PADDLING TOWARDS RESILIENCE:
BENEFITS OF CANOEING FOR VULNERABLE FIRST NATIONS CHILDREN

By

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Abstract

This phenomenological study investigated the benefits of a weekly canoe program for vulnerable Grade 5 First Nations students at an elementary school in Victoria, BC. The experience of student and adult participants was explored with a focus on how perceived benefits related to protective factors of resilience. This study builds on research of impacts of outdoor adventure-based, wilderness therapy, recreational, experiential, and environmental education programs. Interviews were conducted with 11 students, and 13 adults, including an Elder, the principal, school staff, parents, and volunteers. This research indicates the canoe program enhanced student's inner resources, such as self-efficacy, self-esteem and mental and physical health, and outer resources, such as connections to peers, community resources, culture, school and nature. Through many interconnections between these resources, the canoe program helped address students' vulnerability, promote their resilience and reconnect them to their traditional waterway. Future research and program recommendations are presented.

Dedication

I dedicate this thesis to the First Nations students in Greater Victoria School District 61 and the school staff and administration who strive to help enhance these students' resilience.

Acknowledgements

I would like to acknowledge and thank the Esquimalt and Songhees Nations for welcoming the Canoe Program and my research onto their traditional lands and waters. I am grateful for the wisdom the Elder and First Nation educational assistant shared with me during their interviews. I would also like to thank the First Nations students and parents for their efforts and participation in this study.

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Chapter 1: Introduction

Ecological justice is inextricably connected to social justice. Where there are poverty, inequity, and oppression, people and ecosystems suffer. Children, who lack food, clothing, shelter, and family security, may never have the opportunity or desire to connect with nature. To promote true sustainability, environmental education and communication must pursue a systematic approach and simultaneously address social and environmental concerns. Effective environmental education brings together society and the environment and supports the resilience of ecosystems, communities, and children. In particular, Indigenous environmental education and communication programs are a natural fit to help improve the resilience of First Nations children whose cultural identity is deeply connected to their traditional land and waters.

Although there are much fewer studies on the resilience of First Nations children and youth, it is a topic demanding more research as many First Nations youth are at-risk. Indeed, "there are few other groups at greater risk for poor psychosocial outcomes than First Nations" (Mykota & Schwean, 2006, p. 5). First Nations children and youth are affected by "intergenerational trauma" (Gray Smith, 2012, p. 20) caused by the generations of trauma their people have endured, such as "death from disease, loss of land and self-sufficiency, residential school and loss of culture and language" (Gray Smith, 2012, p. 20). It is vital that schools offer culturally meaningful educational programs to help build the inner and outer protective resources of First Nations children so that they may flourish. This study examines the experiences of First Nations elementary school children participating in an outdoor environmental adventure program, called the Canoe Program (CP) and how the benefits of the program relate to their inner and outer resources associated with resilience.

Background

Resilience has been defined "as the process of effectively mobilizing internal and external resources in adapting to or managing significant sources of stress or trauma" (Lee, Cheung, & Kwong, 2012, p. 2). These inner and outer resources can also be called "protective factors" (Green, Kleiber, & Tarrant, 2000, p. 78.). Masten and Reed (2005) define a protective factor as "a measurable characteristic in a group of individuals or their situation that predicts positive outcome in the context of risk or adversity" (p. 76). Protective factors, which help vulnerable children mitigate risk, include: "establishing relationships with caring adults, increasing self-esteem and a sense of control, becoming involved in organizations such as clubs or church, and developing useful skills" (Green et al., 2000, p. 78). In a school setting, there is significant potential to positively benefit vulnerable students' protective factors of resilience.

According to the Greater Victoria School District 61 (GVSD 61), there are two schools in Victoria, BC, where 100% of the students are vulnerable (Greater Victoria School District No. 61, 2012). This study focuses on Grade 5 students of one of these schools. Ninety-seven percent of students in this school are First Nations children from the local communities, including Esquimalt and Songhees Nations (School Principal, personal communication, September 24, 2012). Being vulnerable, in this school's context, means these children frequently lack normal health and family supports (School Principal, personal communication, October 13, 2012). Consequently, these students often face one or more of the following difficult challenges: poverty, poor nutrition, abuse, obesity, low self-esteem, learning disabilities, and inconsistent home environments (School Principal, personal communication, October 13, 2012). For

example, in British Columbia in 2009, “Aboriginal children represented 53% of the Children in Care” (BC Ministry of Children and Family Development, 2009, p. 2).

These students are also academically vulnerable as their literacy and numeracy rates are below average (School Principal, personal communication, April 30, 2012). For example, report card marks from all grades in June 2011 indicated “only 28% of students are meeting or exceeding expectations in language arts” (Greater Victoria School District, 2011, p. 3). The Foundation Skills Assessment (FSA) February 2013 results reveal just 55% of the elementary school’s Grade 4 students, who completed the FSA, are meeting expectations in reading and writing, and 15% are meeting expectations in numeracy (BC Ministry of Education, 2013); the FSA graphs show the 2012 results were approximately the same. Because students’ vulnerabilities can lead to poor health, negative educational outcomes, and at-risk behaviours (Green et al., 2000; Ungar, Dumond, & Mcdonald, 2005), it is important to find culturally appropriate ways (Lalonde, 2006; Ritchie et al., 2010) to help these students become more resilient to face these challenges.

