According to UNESCO (2006), “the most common understanding of literacy is that it is a set of tangible skills—particularly the cognitive skills of reading and writing” (p. 149). Literacy defined in Merriam-Webster’s online dictionary state that literacy is “the ability to read and write knowledge that relates to a specified subject” (<http://www.merriam-webster.com/dictionary/literacy>, 2015). Yet, synonyms for literacy from the same source are erudition, knowledge, learnedness, learning, education, and scholarship (<http://www.merriam-webster.com/dictionary/literacy>, 2015) which indicates that literacy is more than reading and writing.

There has been much debate and research on defining literacy and a consensus has not been reached globally (UNESCO, 2006). Twenty-first century learning has challenged the simple definition of literacy because of the recognition of diversity throughout the world. In 2003, UNESCO (2006) revised their definition of literacy to:

Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts.

Literacy involves a continuum of learning in enabling individuals to achieve his or her goals, develop his or her knowledge and potential, and participate fully in community and wider society. (p. 21)

As referred to earlier in this paper, the importance of focussing on individual learning styles and the connection to one's place is instrumental in how children have meaningful learning experiences. UNESCO (2006) states that

some scholars have suggested that a more useful concept would be that of multiple literacies—that is, ways of 'reading the world' in specific contexts: technological, health, information, media, visual, scientific, and so on (see Street, 2003; Lankshear and Knobel, 2003; Cope and Kalantzis, 2000). (UNESCO (2006), p. 150)

Literacy is multidimensional in the 21st century and involves reading, writing, numeracy and oral language which all can be expressed in multimodal ways. Curriculum designers in British Columbia are taking into account that cross-curricular competencies play a large role in developing literacy skills by means of teaching to the whole child through addressing critical thinking, creative thinking, reflective thinking, positive, personal and cultural identity, personal awareness and responsibility, social awareness and responsibility, language and symbols and digital literacy (B.C. Ministry of Education, 2013a). The B.C. Ministry of Education (2013a) report, *Exploring Curriculum Design*, states that "it is recognized that British Columbia schools serve students from diverse cultures and backgrounds. The multicultural nature of the BC school system is

highly valued, and all students' heritages and cultures are valued" (p. 4). It is this recognition that I feel demonstrates the understanding that the term literacy is 'multi-definitional' and brings to light the term, New Literacies.

The article, *What are the New Literacies?* indicates that literacy has changed from being fluent in decoding written text to "the complexities of new, multifaceted literacies that include the traditional concepts of decoding and exegesis, as well as orality and numeracy, technology and media literacy" (Hasebe-Ludt et al., 2003, p. 103). These changes in literacy should have an enormous effect on curriculum and the way students are taught from kindergarten through graduate studies. I have watched the changes that have occurred in the name of literacy and how it has affected me as a professional and the way that my own children think of what literacy is. I have experienced going from being able to decode and be fluent in reading, to being aware of the critical thinking that needs to take place in today's world of literacy. This is a "reminder that new literacies require new forms of critical thinking and reasoning. Students must be helped to become "healthy skeptics" [as cited in Hasebe-Ludt et al., 2003], learning reading skills that have not always been necessary within an environment of traditional classroom texts" (Hasebe-Ludt et al., 2003, p. 106). I am reminded that technology is a large part of students' textual repertoire and teachers can encourage or discourage that critical thinking piece, depending upon their understanding of literacy in the world today. Technology is a skill that I need to connect to learning using the environment. As much as I want the children to be outside playing and exploring while learning, I recognize that technology is also a part of their life and I need to teach them how to use it responsibly.

The references to technology and the role that it plays in 21st century learning, reminded me of this reflection I wrote about a young boy in my class who taught me as much as I taught him.

I taught a student who brought the meaning of teaching, relationships and connections to a whole new level for me. As an autistic, gifted and epileptic eight year old, he loved to spout off all sorts of facts that he had ‘researched’. He was completely passionate about researching!! I continually questioned him on where he got his facts and if he had more than two sources. At first, he scoffed at me and said he got it off the Internet and that was good enough. But being gifted made him always wonder, so the challenge was there and he rose to it! He would come back to me with four or five sources and he had to slow down in his ‘spouting’ because he discovered that there were discrepancies between books and the Internet. It was a great learning experience for him, and also for me, because I could have just let him have his moment with his facts and not challenged him. From this I transferred into my teaching the concept of critical thinking to grade twos and threes, modeled by my gifted student and reinforced by me. As I challenge my students to explore through nature, I am reminded that critical thinking is a large part of being literate and I need to encourage that just as much as being able to read and write. (Sharpe, personal journal, March 2014)

I believe that children have a difficult time reading and writing about things that they do not understand. This has been validated for me by *What are the New Literacies?* (Hasebe-Ludt et al., 2003) because I strongly believe that students’ voices need to be heard, however, the environment needs to be familiar and safe. “One cannot write about

what one has not thought about. This is political. In an age of Wal-Mart and McDonalds a critical thinker is not common, desired or wanted” (Hasebe-Ludt et al., 2003, p. 106).

The reference to Wal-Mart reminds me that children really do need to be exposed to their environment, the nature around them and the importance of knowing their place. By teaching children literacy skills using what they know, they have more confidence, therefore possibly better understanding of why they are learning.

Experiential Learning

In my humble opinion, John Dewey was a very progressive educator when he wrote *My Pedagogic Creed* in 1897. Dewey believed in bringing experiential education into classrooms because schools were communities where students should be treated as active members; teaching should be based on students’ actual learning experiences (as cited in Pring, 2007). Dewey’s philosophy is instrumental in how various educational approaches and programs are being developed in the 21st century. He demonstrated an understanding of how students come to school with knowledge and experiences and how it is important to use what students know to teach further knowledge. It is my belief that by making connections to the environment that one lives in; the learning will be more meaningful and therefore more successful. Dewey’s philosophy guides my action research as I feel using environmental projects is of interest to the children who live in Kimberley. Many of the students already practice the habits of taking care of their environment. Dewey (1897) stated, “... school must represent present life—life as real and vital to the child as that which he carries on in the home, in the neighborhood, or on the play-ground” (article 2, para. 3). Dewey (1897) promotes the teaching of expressive

or constructive activities through social activity before introducing children to reading and writing. Dewey stated, "... it is possible and desirable that the child's introduction into the more formal subject of the curriculum be through the medium of these activities" (article 3, para.12). This supports my project's action research by means of introducing children to text using environmental projects, such as reading the book *Diary of a Worm* by Cronin (2004). Before working with the text, children have the opportunity to work with the vermicompost in the school to examine the worms, among many other activities. The children are instrumental in playing an active role in their learning and are very much a part of the planning process.

Similarly, Piaget's (1936) theory of constructivism (as cited in North America Association of Environmental Education (NAAEE), 2010) experiences supports experiential learning as it states that by allowing children to explore, touch and speak, their learning will be enhanced (NAAEE, 2010). Piaget believes that in order to have deeper understanding; a learner must have his physical, emotional and academic abilities engaged (NAAEE, 2010). This speaks to the benefits of environmental learning. According to the document, *Natural Curiosity: A Building Children's Understanding of the World through Environmental Inquiry/A Resource for Teachers*, "academic achievement among youth improved when school curricula was organized around the outdoor environment" (Chiarotto, 2011, p. 37). David Kolb, an educational theorist, builds on Piaget's constructivism theory by identifying 4 steps that children need to take to be successful learners. If a child can watch, think, feel and then do, he will learn (NAAEE, 2010). While teaching my students, I believe that the more hands-on experiences they have, the more they understand and retain what they are learning. The

science fair at LPES is an example of true hands-on learning as the students plant a seed, seedling, bulb or root, observe it over a six week period, document their observations and share what they learned. Students research, measure, document, photograph, care for and show off their plant at the fair and feel success because they did the work themselves. They also make an edible product from the fruit/vegetable/grain of their plant. For example, a child growing grapes will make grape jelly, a child growing potatoes will make potato chips, and a child growing peppers will make salsa. The fair is a plant and food product smorgasbord!

Vygotsky's (1978) socio-cultural theory advocates that adults interact socially with children. Using the environment as a source of learning is validated by Vygotsky's idea of authentic learning, where he claims that learning comes from opportunities given to children during authentic cultural situations. These situations provide a comfortable and safe environment for developing language, thinking and meaning-making.

Vygotsky's (1978) 'zone of proximal development', states that learners will develop by introducing challenging tasks that are built upon existing tasks with support and guidance from an adult. By letting children explore through nature following a simple set of guidelines, environmental learning can be rewarding and meaningful to most children.