Research Opportunity

Since the students of the elementary school in question are considered 100% vulnerable (Greater Victoria School District No. 61, 2012), it is imperative we do everything we can to boost these students’ protective factors of resilience. One way to improve children and youth’s protective factors and/or resilience is through outdoor adventure-based programs (e.g., Cason & Gillis, 1994; Green et al., 2000; Hattie, Marsh, Neill & Richard, 1997; Neill & Dias, 2001). With repeated success in enjoyable challenging outdoor adventure activities, some researchers (e.g. Hattie et al., 1997; Morgan, 2010) believe it is possible that at-risk children can let go of

maladaptive strategies and adopt healthier ones to cope with stressful events. While there is a significant amount of research on the impacts of outdoor adventure-based programs on at-risk and/or minority youth (e.g., Green et al., 2000; Hurtes, Allen, Stevens, & Lee, 2000; Ungar et al., 2005), there is insufficient research on how outdoor adventure-based programs affect the protective factors and/or resilience of vulnerable First Nations elementary school children. Related research, however, does point to the importance of using culturally relevant activities to augment the resilience of First Nations children, youth or adults (e.g., Iwasaki & Bartlett, 2006; Lalonde, 2006; Ritchie et al., 2010; Whitbeck, Hoyt, Stubben, & LaFromboise, 2001)

My research originated with the development of the CP which began its pilot year in September 2012 and now is in its second year. With the help of an Elder, school staff, and the Victoria Canoe and Kayak Club (VCKC) volunteers, I purposefully designed the CP to enhance the resilience of the vulnerable elementary school students by helping to connect them to their school, community, culture, and traditional waterway through weekly canoeing on the Gorge Waterway. Similar to Krasny, Lundholm and Plummer (2010), I believe individuals who are more resilient are better able to "contribute to a resilient social–ecological system" (p. 466). The Victoria Canoe and Kayak Club (VCKC) provides all the equipment and VCKC members volunteer to train students in a graduated program from dragon boats in the autumn to Voyageur canoes in the spring. The CP also includes a Water Safety Day before students are allowed in boats. On this day, students are given a talk on cold water safety and then wade into the Gorge Waterway wearing life jackets. Since many of the elementary school students are kinaesthetic experiential learners and struggle in traditional classroom learning environments, the CP provides a needed physical learning opportunity (School Principal, personal communication,

September 24, 2012). To follow protocol and help connect students' canoeing experiences to their culture and history, Elders from the Songhees and Esquimalt Nations blessed the children and the canoes at the beginning and closing of the program in the CP's first year. Furthermore, we arranged a First Nations paddling mentorship between nearby high school students and the elementary school students, which occurred for four weeks in April 2013. On the last canoe trip in June 2013, we invited parents to accompany students and had a picnic on the water in Portage Inlet. The CP presented an exciting opportunity to gain more insight into how an outdoor adventure program like the CP can potentially influence First Nations children's protective factors and resilience. Using a phenomenological approach, this study explored students' experiences of the CP and how its benefits related to the protective factors of resilience.

Research Problem Statement

Because the students at the elementary school face many social, emotional and academic challenges, it is crucial to attempt to enhance their resilience through culturally relevant enrichment programs, like the CP, and to understand how these programs benefit these students' resilience. The purpose of this study is fourfold. First this study aims to investigate students' lived experience of the CP. Second, it will assess the benefits of the CP for First Nations Grade 5 students at the elementary school. Third, it will explore how these benefits correspond to different protective factors of resilience. Fourth, this study will evaluate whether or not the CP positively influences students' resilience.

Research Questions

The research questions for my study are:

1. What is the experience of these children canoeing on a weekly basis?
2. How does a weekly canoe program benefit the Grade 5 First Nations students at the elementary school? And how do these benefits correspond to various protective factors of resilience?

Limitations and Delimitations

The first limitation of this study was the period of data collection set by GVSD 61. I was permitted to collect data during the 2012/2013 school year. Subsequently, I was unable to member check my descriptions and interpretations of student interview data with the student participants once I began data analysis in August 2013; this limitation may decrease the credibility of my findings. Since the CP recommenced in April 2013, I was limited to collecting observational data starting at the beginning of April 2013 until the last paddle on June 4, 2013. Due to the frequency of the CP, I could only collect observational data on Tuesdays. Furthermore, I was restricted to doing interviews in May once students had sufficient canoeing sessions to talk about their experiences and for possible benefits to be realized.

Originally, I had wanted to quantitatively assess different resilience factors, such as self-esteem and self-efficacy, but these children have difficulties with introspection and expressing themselves (Grade 5 teacher, October 16, 2012, personal communication). According to the Grade 5 teacher, all the Grade 5 students were below their grade level in writing and half were below grade level in reading (Grade 5 teacher, October 16, 2012, personal communication).

Consequently, I was compelled to choose interviews over student journal entries because of students' low writing ability.

Regarding study delimitations, I did not include any non-First Nations students since I preferred to focus my research on impacts of the CP on First Nations children, who are the majority of the elementary school's students and represent a vulnerable population. As a result, I cannot generalize this study's findings to non-First Nations students. In addition, I cannot extrapolate my findings to children of other First Nations since every Nation has its own context and culture. Another delimitation was my decision not to study obesity levels, levels of family security, or other enrichment programs in the school, which may have also impacted students' resilience or lack thereof. For instance, some of my research participants were involved in an art therapy program in the school, which may have influenced their resilience. Since I conducted a phenomenological study, which "does not seek to predict or to determine causal relationships" (Moustakas, 1994, p. 105), I cannot conclude whether the CP actually increases student resilience or any of its protective factors.

Research Significance

There is a paucity of research regarding the impacts of outdoor adventure-based programs on First Nations children and their experiences of these programs. As a result, I believe this study makes an important contribution to the understanding of how outdoor adventure-based programs, such as the CP, benefit these children's resilience. This study has the potential to reinforce the findings of other studies of the positive effects of outdoor adventure-based programs on protective factors and/or resilience (e.g., Cason & Gillis, 1994; Green et al., 2000, 2000; Hattie et al., 1997; Neill & Dias, 2001).

As the students at the elementary school are 100% vulnerable (Greater Victoria School District No. 61, 2012), this study is important to all adults who interact with them and are committed to enhancing these students' inner and outer resources. Thus, I believe the Esquimalt and Songhees Nations will be interested in my research as it focuses on how the CP impacts the well-being of their children. It will also inform school administration, teaching staff, parents and VCKC volunteers of the CP's potential benefits to students' resilience. Programs that enhance the resilience of First Nations students are welcome since "the risk of suicide … is 5 to 20 times higher for First Nations youth as a group" (Lalonde, 2006, p. 59). Among possible improvements in protective factors of resilience, students may experience better mental and physical health from the regular exercise of the CP.

My research may also demonstrate the CP supports some of GVSD 61's (2013) Aboriginal Education Enhancement Agreement goals. For example, the first goal of the Aboriginal Education Enhancement Agreement (Greater Victoria School District, 2013) is "to provide a sense of place, caring, safety and belonging for Aboriginal students in the Greater Victoria School District" (p. 10). My study may discover that the CP improves protective factors of student resilience, such as connections to community resources and caring adults, and facilitates students' engagement with learning. Consequently, students may feel more attached to their school. First Nations elementary school students with greater resilience, engagement with learning, and connection to school, land, water, and community may be more likely to finish grade school. This would support the fourth goal of GVSD 61's (2013) Aboriginal Education Enhancement Agreement which is "to increase success of all Aboriginal students" (p. 13). Part of this fourth objective is for the Aboriginal Nations Education Division to continue to

"foster and support experiential land-based learning at all grade levels" (p. 5). This study may establish the CP to be a beneficial experiential program which connects students to their traditional waterway.

From the perspective of the Greater Victoria community, it is important to research how we can improve the resilience of First Nations children. Healthier and more resilient children can lead healthier lives in the long-term, provided they have continued support from various community networks. More resilient children could mean fewer adolescents engaging in anti-social or self-destructive behaviours, which in turn, would ease the burden on family, Band, and municipal resources.

From an environmental education standpoint, the CP is relevant because it reconnects the students to their traditional waterway and natural environment. Before the CP, the students did not paddle on the Gorge Waterway. The CP is an example of holistic environmental education as it strengthens cultural, emotional, social, and intellectual connections to the waterway. In other words, the CP is an applied environmental education program which is place-based, outdoor adventure orientated, and culturally relevant. One of the goals of place-based education is to give students experiences and knowledge of their local environment so that they may care for it (Orr, 1994). The CP links students to their cultural tradition of canoeing, the cultural sites along the waterway, the flora and fauna. Being connected to the land is a large part of First Nation identity. First Nations are connected to the land through their culture, language, resource use, and spirituality. The First Nations were the original stewards of this land and they have much wisdom to share with us. After all, Indigenous peoples lived a sustainable existence "for thousands of years" (LaDuke, 1993, para. 12). By reconnecting the elementary students to their

traditional waterway, there is a greater possibility they will want to care for their local environment, and the larger community may benefit from a renewed interest in the wisdom the Elders hold regarding environmental stewardship. This study reaffirms the notion that cultural, individual, community, and environmental resilience are interdependent.

Researcher's Perspective

As a teacher working at this elementary school, I am concerned about the welfare of these vulnerable students. I want to help enhance their resilience for them to have the best chance in life to succeed. Although my own childhood struggles pale in comparison, I have experienced how important an individual's inner and outer resources are to resilience. Being a creative person and visual kinaesthetic learner, I empathize with students who struggle to learn in traditional classroom environments. I also know from my conversations with the school principal that these students are disconnected from the land. A primary goal for me as an educator is to reconnect students to nature so that they and future generations will live in unison with nature. These are some of the reasons I have volunteered over 500 hours to initiate and help manage the CP. As I have put significant time, thought and energy into ensuring the CP will function and benefit students, I may have a bias towards obtaining favourable results from my study.

Currently, I am assisting with the organization and management of the CP since I believe in the value of outdoor adventure education. My years of experience as a rock climber and surfer increased my own self-esteem and self-efficacy. As an active participant in this study, I frequently accompanied students on their dragon boat and canoe outings. After conducting the literature review and discovering that outdoor adventure-based programs frequently boost

protective factors and/or resilience, I am assuming that the CP will benefit students' resilience. Subsequently, my personal bias towards outdoor adventure, my perceptions of the student's experiences during the CP, and my knowledge gained from the literature review may colour my perceptions and analysis of the interviews which I conducted with student and adult participants. I did keep a field journal in which I made interpretations of the observations I recorded. These interpretations helped me perceive my biases more clearly.

Furthermore, my own cultural bias may also affect my analysis of the interview data as I am not First Nations and may have difficulties understanding the thoughts expressed by First Nations participants. In my experience, every culture has its own language, humour, wisdom and logic. However, I have spent significant amounts of time immersed in other cultures, which included learning other languages, so this may not be an issue.