Learning From the Environment

I have been inspired by many current educators who promote learning literacy skills using an environmental or 'green' approach to teaching across the curriculum. Ritz, an educator in the South Bronx, utilizes gardens to instill in his students the love of learning by teaching them to garden and be environmentally aware. Ritz brings seeds and horticultural technology into his classroom to grow an indoor garden. Most of his

students are IEP or ELL learners; many are homeless or live in foster care and the majority live below the poverty line. His class grows vegetables which are transplanted on farms. Ritz wanted to have an edible wall in his classroom so that all students would have the opportunity to garden, not just those who were able to be outside at the farms. With Green Living Technologies, the “first edible wall in New York City” (Ritz, 2012) was created in Ritz’s classroom. His students are allowed to get up and eat whenever they are hungry. Ritz found students would come to school early and stay after to garden. He has given his students the gift of hands-on tools by teaching them how to garden and install the edible walls which are skills they can use to better their lives. Students also learned to cook with the fresh produce, which they served to teachers and at the cafeteria (Ritz, 2012). At LPES, we use our greenhouse and outdoor classroom to teach students ways to be successful, giving them confidence to explore other types of learning. This is supported research done by the Children and Nature Network (2011), which states, “children’s exposure to the outdoors and nature may have other positive influences on their development and well-being, such as through improved school performance and the development of environmental knowledge, attitudes, and behavior” (p. 25).

Chambers (2008) provided insight into challenging the curriculum to move away from colonialistic practices and incorporate indigenous practices to enhance learning. LPES embraced an experiential learning environment several years ago and as a practicing experiential teacher, I attempt to design my curriculum around learning about the land that we are living on. Chambers (1999) wrote that “as Canadians, we may not recognize our own literature, land and history, our uniqueness—our own curriculum and its theory—even when we are living in the midst” (p. 4). It is important for children to

learn from their environment as it is more meaningful to them, due to having connections, which creates deeper understanding of the world around them. Chambers (2008) also states that literacy is more than the traditional definition of reading and writing, and that there are many types of literacy. Literacy should be built upon by exploring the place that surrounds the learners, consequently creating the development of “curriculum of place [which] calls for an “education of attention”” (p. 120). These words inspired me to examine further the use of the environment to instill the skills required for 21st century learners.

The term ‘New Literacy Studies’ has become front and foremost in many educational circles and is relevant to this project. Ethnographic studies done by Street (2009) have determined that we must look at literacy from a social and cultural context. His approach to literacy “suggests that ‘literacy’ is best viewed not as learning programmes but as activities which everyone engages in in the course of operating within their lifeworlds” (Rogers & Street, 2011, p. 2). This supports the practice of using one’s environment and life skills to teach to what our students know and have an understanding of in their life. Street’s work suggests that our education system must lean away from teaching the Western conceptualization of literacy, which is very academic, and move toward focussing on everyday practices that are meaningful and practical. As part of my action research, I created an environment that conceptualizes reading and writing as a social practice by practicing Street’s ideological model of literacy (Street, 2008). The ideological model of literacy contends that the use of environmental activities allows children to be more successful and learn traditional literacy skills when beginning with what they know and making meaningful connections. Many of the students I teach have

not lived in a city or been many places other than the East Kootenay area of British Columbia. By teaching about our place, even the children who come from a lower economic demographic can relate to hiking on the trails, playing in the creek, going to the ‘hotties’ (local hot springs), climbing trees, biking, skating, sledding, and gardening. The forest is their backyard and most of the children at LPES can walk to the trails or go to the ski hill in less than 10 minutes. It takes my husband seven minutes to drive to the ski hill; it takes me 10 minutes to walk to the trails. This is how we live. Children in our area have a difficult time understanding about public transit, traffic lights (we have one downtown), busy streets, city noise, large schools and urban sprawl. By practicing what Street (1984, 2008) calls the “Autonomous Model”, teachers do not honour what the students have brought to school with them but expect them to learn using a packaged program or a neutral set of reading and writing skills and tools (see Table 1). Asking my students to read a story about urban life and respond in a meaningful manner is difficult for them because many of them have not experienced it. Street’s ideological model states that children will “understand what is going on, not just in general terms, but what is going on in this particular context at this particular time for this particular purpose” (Rogers & Street, 2011, p. 11).

The following table demonstrates the differences between Street’s (1984, 2008) two models:

Table 1

The Ideological Model vs the Autonomous Model

Ideological Model	Autonomous Model
<ul style="list-style-type: none"> • Ethnographically sound • Understands the culture • Conceptualizes reading and writing as social practices • Viewed with power relations • Multimodal • Understands the concept 	<ul style="list-style-type: none"> • Neutral set of reading and writing skills • Rooted in theories of individual cognitive development and social theories • Packaged Literacy Programs • Literacy is defined apart from social contexts; therefore taking 'prior knowledge' out of the learning process

It is my intent, through this project, to show that the environment in which the children at LPES are immersed daily enhances my ability to teach reading and writing in a meaningful manner. Street states, “teachers need to describe their own practices and put into perspective what schooling cherishes in terms of literacy and why” (cited in Larson & Marsh, 2005, p. 37). As I develop my own pedagogy around teaching literacy through environmental activities, I understand that I am also developing my own practice using everyday skills and multiple literacy practices.

UNESCO (2006) presents four approaches of literacy, which are literacy as an autonomous set of skills, literacy as applied, practised and situated, literacy as a learning process and literacy as text. When discussing literacy as a learning process, UNESCO (2006) states,

As individuals learn, they become literate. This idea is at the core of a third approach, which views literacy as an active and broad-based learning process, rather than as a product of a more limited and focused educational intervention.

Building on the scholarship of Dewey and Piaget, constructivist educators focus on ways in which individual learners, especially children, make sense of their learning experiences. (p. 153)

Learning from the environment and about the environment is one way that children can make sense of the world around them as they build upon their current knowledge and explore and inquire about what they don't yet understand.

Resources for Environmental Learning

The NAAEE (2010) document, *Early Childhood Environmental Education Programs: Guidelines for Excellence*, is based on educational theories that support environmental literacy and how young children learn through the works of theorists such as Dewey, Kolb, Piaget, and Vygotsky, as well as others. I found this document informative and supportive in that it “combines the perspectives of the environmental and educational communities, taking a cooperative, non-confrontational, scientifically balanced approach to promoting life-long learning about environmental issues” (NAAEE, 2010, epigraph) therefore supporting the use of the environment to teach traditional literacy skills at the primary level. Not only does it provide the research reinforcing teaching children using nature, it provides recommendations and guidelines to help an educator develop a strong program. NAAEE (2010) believes that “providing opportunities for the growth and development of the whole child, opportunities to develop a sense of wonder about nature and earnest engagement in discovery about the real world are the foundations for learning in early childhood” (p. 2).

Early Childhood Environmental Education Programs: Guidelines for Excellence is a tool for educators to use to design and deliver a high-quality program that is based on

environmental education focussing on children from birth to age eight. The program is not a structured approach but relies on children making discoveries and teachers building positive experiences from those activities. The guidelines “emphasize the development of individual feelings, beliefs, and inner unity with nature that are so critical in the early years” (NAAEE, 2010, p. 3). The program identifies six characteristics that are important in an environmentally based program designed for young children. These characteristics are program philosophy; purpose and development; developmentally appropriate practices; play and exploration; curriculum framework for environmental learning; places and spaces; and, educator preparation. For each of the characteristics, the document provides guidelines that list what environmentally appropriate programs should be used and several indicators that will help the educator gauge whether the program being used has the attributes of the characteristic.

Early Childhood Environmental Education Programs: Guidelines for Excellence (NAAEE, 2010) supports this project in that it “calls for a commitment to action in recognition that children and youth of the world benefit in many ways and across multiple domains of learning and development when they become more connected to the natural world around them” (p. 7). It supports helping children have a sense of belonging in their world (p. 38) by encouraging them to develop a connection with their environment. This document assists teachers in providing a quality environmentally based educational program.

Natural Curiosity: Building Children’s Understanding of the World through Environmental Inquiry/A Resource for Teachers (Chiarotto, 2011) is an excellent resource for helping teachers understand how to put into practice environmental

education by explaining how to implement inquiry, experiential, and integrated learning while fostering stewardship. Environmentally, “stewardship refers to human actions that contribute to a sustainable future for humans, animals, and plant species alike” (p. 54). Moreover, by providing an inquiry, experiential and integrated learning environment, stewardship behaviour is likely to present itself in students if they have a voice in their learning process, spend time in natural settings and their acts of stewardship are linked to classroom learning.