Chapter 2: Literature Review & Scholarly Context

Introduction

While there is scarce research to support using adventure or outdoor education to improve the resilience of vulnerable First Nations elementary school children, there have been numerous studies of culture-focused, outdoor adventure-based, wilderness therapy, experiential, and different types of recreational programs to enhance the resilience of at-risk youth. This chapter begins with an overview of the various models of resilience. Next, there is a section on the protective factors of resilience. Afterwards, there are separate sections which detail the research done on the aforementioned program types and the effects of these programs on the various protective factors of resilience or resilience as a whole. Finally, there are sections detailing the benefits of environmental education (EE) and research on Indigenous EE.

Although this literature review separates outdoor adventure-based and outdoor environmental education programs, they do overlap in pedagogy. For example, they both involve experiential activities in natural environments. Outdoor adventure programs often focus on using challenge to promote self-knowledge, self-growth, and knowledge about outdoor living, whereas outdoor environmental education programs or place-based programs focus on "practical experiences outdoors through the application of an ethic of care, and grounding learning in a sense of place through investigation of surrounding natural and human communities" (Smith & Williams, 1999, as cited by Woodhouse & Knapp, 2000, p. 3). According to Woodhouse and Knapp (2000), place-based or ecological education is "a recent trend in the broad field of outdoor education" (p. 6). As may be seen in the following review, outdoor adventure-based and outdoor environmental education programs also sometimes have similar impacts on participants. In the

case of the CP, they are combined to help increase student resilience. It is important to note that the literature on outdoor adventure-based programs impacts and resilience models do not mention nature as a protective factor and also lack direct connections to EE; however, a section on nature as a protective factor is included below.

Models of Resilience

Indigenous.

One approach for increasing resilience in children, which may be the most appropriate for this study, is Gray Smith's (2012) metaphor of the four blankets of resilience. According to Gray Smith (2012), child resilience may be thought of as four blankets that enclose and safeguard children and enhance their resilience. Gray Smith's (2012) four blankets of child resilience have similarities with protective factors listed by other authors, e.g. Alvord & Grados (2005) or Ungar et al.'s (2007) adaptations to the seven common tensions youth face. The four blankets are as follows: "the child themselves and their sense of self…. the child's sense of and connection to their family…. the child's sense of and connection to their community…. [and] their sense of and connection to culture, language and land" (Gray Smith, 2012, pp. 11-12). Gray Smith (2012) lists possible risks which can influence resilience, such as colonization, destitution, and a "lack of access to health, education and childcare programs" (p. 12). Gray Smith (2012) also gives many examples of how we can enrich each of the four blankets of resilience. For instance, to build a sense of self, we can listen to children; this enables children to learn that their thoughts and words are significant (Gray Smith, 2012). To enhance sense of family, we can invite and support families to actively participate "in programming at all levels" (Gray Smith, 2012, p. 57).

Since the Canoe Program (CP) is a community program designed to help boost students' resilience through canoeing on their traditional waters, it embraces Gray Smith's (2012) third blanket of resilience, which is "a sense of community" (p. 63). The CP aims to "take children out to be on the land as much as possible" (p. 64) and to "traditional places … in the community" (p. 64). The Gorge Waterway has sacred and ancestral sites along its course. Involving parents and Elders in canoe trips with children can also help build a sense of community. Regarding a "sense of culture, language and connection to land" (p. 69), the CP links students to their culture and traditional waterway through paddling and hearing Dan, the First Nations educational assistant sing traditional paddling songs.

International.

Brendtro, Brokenleg, & Van Bockern (2005)'s model of resilience is expressed by the metaphor of the Circle of Courage (see Figure 1). Like Gray Smith (2012), Brendtro et al.'s (2005) model "reflects traditional child caring wisdom" (p. 131). The Circle of Courage proposes that all children, regardless of culture, creed or disposition, have four common development needs: "Belonging, Mastery, Independence, and Generosity" (Brendtro, Brokenleg, & Van Bockern, 2002, as cited in Brendtro et al., 2005, p. 131). Like many modern researchers of resilience (e.g., Masten &, Reed, 2005; Alvord & Grados, 2005), Brendtro et al. (2005) believe in using "strength-based interventions" (Brendtro et al., 2005, p. 134) which employ tactics to increase the four common needs (Brendtro et al., 2005, p. 134); in other words, these strategies focus on children's strengths, instead of personal deficiencies or the problems they are facing. Because many youth depend on negative peer relationships to fulfill their universal needs, it is critical that we bond children to caring adults and form affirmative peer groups