This four-branch approach to teaching is one that I practice in my own classroom and have seen the benefit of practicing experiential, nature-based programs. According to *Children and Nature 2009: A Report on the Movement to Reconnect Children to the Natural World*, “the regular practice of nature based, experiential learning at school significantly improved student outcomes in Social studies, Science, Language Arts, and Math” (Chiarotto, 2011, p. 37).

The following journal entry was written in my daily writings as I was justifying to myself the importance of implementing inquiry, experiential and integrated learning into my daily practice.

The children are asking and asking me when they can do some research on an animal. I finally agree to their request, even though it means giving up something else during this busy time. We came up with the criteria as a class and agreed that everyone must have their own animal. The only restriction was no birds, as that is a future research project to complement our making bird houses for our Father’s Day project. A wonder web was created and each child had to come up with at least six wonders before moving on to researching. This did not take long, as we

had just visited a natural habitat down by the creek and were creating our own habitat in the outdoor classroom. There were many wonders, ranging from habitat questions to life cycle to what they eat. The children shared their wonders with their classmates, encouraging more thinking and writing. Some children had to create another web because they had more than six wonders! The children were so excited to move forward with this project, they were finding the answers to their wonders before I had even created the page for them to write down what they found! It is this excitement and transference of skills that validates the use of nature to teach literacy skills once again in my classroom! (Sharpe, personal journal, March 2015)

Lindsay Park Elementary as a Green School

In 2002, LPES became part of the SEEDS Foundation. Becoming involved in the SEEDS Foundation was the beginning of LPES becoming a school that uses environmental education to expose learners to many skills and strategies that are multimodal and cross- curricular.

From 2003 to 2007, LPES students completed a total of 1,000 environmentally friendly projects, deeming it an Earth School. These projects became a part of the school culture. Today, LPES is a small community school with an enrolment of 178 students. There are eight classrooms and nine full time teachers, which includes the learning assistance teacher. There is one administrator, one administrator assistant and five educational assistants. The population is mainly Caucasian with a small percentage of ESL learners. It is an economically diverse demographic.

Currently, children at LPES are involved in the following environmental activities in the 2014/2015 school year:

- School wide composting.
- Grade Three Science Fair (plants).
- Planting, tending and studying flowers, vegetables, herbs and some fruits in the greenhouse which are then donated to the local food bank and sold at the local farmer's market.
- Annual involvement in the BC Green Games.
- School wide plastic, paper and glass recycling.
- Vermicomposting.
- Recycling of drink containers.
- Environmental Club once per week creating projects using recycled materials.
- Earth Day is everyday—developing awareness of our school environment and beyond.
- Community Pitch in throughout the year.
- Student initiated garbage clean up at recesses.
- Ongoing awareness, with the help of community resource people such as the Regional District of East Kootenay, Wildsight, Mark Creek Recovery Program, Columbia Basin Trust, Teck Cominco, City of Kimberley, Tembec, Columbia Basin Environmental Education Network and local environmentalists.

Since becoming an environmental school, projects that LPES and community teams worked together on to create a strong environmental culture in and around the school are:

- The first carbon neutral computer lab in Canada.
- All students were involved in planting trees, shrubs and perennial plants for the Mark Creek Recovery Program in 2004, which is now a creek where students can discover restored aquatic life.
- An outdoor classroom that is built into the ground with large stones and berms to create seating areas plus trees and foliage for students to study and take care of.
- Instrumental in tying the forest land below the school to the Kimberley Nature Park Trails by creating more trails and having signage to introduce the trail system at the trail head near the school.
- Provided funding for bridges to be built across the section of Lois Creek near the school for easier access to trails and also to the creek for aquatic studies.
- Students, staff and community members worked with a local landscaper to design and create a low maintenance and environmentally friendly area at the entrance to the school. A fully functioning greenhouse, decorated with a mural created by local artist, Jim Poch, who took ideas and sketches from all of the students. One side and one end of the greenhouse were decorated with this mural created by the artist, staff and students. Even some community members came along and took their turn with a paintbrush to contribute.

When researching the history of LPES becoming a Green School, I wrote these reflections in my journal because it really hit me that by having the students involved in creating their school area, they took ownership of it.

After reading through the letters and grant applications that were put forth to receive funding for many of the environmental projects, I started to think about all of the people involved. While many of the environmental projects were driven by a former learning assistance teacher, one of the educational assistants and a parent, the majority of the labour was done by the students. Weeding, digging, moving rocks and dirt, laying sawdust, planting seedlings, illustrating a section of the greenhouse, painting, hauling water and taking care of the areas were all things that every student in the school was asked to participate in. Some people jokingly (I hope) commented that we were breaking child labour laws! But what I saw was ownership. The students cared about their school and the area around it because they were instrumental in developing it. Vandalism is rare at our school and when it happens, it is generally towards the school itself, not the outdoor classroom, greenhouse or front gardens. In June, 2014, the greenhouse was vandalized twice, both times during the strike, and only the door was damaged. The mural was not touched. I think this makes a statement about how people, even vandals, feel about what we have done for our school environment (Sharpe, personal journal, October 2014)

The “Planned” Curriculum

As I ended the spring semester of my Master’s program, I began to work on the project proposal that I had been thinking about for two years. I was excited to work on researching the value of being an environmental (Green) school and documenting what I believed would paint a picture of a dedicated staff using our surroundings and natural environment to teach our young charges traditional literacy skills through different

environmental projects and activities. In the spring of 2014, I approached the staff members at that time and obtained their cooperation to share the knowledge and activities that they used in their classrooms, as well as collaborate with me on a project for the BC Green Games. The BC Green Games is a competition run through Science World British Columbia to promote the celebration of Green Schools and their commitment to environmental stewardship. The plan was to do a whole-school learning sequence using the book, *Winston of Churchill: One Bear's Battle Against Global Warming* by Okimoto (2007). It was at this time that I started to think that this project would be a worthwhile action research project because during the past few years our involvement as a staff for these BC Green Games had waned and I hoped my project might encourage our recommitment in this type of planning and teaching.

The B.C. Ministry of Education promotes environmental learning at all ages and supports teaching through the use of the environment. The B.C. Ministry of Education's (2007) guide, *Environmental Learning and Experience An Interdisciplinary Guide for Teachers*, is a vital document for this research as it states:

Environmental education aims to integrate concepts and principles of the sciences and social sciences, such as ecology, biogeography, sociology, environmental chemistry, environmental psychology, politics, and economics (to name only a few) under a single interdisciplinary framework. It can help students learn about how they are connected to the natural environment through traditional subjects and through direct experience in both natural and human designed systems like their school buildings. In the ecological view, students may come to know and understand that all human environments, societies and cultures are deeply

embedded and dependent on natural systems, both for their development and their continued survival. (p. 7)

Understanding the importance of bringing together traditional learning and environmental literacy became significant to me in order to help educators develop a strong, rich and rewarding program for their students that will strengthen learning in many different ways. With the assistance of my staff, I composed a list of the topics and activities we were going to carry out to meet the requirements of the curriculum as well as teach using the natural environment surrounding LPES. Each teacher chose a topic that fit into the appropriate grade level and agreed to share his or her lesson and unit plans with me for my project. Topics to be covered were bats; earth flags; bear aware; apples; Take-Me-Outside Day; Aboriginal education; building habitats; and, quilt-making using natural items. It was agreed upon to step up our involvement in the SEEDS program, even though we had reached the top level. A decision was made that our students would start documenting the second round of 1,000 environmental projects and activities (SEEDS, 2014) to carry on with our mission statement and belief system about the environment. Children in LPES are

provide[d] a caring environment developing the qualities of self-esteem, creative thinking, a love for learning and respect for self and others, realising that quality education is an individual life-long process involving physical, mental, emotional and social development to produce happy, responsible citizens. (“Mission Statement”, 2014, para. 1)

For the BC Green Games, I had the idea of building a book called, *The ABCs of Being a Green School*, hence the name of my project, which I borrowed from my BC

Green Games idea. My thought for the Green Games was to build a flip book that highlighted all of the things that we do at LPES that are environmentally friendly in alphabetical order. A group of us came up with words (Appendix A) that I could work with. My plan then was to have students and teachers document these words as they occurred in their classroom or in the school with photos and videos. I would build the book based on the involvement of the whole school and our participation in being a Green School.