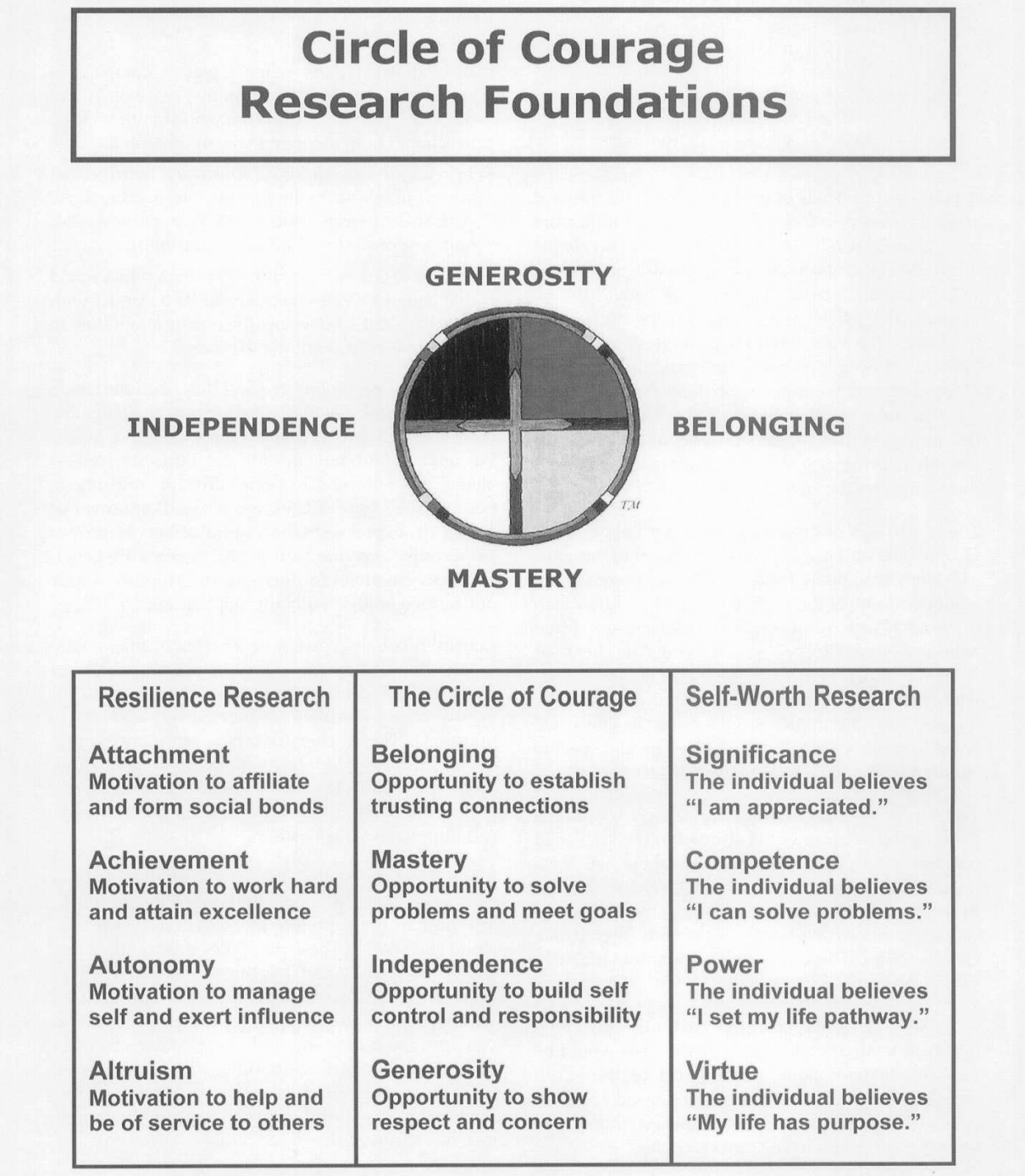

Figure 1. Circle of Courage Metaphor of Resilience. The Circle of Courage metaphor describes the four universal needs of children. From "The Circle of Courage and Positive Psychology," by L.K. Brendtro, M. Brokenleg, and S. Van Bockern, 2005, *Reclaiming Children and Youth*, *14*(3), p. 132. Copyright Circle of Courage Publishing on behalf of Reclaiming Youth International and Starr Global Learning Network. Reprinted with permission.

(Brendtro et al., 2005, p. 135). With respect to "belonging" (Brendtro et al., 2005, p. 132), it is possible that the CP could encourage positive relationships between adults, mentors, and Grade 5 students, and help connect students to their culture. Considering "mastery" (Brendtro et al., 2005, p. 132), the CP may provide students an opportunity to master the skills of paddling and being in canoe, which could help build their resilience.

The importance of culture to resilience is reflected in Ungar et al.'s (2007) research. In the International Resilience Project, Ungar et al. (2007) studied how youth from different cultures devise culturally unique behavioural and psychological adaptations to seven common sources of conflict: "access to material resources, relationships, identity, cohesion, power and control, social justice and cultural adherence" (p. 287). Each of these tensions could be categorized as one or more of Brendtro et al.'s (2005) four universal needs. For example, Ungar et al.'s (2007) tensions of relationships and cultural adherence are similar to Brendtro et al.'s (2005) universal need of belonging. Unlike some researchers (Rutter, 1987; Bernard, 1991, Werner & Smith, 2001; as cited by Shellman, 2011, p. 5) who argue that resilience should be seen as a process, Ungar et al. (2007), believe resilience is "both a characteristic of the individual child and a quality of that child's environment which provides resources necessary for positive development despite adverse circumstances" (p. 288). Ungar et al. (2007), like Gilligan (1999), Gray Smith (2012), Lalonde (2006), and Whitbeck et al. (2001), stress the importance of using culturally relevant activities to enhance the protective factors of resilience, and believe resilience includes "the capacity of the individual's environment to provide access to health-enhancing resources in culturally relevant ways" (Ungar et al., 2007, p. 288). Thus, resilience is affected by one's context and culture (Ungar et al., 2007, p. 294). Interventions for at-risk youth and

children are more likely to be successful if they "reflect the values of students in their culture and key relationships, fit the way they seek identity and cohesion, and cohere with experiences and needs for power and control" (Cross, 1988; Dei et al., 1997; Gosin, Dustman, Drapeau, & Harthun, 2003; as cited by Ungar et al., 2007, p. 305). The CP for the elementary school First Nations students is a potential health enhancing resource which is culturally significant, since it is on their traditional territory, involves the traditional practice of canoeing, and connects them to their natural environment.

Western.