The plan was ready to put into place. In the fall of 2014, the teachers would carry out the projects that they had chosen to plan and implement with their students. I would collect the information and data about their curriculum plans through observations, conversations and by looking at the learning sequence they created and the philosophy behind their work. Each teacher would also take pictures and videos of their students for the BC Green Games project. In January, 2015, we were going to implement the whole school learning sequence based on the book, *Winston of Churchill: One Bear's Battle Against Global Warming* by Okimoto (2007), which we planned to build during our August professional development days prior to the start of school. After my project and the BC Green Games were completed, we had a plan in place that involved Winter Wonderland, Earth Week and the grade three science fair, the latter which would be plant based. The curriculum plans looked good on paper and in our minds we felt that we would have no difficulty implementing this plan.

Even though there was strike talk, I did not think that it would come to anything and I was pleased that our staff and new administrator appeared keen to assist me on my project. This feeling is reflected in my personal writing prior to the strike.

I was extremely excited to get this project off the ground. I had a very clear vision as to what it would look like and how the BC Green Games flip book would be so amazing! I was hoping that my enthusiasm would be contagious and bring us together as an environmental staff because we seemed to have lost some of our interest in being an earth school. This attitude also inspired me to pursue action research for my project. The last few BC Green Games entries ended up being done by one or two people and at times I believed that some of the staff did not even know what the project was! I think we were all hoping the same thing, especially our educational assistant, Mrs. D, whose passion for the environment is why we have all of the amazing environmental programs and tools that we do. (Sharpe, personal journal, May 2014)

How the Curriculum was Implemented

August 27, 2014 was a pivotal date and one that I will remember for many years to come. Conjure up a miserable spring due to the negative working relationship between the B.C. government and the teachers, which deteriorated into a full strike during the last two weeks of June and what do you get? A despondent, depressed, miserable teacher. No, it was more than that. It really infused a feeling of unworthiness in my soul. It made me question what I really stood for. I watched my daughter—a new teacher herself, only 26 years old—being crushed by bitterness and hate for a government that she probably voted for. It was a horrible time and one that will not easily be forgotten. I had spent the summer working on my project proposal about environmental literacy, which I spoke about enthusiastically to my staff and which I was personally excited about. As we moved toward the beginning of the school year anticipating the end to the strike, we all

thought that the government would negotiate in good conscience with the BCTF. Yet it started to appear that believing that school would begin September 2nd, which was something I initially had high hopes for, was not going to happen.

During the month of August, the BCTF and the Ministry of Education stated that they were meeting and having exploratory discussions. Both sides met with mediator, Vince Ready, and it was agreed upon that because Mr. Ready became involved in the bargaining process, there was to be a media blackout (BCTF website, “media statement”, August 14, 2014). Therefore, I was led to believe that negotiations were moving forward, because Mr. Ready had stated in June that he would not become involved in the bargaining process unless he felt it could be resolved. The following media statement gives an indication of how the government used the media to ‘throw fuel onto an already blazing fire’ and that negotiations were not moving forward but appeared to be at a standstill.

Education Minister Peter Fassbender’s recent media tour is a clear contravention of a media blackout that the BCTF, BCPSEA, and government agreed to when Vince Ready first engaged in the bargaining process.

It is unhelpful that the Minister is again playing politics in the media instead of allowing bargaining to resume behind closed doors. It shows a lack of integrity and highlights the government’s ongoing attempts to derail meaningful negotiations.

Today, I am calling on Peter Fassbender to honour the media blackout and instruct BCPSEA to immediately begin intensive mediation with the assistance of Vince Ready. The BCTF bargaining team is ready at any moment to begin this

important work. Teachers hope the government is finally ready to compromise to get a negotiated settlement.

More than anything, teachers want to be back in schools on September 2 with smaller classes, and more support for all students so we can give BC children the education they deserve. (BCTF website, August 21, 2014)

So on August 27th, which was to be the first day of professional development in our district, teachers were herded into our local common meeting place, an old theatre that has been refurbished and generally brings memories of laughter and enjoyment, to hear that all of the media hype about the two sides coming together was just that—hype. The reality was that neither side was moving on its stand and school was not starting as scheduled. We sat there, shell-shocked. We had not received a full pay cheque since the end of April.

I thought back to the spring, as the BCTF and the B.C. Ministry of Education battled over the teachers' contract, how I still went to work every day and encouraged my children to be the best learners they could be. My work ethic remained the same as always. This reflection was made at the end of May 2014, as the contract talks heated up.

In May, it was determined by the Ministry of Education that we were not doing our full duties as teachers and we were docked 10% of our overall pay as well as not paid for the days we didn't work when on the rotating strike schedule. This completely floored me as I had continued to be the best teacher I could be, teach the children to the best of my and their abilities and make our school a caring and safe environment. Did not going to a staff meeting or not being on supervision (there were five other people outside) make me a bad teacher? I really questioned

what my value was when the government and the labour management board deemed that I was not doing 10% of my job. When did teaching become about paper work, meetings and supervision at recess? (Sharpe, personal journal, May 2014)

Yet, at this point in August, we were faced with the reality that we were not going back into the classroom in September. I was crushed. The anticipation and excitement of the beginning of the year and my project was sucked out of me, out of all of us, and there just seemed to be no hope. Many of us were so emotional that we could not even say the word strike or school without bursting into tears. The government appeared in no rush to get school started; instead they were offering parents \$40 per day for childcare, money that they had saved from the schools being closed in June. Administrators' plans for the initial three professional development days that our district holds were dashed; no one was allowed in the schools. Our classrooms were still set up from June as we had thought and hoped that the strike would be short-lived. We had anticipated that we would have been back in for the last few days of June, at least to be allowed to clean up our classrooms. Morale was at its lowest, anger and tears were abundant. We did not want to be in this situation but we also needed to have a change in our contract.

As we all shuffled out of the theater, I came to realize that this outcome would heavily affect my project. And to be honest, I did not care. I truly believe that I experienced depression. I had no desire to talk to anyone, I could not smile, I cried easily and I felt so, so useless. The strike had sucked all of my energy and passion for doing something to better our school system right out of me. Both the timeline and the

methodological approach that I had outlined in my project proposal was thrown into the wind:

This action research project will take place beginning in August 2014, and ending in March 2015. Action research is the best method for this project because it involves taking the environmental focus that is already in place at LPES, documenting the learning through environmental projects, analyzing that process and reporting on the learning that takes place for both staff and students and then refining the practice of the environmental education at LPES. The first steps will be meeting in August prior to the beginning of school and establishing a time line for projects and activities that are deemed environmental learning. The staff of LPES has agreed to participate in a school-wide environmental project that will focus on oral language, reading and writing through learning about global warming and polar bears using the text, *Winston of Churchill: One Bear's Battle Against Global Warming* by Okimoto (2007). School-wide projects are popular at LPES as we believe these develop healthy relationships amongst our student population. I will also be documenting individual classroom projects that teachers will select in August to be a part of the project. Once these projects are completed I will be collecting the plans that each teacher created to present in my research. All projects will involve oral language, reading text, and writing while having a strong environmental focus. (Sharpe, 2014, unpublished)

There was to be no meeting in August, furthermore there was no way that I could ask teachers to participate in a project that could not get off the ground because we could not follow through with what we had discussed in June. We were not allowed in the

school building and we lost all interest in further planning while on the strike line as time dragged on and on. Although there was much support for teachers during this portion of the strike, the yelling, fingers and fists are the things that many of the teachers will remember as they stood on the line, standing up for fairness for kids. One elderly man made it his daily routine to drive by and belittle the teachers, calling us lazy and telling us to get back to work. He would even drive his van toward the strike line to scare us and then veer off or he would stop and yell at everyone. It was a truly devastating, depressing and abysmal time for teachers.

September started and there was still no movement in the strike. Teachers were really becoming discouraged and many were financially troubled. Parents were frustrated with the government—how could it offer \$40 a day for daycare yet not be willing to put that money back into the education system?

Instead of finding creative ways to solve the dispute and get schools open, the government is actually trying to prolong the shutdown with their \$40-a-day payment scheme. That amounts to \$12 million a day and \$60 million a week of taxpayers' money that should be put into the education system to give students and teachers more resources. (BCTF, website, September 3, 2014)

How could I work on a project that involved my school, staff and students when none of us were there? As September dragged on and teachers picketed in the rain, the sun and even the snow, I questioned what education in BC was all about and why a Premier whose son attended a private school would really care about moving forward with public education. Binding arbitration was put forward by the BCTF and declined by the government. It was clear to me that this government was out to break teachers, or at

the least the BCTF, and that the children were their last priority. It seemed that getting the kids back in school was not high on Premier Christie Clark's priority list, in my opinion. While this should have motivated me to be angrier and prove to the private system that public education could also be valuable and rewarding, I just felt despondent.