In a paper exploring the development of resilience in children involved with social services, Ungar (2005) investigated how child protection, psychological health services, and correctional and educational systems enhance either risks or resilience for children. According to Ungar (2005), children in these social systems become resilient from "successfully navigating their way to the services, structures and relationships (health resources) and their negotiations to have services provided in child-focussed ways that sustain their well-being" (p. 429). Ungar (2005) also states resilience is contingent on "social context … [and] access to resources" (p. 429). Consequently, impoverished children, who have good inner resources, such as intelligence, are better able to become resilient if outer resources, such as a community recreation centre, are more available to them. In addition, Ungar (2005) underscores children have the power to seek out external sources of health support, "whether that navigation places them in contact with service systems or leads them to nonconventional forms of behaviour that bring equal benefits" (p. 442).

Masten and Reed (2005) suggest that another model of resilience comes from human development literature which describes resilient people as those that complete developmental tasks, which are "age-related standards of behavior ... presumed to guide socialization practices" (p. 75). Because risk factors often occur simultaneously and thus "predict similar problems" (Masten & Wright, 1998, as cited by Masten & Reed, p. 77), resilience research now studies "cumulative risk" (p. 77). Masten and Reed (2005, pp. 77-82) list three models of resilience: variable focused, person-focused and pathway models. Variable focused models of resilience investigate the connections "among characteristics of individuals, environments, and experiences to try to ascertain what accounts for good outcomes on indicators of adaptation when risk or adversity is high" (p. 77). Person-focused models, on the other hand, "identify resilient people and try to understand how they differ from others who are not faring well in the face of adversity or who have not been challenged by threats to development" (p. 78). As resilience is "multidimensional and configural" (p.80), Masten and Reed (2005) prefer the person-focused models, which try to understand "holistic patterns" (p.80). The most recent models of resilience are the pathway models, which "address patterns of behavior over time in more explicit ways" (Masten & Reed, 2005, p. 82).

Regarding the person-focused models, Masten and Reed (2005) give an example of a study, Project Competence (Masten et al., 1999, as cited by Masten & Reed, 2005, p. 80) which used a person-focused approach called a full diagnostic model, which classifies "children on the two major aspects of individual lives: good outcomes and adversity/risk" (p. 80). Results from the study demonstrated "resilient youth have much in common with competent youth who have not faced adversity, in that they share many of the same assets, both personal ones like good

intellectual skills and family ones like effective parenting" (p. 81). According to Masten and Reed (2005), programs designed to increase resilience will be more successful if they engage "powerful adaptational systems" (p. 83) such as "the mastery motivational system" (p. 83) since "feelings of self-confidence and self-efficacy grow from mastery experiences" (p. 84). If the Canoe Program can allow students to experience success and develop competency in paddling, it may help them build resilience. Masten and Reed (2005) also describe three strategies for enhancing resilience in children and teenagers. These strategies either aim to decrease "the exposure of children to hazardous experiences" (p. 85), augment "the amount of, access to, or quality of resources children need for the development of competence" (p.85) or muster "fundamental protective systems for development" (p. 85). These strategies would more effective, if ubiquitous social problems, such as poverty, racism, and inequality, would be reduced simultaneously. Like many modern researchers (e.g., Rutter, 1987; Bernard, 1991; Werner & Smith, 2001, as cited by Shellman, 2011), Masten and Reed (2005) conclude resilience is best considered a process, rather than a biological trait:

> Resilience does not come from rare and special qualities but from the operations of ordinary human systems, arising from brains, minds, and bodies of children, from their relationships in the family and community, and from schools, religions, and other cultural traditions. (p. 85)

If resilience is considered a process, anyone can learn how to be resilient. Yet, not everyone becomes resilient if they do not have enough inner and outer resources.

In a more recent review of resilience research, Sapienza and Masten (2011) acknowledge that resilience theory is now based on "dynamic system models with multiple levels of

interaction, including research on the neurobiology of stress and adaption, epigenetic processes, and disasters" (p. 267). Culture, social context, biological functioning, and other factors are all involved in a complex interplay affecting resilience. In a systems model of resilience, variation in "one domain of adaptive function can cascade to affect other domains over time" (Sapienza & Masten, 2011, p. 268). This model of resilience affects the way practitioners time and focus interventions (Sapienza & Masten, 2011, p.268). Moreover, Sapienza and Masten (2011) stress that while competent parenting or caregiving and advanced mental functions, such as self-control, are key for the development of resilience, they can be enhanced by outside support. Reminiscent of Ungar et al.'s (2007) emphasis that resilience is dependent on culture and context, Sapienza and Masten (2011, pp. 270-271) state that resilience research is also demonstrating how the contexts of poverty and mass trauma have widespread implications for the internal and external systems contributing to resilience.

Protective Factors

Although early studies of troubled children and youth concentrated on risk factors and treatment of problems, research shifted to which protective factors caused children and youth to become resilient (Masten & Reed, 2005; Konrad & Bronson, 1997, as cited by Shellman, 2011); in other words, resilience research now investigates strengths-based approaches (Brendtro et al., 2005). My understanding of protective factors affecting resilience was deepened by Alvord and Grados' (2005) overview of resilience research and suggestions for clinical practice, and Werner's (2005) research. Similar to Ungar et al. (2007), Alvord and Grados (2005) emphasize the importance of understanding how a person's culture influences resilience. For example,

Alvord and Grados (2005) believe effective protective factors for children "must be viewed in the context of their individual cultures and developmental stages" (p. 239).

Based on resilience research and their personal clinical experience, Alvord and Grados (2005) group efficient protective factors into six categories, which overlap each other: "proactive orientation … self-regulation … proactive parenting … connections and attachments … school achievement and involvement, IQ, and special talents ... community" (pp. 239-241). Proactive orientation can be as described as assuming agency in your life and having strong beliefs of self-efficacy (Alvord & Grados, 2005, p. 239). Proactive orientation also includes "positive future expectations" (Wyman, Cowen, Work & Kerley, 1993, as cited by Alvord & Grados, 2005, p. 239). In other words, resilient individuals are "hopeful about the future" (Alvord & Grados, 2005, p. 239). According to Alvord & Grados (2005), self-regulation is also a key protective factor category. Self-regulation can be defined as "gaining control over attention, emotions, and behaviour" (Masten & Coatsworth, 1998, as cited by Alvord & Grados, 2005, p. 240). If children regulate their behaviour and feelings, they are more likely to receive "positive attention from others…and will have healthy social relationships" (Alvord & Grados, 2005, p. 240).

Alvord & Grados' (2005) protective factor category of proactive parenting means the child has a minimum of one parent who is "warm, loving, and supportive" (p. 240), towards his or her children, but also expects good behaviour (Baumrind, 1991, as cited by Alvord & Grados, 2005, p. 240). "Connections and attachments" (Alvord & Grados, 2005, p. 240) as a category of protective factors, refer to a child's healthy relationships with family, friends, and alternate care-givers. Caring relationships enhance "self-esteem and self-efficacy" (Werner, 1993, as cited by

Alvord & Grados, 2005, p. 240). According to Rubin (2002, as cited by Alvord & Grados, 2005, p. 240), friendships are critical to positive adaptation.

The protective factor categories of "school achievement and involvement, IQ, and special talents" (Alvord & Grados, 2005, p. 240) and "community" (p. 241) correlate with other research. For example, Mykota and Schwean (2006) found, academic achievement assisted in the growth of resilience in First Nations students. In addition, Werner (2005) states intelligence is a key inner resource to enhancing resilience. Alvord and Grados (2005) and Werner (2005) describe community as a protective factor, which includes beneficial relationships with caring adults external to the family and supportive community resources. As part of the community, schools can be a protective resource for students if they "identify the needs of the students and address those needs with services" (Alvord & Grados, 2005, p. 241).

Similar to Sapienza and Masten (2011), Alvord and Grados (2005) state that "presence of several factors seems to enhance performance in multiple arenas" (p. 239). Among their recommendations for interventions to increase child resilience, Alvord and Grados (2005) recommend "fostering self-esteem in children through meaningful responsibilities whereby children may gain a sense of accomplishment and mastery" (p.241); this supports the CP's goal of providing an opportunity for students to master paddling Voyageur canoes to help increase self-esteem and self-efficacy.

From her longitudinal research on resilience, Werner (2005) determined some inner and outer resources, which strongly promote resilience, are found across cultures, class, and geographical locations. "Good health; an easygoing, engaging temperament; intellectual and scholastic competence; an internal locus of control; a positive self-concept….a competent

mother….affectionate bonds with alternate caregivers" (Werner, 2005, p. 5) are examples of protective factors found in different groups of people. Another important common protective factor for children is "an external support system in the neighborhood, church, youth groups or school that rewarded competence" (Werner, 2005, p. 5). The CP could be considered such a support system since volunteers and teaching staff reinforce good paddling skills, endurance, and behaviour. According to Werner (2005), the basis for resilience begins in early childhood. Interestingly, from the Kauai Longitudinal Study (Werner, 2002; as cited by Werner, 2005, pp.5-6), the author found inner resources usually helped females adapt better whereas outer resources had a larger impact on the ability of males to adapt. However, Werner (2005, p.7) underscores people, in general, vary in their coping mechanisms, which means intervention programs will have varying effects on people. Consequently, the CP will probably have dissimilar impacts on different students. Similar to Ungar et al. (2007), Werner (2005) acknowledges resilience processes are complicated and "are greatly influenced by context" (p. 10).

Nature as a Protective Factor

Even though much research of impacts of outdoor adventure-based programs has not measured the effects of nature itself on various protective factors of resilience, there are numerous studies which demonstrate that being in nature benefits mental and physical well-being. Nature can be considered a protective factor of resilience, which positively impacts other protective factors. For instance, Wells and Evans' (2003) quantitative study on "337 rural children in Grades 3 through 5" (p. 311) demonstrated that "nearby nature moderates or buffers the impact of life stress on children" (p. 321). More importantly, Wells and Evans (2003) found "the protective or buffering effects of nearby nature are strongest for the most vulnerable

children—those experiencing the highest levels of stressful life events" (p. 322). This finding is highly relevant for the vulnerable students participating in the CP. In addition, Wells and Evans (2003) discovered that children, who had more nature exposure, "perceive themselves as being higher in self-worth" (p. 323). Pretty, Peacock, Sellens, and Griffin (2005) conducted an experimental study on adults who exercised while "exposed to different rural and urban photographic scenes" (p. 322). Pretty et al. (2005) found adults gain self-esteem and have decreased blood pressure when exercising in front of "rural pleasant scenes" (p. 333). In another experimental study, Berto (2005) investigated the hypothesis that natural or "restorative environments could renew depleted attentional capacity" (p. 251). Berto's (2005) undergraduate participants completed a prolonged computerized attention test, and then viewed pictures of either restorative environments, non-restorative environments, or geometric pictures, before retaking the same attention test. Participants, who were exposed to pictures of restorative environments, improved their performance on the attention test (Berto, 2005). Taylor, Kuo and Sullivan (2001) carried out a qualitative study of "whether contact with nature assists attentional functioning in children with ADD [Attention Deficit Disorder]" (p. 59). Their results indicate that children, who play in "greener play settings" (p. 71), have less severe ADD symptoms. Perhaps canoeing in the Gorge Waterway will help students have better attention in the classroom.