Finally, on September 18, 2014, the BCTF ratified a contract and schools were to start up September 23; teachers were allowed in the schools on the weekend and were given one day to prepare for the beginning of this school year. There was no celebration; we had been broken. As glad as we were to get back into the classroom, the anticipation and excitement that usually fills the air prior to the 'first day' was not there. We were glad because it was finally over. We were back in our safe environment but still not feeling safe. Our spirits had been crushed; we did not feel valued or trusted. And unbeknownst to me, there was more to come.

My project was not a high priority at this time as I needed to dismantle all the materials from June in my classroom, and put up those for September as well as prepare for the start-up of a new year. Needless to say, my project was placed on the back burner and I thought that once we had settled in, I would get to it. Was I ever wrong about that. The settling-in part was an energy-draining, time-consuming, difficult time. Forget about the project! Children had been out of school for three months and building a classroom community was going to take time. Interestingly enough, it took much more time than normal. Why was that? Starting school at the end of September was not optimal. All of a sudden it was Thanksgiving, then Halloween, then Remembrance Day, then report cards and then Christmas. There was very little build-up time for the fall and we discovered something that we have all taken for granted in the first four weeks of September; the

calm, community-building period of getting to know each other. No, the end of September was full on, flat out, run, run, run, go, go, go, plan, plan, plan, do, do, do and not a lot of down time to just get to know the children and make the classroom a safe learning environment. Creating a safe and caring classroom became my priority, as did keeping my sanity, which was lacking at this point, and the *ABCs of Being a Green School* became a vague memory and a dusty pile of books and papers as I struggled to survive the worst start up in my 30 year career of teaching.

So, how was I to start a project that did not fit into the demand of compressing a curriculum into less time than normal? I have to say that these months were very trying and difficult. Add into the equation the fact that our school had a new administrator who also had no opportunity to get to spend the three August days or any other time getting to know her staff, the ways that our school worked efficiently, or build a safe and trusting community with the adults within the building. We also had a new learning assistant teacher (LAT) and an additional classroom, which was placed in a portable classroom that had been brought in over the summer. The educational assistants were starting their year with two new supervisors and no one was on the same page on how to support children. Philosophies and beliefs were not discussed as there was no time. We were off to a rough start.

There is no easy way to explain what a devastating time I was having with this start up. My class consisted of 12 grade-two students and 11 grade-three students, six of whom I had last year. I had three non-readers, three highly-intelligent students, including one autistic boy, as well as 17 other unique and different individuals who I needed to get to know so that I could meet their needs. A diverse group but the norm in our school,

probably any school. What was not the norm was the support that I was getting from the LA teacher and the administrator. Because I had a record of being a good fit for autistic children, the decision seemed to be made that I did not need as much support for my little autistic student, even though he was fully-funded. This caused me much grief as I felt I had to fight for support in my classroom when it should have automatic, not optional. Sadly, this set me up with a somewhat negative perception of the LAT, which was not good. Being the senior teacher on staff, my opinions and feelings were often asked for and thought about. This was a dicey situation because I discovered that I was not the only one feeling let down and unsupported. We all had to be very professional and wary of what was going on behind closed doors. Every day it seemed that there was a new plan regarding which children needed support and which teachers were on the list to receive assistance in the classroom. I never knew if I was going to have support until each morning of each new day. The educational assistants were moved from child to child and classroom to classroom and there was no consistency or schedule that had been established. No one felt like they knew what was going on and often did not get told if a schedule change affected them or they were told via others because we all knew if we received support on a given day, our colleague who had that educational assistant the day before was in for another change. Needless to say, our school community was not feeling safe and there were a lot of tears and frustration in the staff room during recess and lunchtime. Feeling valued and trusted was at an all-time low and the whole staff seemed to be walking on eggshells. Every little comment was questioned or feared by the staff, who felt they were being watched and questioned about every little thing that they did.

This was a complete 180 degree turn from the past several years, as our prior administrator let everyone have a free run and we all felt completely supported and trusted. Sadly, this feeling of not being trusted or valued continued throughout the fall and winter although it improved in the spring. The mantra of the school was no longer, things will get better as we go along, but one of that we just need to get through the year and set ourselves up for success in the fall of 2015.

Therefore, the plan that I had so craftily come up with in June was unable to be put into motion because of the fact that we did not go back into our classrooms until September 23rd. It was only a three-week delay after the intended start-up date, yet felt like months and months. Our school was a toxic environment as teachers were feeling very low and not sure that the accomplishments of the strike were truly worth it. We had settled for a mediocre wage. We were out of pocket thousands of dollars—dollars that we will never see made up. Sadly, this was the second time in two years that teachers had given up wages to fight for their rights then did not earn their wages back in the contract settlement. Even after the contract was ratified, the government and the BCTF were still battling over Bill 28, a bill which had introduced language that stripped the teacher's contract in 2002. The following quote is from an article in the online Teacher Newsmagazine, Jan./Feb. 2012, entitled, *2002–2012: Another decade of struggle for BC teachers* by Denyer and Knickerbocker (2012), to give a brief understanding of what Bills 27 and 28 did to public education in 2002 and continues to be an issue with public education teachers in 2015.

On January 26, 2002, then-Education Minister Christy Clark rose in the Legislature and tabled two bills that would have enormous consequences for

teachers and students throughout the province. Bill 27, the Education Services Collective Agreement Act, imposed a new contract and Bill 28, the Public Education Flexibility and Choice Act, stripped class size and composition from the old contract. Clark added insult to injury when she stated that she was “delighted” to speak in favour of Bill 28, which she claimed was “about putting students first on the agenda.

Over a single weekend, the Liberals wiped out decades of advocacy and sacrifice by thousands of teachers across BC and launched a decade of cutbacks, school closures, and untold damage to teaching and learning conditions. The BCTF and its members immediately responded with outrage and action. (p. 1)

Many teachers, including myself, remembered when Bills 27 and 28 were tabled and the effects that they had on our school system. Specialist teacher positions were cut, schools were closed and class composition became an issue. Children who needed support were not given as much because the funding was not available and teachers were expected to take on more children with special needs as well as every day needs. I believe that many teachers felt that the 2014 strike was another foot in the grave for public education in British Columbia because there has not been an improvement in class composition even though it was negotiated. Data has shown that although class composition was to be addressed after the strike, it was not. A BCTF News Release, titled *Class Composition stats highlight Premier's broken promise*, on April 17, 2015, stated,

The data released by the Ministry of Education shows there now are 16,156 classes with four or more students with special needs, compared to 16,163 classes

last year. In addition, a staggering 3,895 classes have seven or more children with special needs. In 2014, that number was 3,875. (BCTF website, April, 2015)

In the fall of 2014, teachers were pessimistic about the government holding up their end of the contract and there was not a lot of positivity in our school building due to the volatile relationship between the BCTF and the Liberal government of B.C.. Unfortunately, this mind-set did affect the outcome of my action research as the methodology did not occur as planned.

The thought of asking my colleagues to implement the environmental literacy programs as discussed in June was not on my radar. Building a safe and caring class community was the first and foremost priority for everyone. Furthermore, we needed to figure out what the expectations were from our new administrator. Going to an administrator who was visible from one who rarely was at the school in his final two years was a huge change for everyone. This really affected the teachers who had only had experience with the previous administrator because of the length of time they have been teaching, which is less than ten years.

I was too immersed in creating my classroom community to even think about doing this project. We were back in school for three weeks and had to do parent-teacher interviews. We didn't even know the kids yet!

Following parent/teacher interviews, I reflected on how mine went and how devastated I was by some of the children's responses during the interview.

I have parent/student/teacher interviews and always include the student because I believe that the interview is about them. I believe they need to hear what I have to say and they also need to have a say. I always start my interviews with the

questions, “Do you like school? How do you like being in this class? What are your favourite things about school?” I find this gets the children and their parents talking about good things and I learn a lot about their relationship and about the child in those few minutes. I also ask the children what they are good at and for the first time that I can recall in my career, I had children not be able to answer that question. As I reflected upon this afterwards, I realised that I spend all of September getting to know my students and their gifts. Then I build on their gifts and try my hardest to build up their self-confidence. It occurred to me that I had not had the time to do that and that was possibly why they could not answer that question. Even when I asked them, “What would Mrs. Sharpe say you are good at?” there were still two or three who could not answer. I had not gotten through to them yet (Sharpe, personal journal, October 2014).

After this epiphany, I spent a lot of energy working on getting to know my students, build a safe and caring classroom environment and encourage a community of confident and risk-taking learners. The project was not mentioned nor thought about much at this point.

Although the project was on the back shelf, there were several things that we had talked about prior to the strike happening in the school. Several of us chose to study the topic of “Bats” at the beginning of October. As indicated earlier in this paper, this was a topic we had discussed in the spring as a worthwhile one as part of our environmental approach. One teacher had adamantly wanted to study bats and felt that October would be a great month to do it in because of Halloween and the connections she could extract from her students because of the time of the year. However, several of us went ahead and

studied bats which, sadly, was an indication of the dysfunction that was happening in our school as there was little communication happening. The teacher who chose to study bats as her environmental project felt she couldn't do the study because several other teachers were doing it and she did not want an overlap for next year. I felt this situation was clearly an indication that we were all in survival mode and just doing what we felt had to be done to meet the outcomes quickly, with no regard of how our actions might affect others.

At the end of October, we participated in Take-Me-Outside Day, which was the activity that was chosen by a grade two-three teacher to implement when we discussed this in the spring. She attended an environmental retreat in Golden, BC in mid-October and returned inspired to carry forth with Take-Me-Outside Day. She spearheaded the setting of up stations and activities that made the day a ton of fun and it was well received.

The following reflection was written the evening after Take-Me-Outside Day. I was so pleased that it had materialised. It was our first environmental activity that we participated in as a whole school and I felt it was a huge success.

What an amazing day for kids. We started the morning gathering in our buddy reading groups and from that point went to our first station. The air was fresh and crisp, a bit cloudy but not raining. Off to the park across the street from the school we ventured to embark on a scavenger hunt for items that were smooth, rough, bigger than a hand, smaller than a thumbnail. We looked for man-made items as well as items that were orange, red, brown and green. The leaves were abundant, as were sticks, pinecones, grasses, weeds and other assorted natural vegetation.

The trees in the park are huge and we hugged them while we searched. Then we headed to our next station which was a cup of hot chocolate and locally grown apples. Yum! A game of eye-spy while snacking was much called for and we enjoyed having a little break before moving on to the most popular station of the morning ... the pile of leaves! Waahoo!! We were allowed to jump in them, throw them and bury each other. We even got to bury the teacher and when she jumped up, everyone screamed! It was awesome! After that excitement, we headed to the pine cone games. We tossed and caught, threw and chased and carried them between our knees. One of the students called his pine cone a pumpkin and everyone thought that was really funny so we all started to call them pumpkins! Then the whole school population walked the regular route for our Daily Physical Activity, a kilometer, just before recess. Usually we try to jog, some of us even run, except today we only walked because it was the kindergartens first time. After recess, the next station was This Little Land of Mine. We got a hoola hoop and set it in a spot in the playing field. We then got a magnifying glass and a ruler and we got down on the ground and explored our space within the hoola hoop. It was fascinating! Another relaxing station was the music station that was supposed to be held in the outdoor classroom but because the air was a bit damp, the leader wanted to stay inside so her guitar did not get wet and ruined. We sang environmental songs and also practiced the song, Hallelujah, which we will sing for Remembrance Day. After that we went out to the playground and read the book, Everyone Needs a Rock. Then we all looked for our own rock and our environmentalist showed us some really cool rocks that she has collected. With

our rocks in our pockets, we headed down the Lois Creek Trail, walking like a fox. Did you know that a fox can walk very quietly because he puts his heel down first and then rolls his foot towards the front of his paw, which makes him move stealthily? We sat in the forest and listened with our eyes closed. We could hear the creek running, many different birds singing and a squirrel giving us heck for invading his spot. Someone is sure they even heard a cow elk calling. Maybe she did! The last station was Nature Art and we built all sorts of creations including bridges, fairy houses, towers and pictures. (Sharpe, personal journal, October 2014)

Take-Me-Outside Day was a great day and supported by the David Suzuki foundation. Over 500 schools in Canada participate in this day to encourage kids to get outside instead of being in front of the screen. We learned how to teach and be taught outside, which is a great thing to be able to do because of where we live.

Continuous Yearly Activities

One of the constant activities that has been a mainstay for the duration of LPES being a Green School and carried on during this year was our Environmental Club. Environmental Club is a weekly lunch hour gathering of students who love our educational assistant and local naturalist, Mrs. D, and want to make, create and learn more about reducing, reusing and recycling. Mrs. D and the aboriginal education leader guide the students through projects that are environmentally friendly. This spring they headed outside and cleaned up all of the garbage in the outdoor classroom and they repaired all of the habitats that were built by students in the outdoor classroom. Crafts from recycled materials, such as juice can lids being painted with little scenes and then

turned into fridge magnets were made. Another popular craft is crushing all of the old crayons and then them mixing them up, putting them into special molds and melting them into one fancy shaped multi-coloured crayon. These items are sold at the local craft fairs and raise money for environmental activities that take place around Earth Day and later in the spring. About 80 students consistently attend, which is pretty amazing for a school of 170! This is an excellent leadership opportunity for grade 3 students who have been attending Environmental Club for three years and know the ropes!

Another continuous activity was composting and recycling. All of the classrooms compost daily and students from one of the grade one/two classes goes around to each classroom after lunch and collects all of the fruit and vegetable waste. Some of the compost is put into our vermicomposting bin and the students get to see how the red-wiggler worms slowly break down the waste into compost. It is a regular occurrence for a class to have the vermicompost dumped out onto a plastic sheet and the children take a handful of the compost and examine it. They are looking for a worm and also looking at the different levels of decomposition that the scraps are in. The rest of the waste goes to Mrs. D's compost and garden area or to another staff member's chickens and pigs. It is because of the vermicompost that I chose to do a learning sequence on the book, *Diary of a Worm* by Cronin (2004) in the spring. This sequence was be implemented at the beginning of May and complemented the outcomes of the science fair at the end of May.

The children love to collect the compost, especially in the staff room at lunch. That way, they get to see what the teachers eat and do at lunch hour! The grade one teacher planned to hatch chicks again this year and she shared the process that she has to follow, which prompted the following reflection.

As I write about the compost, I realise that there is a connection because the chickens that get the school's waste lay the eggs that are fertilized, brought into a grade one/two class and incubated so that the children get to experience the miracle of birth right in their class. Then the baby chicks are taken back to the farm they came from, meeting all ethical requirements. (Sharpe, personal journal, March 2015)

The steady use of the outdoor classroom and the greenhouse that are on our school grounds are two activities that really provide a wonderful environment for children to learn in. It is amazing to watch children who struggle with sitting still in a classroom be able to sit in the outdoor classroom and focus. The greenhouse brings out nurturing and responsibility as the children take care of the plants.

As I was preparing my proposal, I had an amazing day in the outdoor classroom and wrote the following reflection. At the time, I felt so blessed to be able to witness the students' confidence in their reading out loud to me, as well as be a part of nature while sharing our time together learning. I feel this reflection exemplifies the passion I had for the importance of taking children outside to learn. It also demonstrated my belief in utilizing the outdoor classroom in order to foster a love for learning in a natural setting. I still feel blessed, even in the aftermath of the strike, and I believe that using the outdoor classroom is essential in environmental learning because it gives children a sense of the magnitude of their surroundings. Learning does not have to happen in the classroom and reading and writing should not be limited to desk work during the designated language arts block. As I wrote this reflection, and put it in my proposal, I envisioned sharing my school's ability to learn using the outdoors with many others.

As I sit listening to my young student reading his book about snakes to me, I revel in the atmosphere surrounding us. We are sitting on a rock in the outdoor classroom at our school, a big space that has been dug into the ground and then strategically designed with large rocks staggered for seating, trees for shade and smaller plants and shrubs for ground cover. The other children are scattered throughout the outdoor classroom, finding shade or baking in the sun, depending on their internal thermometers! They each have a book or two and are intently looking at them. Are they reading? I hope so, although some may just be looking at the bugs crawling around on the ground or listening to the birds or the leaves gently rustling. Some are patiently awaiting their turn to read with me yet all of them delight in being able to ‘have school’ in the outdoor classroom. It is a daily ritual when the weather cooperates and one that I feel encourages their relationship with their surroundings. It is because I live in this mountain town and have been blessed to teach at a school that has a greenhouse, an outdoor classroom, a gully and myriad of trails right beside the school, and is a short drive to the ski hill, that makes me want to research and document the effects of how living and working in this environment helps develop young children’s’ literacy skills. A young girl confided in me, “I learn from nature when I get to read and write in the outdoor classroom!” (Sharpe, personal journal, June 2014)

Another continuous environmental activity is the recycling program that we have in our school which includes bins in the hallway for recyclable drink containers. We have a program set up with a mentally challenged adult man and his support worker, who come into our school and put the drink containers in a common area and clean out the

bins. This part of his program, being in the school, helping with the ‘juice boxes’ and having a job to do, is a good connection with the community and I think it is good for the children to see him doing a job that they also like to do. I think that his support worker does most of the work but we all enjoy seeing his smiling face! Afterward students are allowed to work with Mrs. D and count the juice boxes before they are taken to the recycle depot. This money is also used for environmental projects and if necessary, the breakfast club, which is a program that we offer to families who have a difficult time providing healthy breakfast food for their child.

Daily garbage pick-up is something that many children love to do. Once the snow is off of the field, kids are knocking on the staff room door asking for a bucket. We have several five-gallon ice cream containers that have rope handles on them and the kids go out and pick up all of the garbage that has been lying in the field all winter. They get really excited to fill their bucket and when they take the initiative to pick up garbage, Mrs. D will give them a special polished rock. These rocks often have ‘powers’ and the children love to receive one and keep it in their pocket or desk.

Upon our return to school after the March break, the snow had melted off of our playing field. This reflection indicates how our new administrator is still learning about the environmental stewardship that we have developed in our students.

On the first day back after spring break, our administrator was outside commenting on how full of trash the field was and how she would have to get the classes outside to get it cleaned up. I just smiled and said, “Mrs. D will look after it. Don’t worry!” That was at 8:30 in the morning. At 10:20, she stood in awe as she watched several children with their buckets madly picking up the garbage and

by the end of the lunch recess, the field was pretty clean. She was shocked! She made a comment to Mrs. D who responded with, “That’s just the way it is here, my dear!” And every day, children are out with buckets looking for trash, keeping our play area clean and also wishing upon their rock with powers!” (Sharpe, personal journal, 2015)

At the end of March, Mrs. D met with the staff and set out all of the projects that she thought would be beneficial and educational for classes to participate in for Earth Day in April. The first decision made was that we would celebrate all week because we are an Earth School, instead of just one day. In fact, we talked with our students about every day being Earth Day at our school but that we would just celebrate during this time to show how amazing we really are! Each class chose one larger activity and my class’s activity was to tidy up the landscape in the outdoor classroom plus build two habitats that would remain there for as long as they last. There are two nooks in the outdoor classroom that are perfect for setting in wood, stones, a tin can, grass and other items to build a small animal habitat. We have built habitats in the past and the children love to go out and play with the toy animal collection that we have. The process that Mrs. D and I chose to follow was that half of the class would be working on the habitats and the other half would be weeding, sweeping off the stone seats, removing the cottonwood baby trees that have seeded themselves in between the stones where we sit, laying sawdust and wood chips on the paths and generally tidying the area up. We were also reading and presenting a reader’s theater play called *The Earth Week Carol* by Thomas (1994), which I adapted to make it relevant to our community.

To complement building the habitat, the students researched an animal and the final product was a power point presentation. The process that we followed for this was to choose an animal and then create a wonder web (Gear, 2008). The children wrote all of their wonders about their animal before they started their research. I found that this process made the research more meaningful to the students because they chose an animal that interested them and they researched what they wanted to know. We brainstormed several questions before we started so that the children who were a bit stuck had something to scaffold upon, however most of them were so excited to start writing their wonders down that I could hardly keep them seated at the carpet until everyone had their say! Once they established what they wanted to know and I conferenced with them about their wonders, they started to look in books to see what they could find. I found it so rewarding when children were looking for their wonders and they discovered a lot more than they originally thought of, causing a lot of excitement! It was at this time that they started a page called Interesting Facts, which was part of their presentation. As they have done power point presentations before, they were aware of the criteria so they looked for as much relevant information as possible. At the end of April, beginning of May, the students gave their presentation to their classmates and then I sent the power point presentation home to the parents, who really enjoy getting to see this part of learning. Another piece of my contribution to Earth Week was building ten herb boxes to be sold at the local Farmer's Market in June. Mrs. D's husband and the father of one of my students pre-cut the boxes. The children pre-drilled the screw holes, ran the drill, assembled the box, sanded it and then planted the herbs. I implemented a math lesson regarding

measurement around the herb boxes, which helped the students understand perimeter, height, width and length using a product that they built themselves!

Another project that the school community became involved in was creating a calming environmentally focussed area in the entrance of our school. We have a wildlife tree stump there which shows the children how many different animals live in a tree and explains why unnecessary logging is harmful to wildlife. There is a beautiful bench there that was donated in memory of an amazing environmental teacher who passed away from cancer 12 years ago. We recently purchased a fountain that sits beside the tree and one class created items, such as big cushions, to compliment this corner and make it a safe and caring place to go when one needs a calm down.

Planting is a huge focus at LPES because of the greenhouse. The children grow plants for their classroom, Mother's and Father's Day, the Science Fair and for selling to the community to raise funds for the school. The children are taught how to set up the greenhouse before they start to plant. All of the pots, trays and tools are kept in there and the children help keep it organized and tidy. Children are instrumental in helping bring the soil, compost, seeds, seedlings, and other items to the greenhouse from the school or area where they have been deposited! It is important for a child to not only watch a plant grow but to be a part of opening the bag of soil, inhaling the smell of fresh dirt and knowing that it is an essential part of life. The act of putting dirt in their pot, understanding why their pot is the right size for the plant they are growing, why they need a few stones in the bottom or why there are holes in the bottom of their pot are all skills that they tend to remember year after year once they have been involved. The kinesthetic part of digging into the soil with their hands, feeling the warmth or coolness

of the dirt, placing their seed in, tamping the soil down gently and understanding how much water is needed for different plants is also important in their learning. Daily monitoring is also a good way to teach responsibility and perseverance as a child cares for their plant. The excitement that one hears in the greenhouse at this time of the year is priceless. The seed does not sprout right away so when a child sees a sprout, they are so excited; it is like they won a big prize! There is also the learning that life doesn't always go as planned and that seeds don't sprout or plants die. The lessons of having too much water or not enough usually sends a child into a world of figuring out what went wrong and trying again. The conversations and learning that the children share with each other cannot be measured, only celebrated by those of us who are witnessing such joy.

This reflection came to me as I worked on this paper. It really became apparent to me how important it is to recognize that every child brings something to my classroom and sometimes I love to be surprised by what they have to offer.

Often the child who is disorganized, seems disinterested and struggles with sitting at a desk and learning in a traditional manner, is the child who shines in the greenhouse. This child will get off the bus, head to the greenhouse and be the one talking to the plants, sweeping the floor, checking to see which plant needs water, and monitoring all of the changes. This child will not only know how his plant is doing, but will also know how everyone else's plant is doing and will protect all of them. This child will know the names of all of the plants and what care is required. This child will go and find the owner of a plant if he feels that the plant needs to be taken care of or if there has been a change.

Last year, in spite of the strike, we managed to pull off the science fair. I don't really remember much about it but what I do remember is a young man who struggled in school while his twin brother was the academic shining star. This young man is the child I am referring to above and his plant was a rose bush. Every day he talked to it, loved it, took care of it, as well as the greenhouse. Another child also grew a rose bush but she wasn't as engaged. Maybe it was luck, I like to think it was not, but the young man's rose bush bloomed for the science fair. The other child's did not, yet the bushes were purchased from the same place, same day and were the same age. Children are learning how to care for living things and they see the rewards. It's magical. (Sharpe, personal journal, March 2015)

What I Learned and The Action Needed to Be Taken

Sagor (2009b), in *Guiding School Improvement with Action Research*, defines action research as “a disciplined process of inquiry conducted by and for those taking the action. The primary reason for engaging in action research is to assist the “actor” in improving and/or refining his or her actions” (p. 1). Although the intent of this project was to document the environmental learning at LPES and then refine it, I discovered that it was difficult to be involved in curriculum development when the long-range plans did not go as intended or planned. I pride myself in being able to deal well with change, however I discovered that an emotional situation, such as the strike, can really impair a person, and in this case, the ripple effect of that emotional impairment caused the collaborative plan devised by the staff at LPES to not work out. I learned that after being faced with a upsetting emotional situation, I appreciated certain things more, such as

having a greenhouse and an outdoor classroom as well as amazing resource people, because those were the things that made this project successful. Even though the project did not go as planned, the action research part was effective in ““play[ing] a significant role in producing the knowledge and insight needed to move [his or her] profession forward” (Sagor, 2000, p. 31)”” (Sagor, 2009a, p. 8). This project and the after effects of the strike made me more aware of how we took our environment, our school’s natural space and our educational assistant, who is our local naturalist, for granted. We also were not utilizing these assets in a way that we needed to. I learned that it takes a team of teachers to put together an effective learning environment for children and that it is important for everyone to be on board with whatever school wide project is being pursued. Sagor (2009a) supports this by encouraging educators to “bring a mastery of the profession’s knowledge base to their work” (p. 9) because these educators will work together to assess their performance, analyze any problems that occur, prescribe an intervention, monitor the intervention to see if it changes the performance and ultimately, learn from the experience (Sagor, 2009a).

From this project I watched children learn and grow in ways that I couldn’t imagine given the circumstances. The children came back to school at the end of September more ready to learn than I have ever seen. Regrettably, the teachers were beaten up and scared. Teachers worked in an isolated environment in their classroom because they were playing catch up, as well as surviving and tending to their own wounds. As Sagor (2009b) states, “the work of teaching has always been difficult” (Enhancing Teacher Motivation and Efficacy section, para. 1) as he writes about how teachers are dealing with today’s students arriving to school with more problems as well

as expectations from parents and society have increased and financial cutbacks “make it clear that today’s teachers are begin asked to do more with less” (Enhancing Teacher Motivation and Efficacy section, para. 1). This statement from Sagor (2009b) sums up how my colleagues and I were feeling about our worth after the strike: “... the respect that society had traditionally placed upon public school teachers is eroding, as teacher bashing and attacks on the very value of public education are becoming a regular part of the political landscape” (Enhancing Teacher Motivation and Efficacy section, para. 1). Yet, we all knew that we had a job to do because we do make a difference, therefore building a classroom community became the focus and I ascertained that September is an essential month for getting to know your students and the whole school body, something else that was just taken for granted.

As a staff, we revisited our environmental project proposal for the year in March 2015, and discovered that we missed doing the school wide activity and therefore, that will be a focus next year. By being reflective practitioners, we discussed making a “commitment to achieving excellence with a specific focus” (Sagor, 2009b, Making Progress on Schoolwide Priorities section), which is our school-wide environmental focus. We also recognise that we need to not only celebrate Earth Week, but remember that we are an Earth School and that environmental education is a school focus, not just to be done by one or two individuals. By analysing the effects that the strike had on how we approached working collaboratively on my project, we also discovered that our focus on environmental education had waned during the past few years and this project brought that to light. As we discussed how our year had evolved, we set into motion the plan of action around school-wide environmental education that we will pursue for the year of

2015-2016. The proposal is to meet during the first three professional development days in September to discuss and plan what our BC Green Games focus will be, what school-wide learning sequences we want to pursue, re-register with the SEEDS program and start documenting all of our environmental projects as well as collaborate with each other on different environmental learning. By working together, we recognize that “crafting solutions to ... ever changing classroom issues can be an exciting undertaking” (Sagor, 2009b, Meeting the Needs of a Diverse Student Body section, para. 2) and in the aftermath of the strike, we recognise the importance of relying on each other’s strengths to create the best teaching and learning environment possible.

Conclusion

Literature shows that children learn by being involved, that place-based education is effective (Sobel, 2004) and that by having the opportunity to learn about their local environment, they will embrace it. They have an interest in reading and writing about their environment and telling others about their learning. They love to present their knowledge. With the right guidance, children become confident and see that making mistakes is okay and part of learning. When a tree or plant dies, you don’t give up, you plant another one. A child learns that one should not give up and that things take time and that sometimes it takes a few tries before you get it right. Inquiry based and experiential learning build on a child’s natural curiosity, encouraging them to explore, ask questions, investigate and research to find the answers. Children “engage deeply with the content because it interests them, not because they are expected to learn it. Consequently, their learning is superior” (Chiarotto,, p. 9).

Through environmental activities and projects done at LPES, students develop skills that can be applied across the curriculum at school, at home and out in the community. This is building good citizens by developing critical thinking skills such as accessing prior knowledge, questioning, inferring, interpreting, and synthesizing. These are skills that children can use throughout their life. Carlson (1998), noted that “a child’s sense of wonder can be lost or diminished, and with it, the desire to learn” (cited by Chiarotto, 2011, p. 7). This is what LPES strives to excel at—giving children the opportunity to learn about ‘their place’ in a meaningful and respectful manner, recognizing that all learners are unique and individual, but all can develop literacy skills, especially if encouraged to read, write and talk about what is important to them environmentally. My final reflection.

As I come to the end of this project, I look deeply at my own pedagogy, which is based on my values and beliefs regarding children. Throughout the Master’s of Education program, it has been reinforced over and over that in order for anyone to learn effectively, it needs to be meaningful. It has also been taught that literacy does not always mean just reading and writing, but that different cultures have different standards of literacy. I ask, who am I to say a child is literate or not? I think of a young fellow who was the most amazing artist and could build and create with his hands wonderful handiworks, yet at the age of eight, could not read nor write well. And he was being beaten down by the system because no matter how badly I wanted to say that he was literate, I could not state that on his report card. Every term, I would have to write that he was not meeting expectations for his grade level. This broke my heart because he worked so hard

and he was literate, just not in the sense that was required. He could communicate beautifully with his drawings. He could explain his thinking orally.

I have worked with many children like him and I wonder why we have created a system that can crush a child's enthusiasm and wonder by making them read and write at an early age. My hopes and dreams are that by being an experiential teacher that I can instill in my students the love of their environment, giving them the confidence to become literate in reading, writing and oral language at their own speed and in their own way. I know in my heart that every child is an individual and learns differently and I firmly believe that by providing programs using an environmental approach, LPES does make a difference in how children learn traditional literacy skills. (Sharpe, personal journal, April 2015).

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Appendix A

ABCs of Environmental Learning

- ◆ Art, apple, air, atmosphere, aware, acorns, ambition, aurora borealis, aurora australis,
- ◆ Bats, bears, berry, biophilia, bees, blue jay, balance, biking, beauty, bio,
- ◆ Care, community, compost, cycle, creatures, conscious, Circle, courage, climate, collaborate, creatures,
- ◆ Dam, diminish, decompose, dirt, dig, draw, dandelion, drama,
- ◆ Eco, encourage, educate, endangered, environment, earth, energy, elder, erosion, engage,
- ◆ Fun, fertile, farming, friends, fruit, family, future, fossil, Frosty, flake,
- ◆ Germinate, greenhouse, grounded, grassroots, green games, grow, global, gully, garbage, grandmother,
- ◆ Health, hydro, heal, happy, heart, habitat,
- ◆ Idling, inuksuk, imagination, inspire, interesting, investigate, insects, inclusion, indigenous, icebergs, impact, indoors,
- ◆ Jam, judge, juggle, junk, jump rope,
- ◆ Kids, kinesthetic, Kimberley, kind,
- ◆ Lunch, Lindsay Park, literacy live, litter, lights, Lorax, leaves, learning, litterless, Lois Creek, Laughter,
- ◆ Mindful, meaningful, moon, mud, mucky, magical, magic, mountains, magnetic,
- ◆ Nature, natural, northern lights, needs, nurture, never ending, nutrition,
- ◆ Oxygen, ozone, outside, opportunity, outdoor, optimistic, outdoor classroom,

- ◆ Polar, positive, play, plant, purify, paper, prevent patient protect, pollinate, pure, peaceful, poplar,
- ◆ Question, quilt, quest, quiet, quarks quirks, quartz,
- ◆ Recycle, reuse, reduce, rainbow, reading, relationships,
- ◆ Sunshine, snow, sustainable, science, study, seed, social, solar, storm, students, stories, singing, speed,
- ◆ Technology, tree, teachable, trust, toad, Ten Thousand Villages,
- ◆ Unite, under, urban, umbrella, understand, undo, ungulate, underground, useful,
- ◆ Van Gogh, verbal, vermicomposting, valley, value, variety, versatile, vulnerable, valuable, view, Wildsight, wild, Walking Wednesdays, wish, world, write, water, worms, wildlife, wonder, whisper, wise, walk/run,
- ◆ Xenosphere, eXamine, explore, excite, extra,
- ◆ Youth, yolk, yes, young, yesterday, yonder,
- ◆ Zenith, zest, zing, zone, zoo, zero-scape, zzz's!