Further studies also establish exposure to natural environments benefits an individual's mental and physical health. For example, Park, Tsunetsugu, Kasetani, Kagawa and Miyazaki (2010) investigated the physiological effects on university students who walked in and beheld forests, compared to those who walked in and viewed city landscapes. Park et al.'s (2010)

results revealed participants, who walked in and viewed forests had “lower concentrations of cortisol, lower pulse rate, lower blood pressure, increase parasympathetic nerve activity, and lower sympathetic nerve activity” (p. 25), than participants who did the same in city environments. That is, walking in and viewing forests “can aid in effectively relaxing the human body” (Park et al., 2010, p. 25). Similarly, Li et al. (2007) discovered forest walks augment the activity of cells which secrete anti-cancer proteins. It is hypothesized that “phytoncides [essential oils] released from trees and the decreased production of stress hormones may partially contribute to the increased NK [natural killer cell] activity” (Li, 2010, p. 16). These studies reveal how important children’s connection to nature is to their health and thereby, resilience.

Using Cultural Activities to Increase Resilience in First Nations

Cultural activities can be used to reconnect students to their environment, and increase their resilience. This researcher encountered five studies of the impacts of cultural activities of on the resilience of First Nations children, youth, or adults. Whitbeck et al. (2001) studied the impacts of traditional culture on the academic achievement of Grade 5 to Grade 8 American Indian students. Students, who identified with their culture and participated in cultural activities and spirituality, experienced improved academic success and higher self-esteem (Whitbeck et al., 2001, p. 12). Academic achievement, in turn, is an important factor in the development of resilience and reduction of risk in First Nations students according to Mykota and Schwean’s (2006) investigation of factors which promote mental wellness. In their study of Indigenous students in Grades 1 to 12, the researchers found academic performance and “psychosocial behaviours are moderately correlated” (p. 11). Since the CP enables students to participate in a

cultural activity and interact with First Nations paddling mentors and Elders, it could be assumed to benefit students' self-esteem and interest in school.

While Iwasaki and Bartlett (2006) studied Aboriginal adults, their study is similar to the present one in that they used phenomenology, they studied the impacts of culturally relevant activities, their participants were First Nations, and they viewed their study's findings through the lens of resilience. Iwasaki and Bartlett (2006) sought to determine the "lived experiences of Aboriginal individuals with diabetes in stress and coping through leisure" (p.323). Engaging in coping strategies, such as participating in leisure activities, to relieve stress, can be considered part of resilience (Diener, 2003, as cited by Iwasaki & Bartlett, 2006, p. 322). In their study, Iwasaki and Bartlett (2006) found that participants' stress was intimately connected to "the history of colonization and westernization" (p. 322) and frequently was the result of "cumulative and structural discriminations" (p. 322). Iwasaki and Bartlett (2006) also discovered that "the use of collective strengths through social leisure, which emphasized interdependence and connectedness" (p. 333) was integral to enabling stress coping mechanisms. Culturally relevant leisure promoted "cultural identities, satisfaction, and enjoyment" (Iwasaki & Bartlett, 2006, p. 333) and enhanced "spiritual or emotional/psychological renewal" (p. 333) which were both central to reducing stress. Spiritual renewal is important as Indigenous spirituality includes their relationships to the land, waters, plants and animals. Iwasaki and Bartlett (2006) emphasize that services provided to increase people's resilience ought to be culturally suitable to help people manage life's difficulties and facilitate "proactive and culturally relevant coping" (p. 335). The CP is culturally relevant social leisure, which may help mitigate students' stress, enhance cultural identity, and connect them to their natural environment.

Creating cultural identity within a community is crucial for enhancing individual and cultural resilience according to Lalonde's (2006) research of youth suicide, children in care, and identity development in Aboriginal communities:

> The process of creating and maintaining a strong sense of collective cultural identity not only promotes the continuity or resilience of the culture itself, but also acts to support and protect young persons in their efforts to build a commitment to their own future that is able to withstand and overcome periods of adversity. (p. 57)

In his research, Lalonde (2006) discovered there was less youth suicide in communities with activities that promoted "cultural goals" (p. 66). The wish of an Elder from the Songhees Nation to incorporate Songhees high school students as mentors in the CP demonstrates the importance of cultural continuity. Because cultural identity and resilience for First Nations is partly based upon their connection to the land (Gray Smith, 2012), linking students to their traditional waterway and natural environment promotes their cultural identity and resilience. Resilient children, who are connected to their waterway and its flora and fauna, are more able and likely to protect and care for it.

Similar to Iwasaki and Bartlett (2006), Lalonde's (2006) research asserts risks, which First Nations children face, have to be put in historical context. The residential schools, confiscation of lands, banning of religious and community practices and other government efforts to assimilate Aboriginal nations have left Aboriginals with a cycle of pervasive risk that appears "on any number of indicators of risk status—from infant mortality, injury and disease rates, to life expectancy, school performance and drop-out rates, and almost any measure of health, economic or social disadvantage" (Lalonde, 2006, p. 59). Therefore, it is important to

remember there are generations of trauma influencing the lives of students participating in the CP.

Ritchie et al.'s (2010) study on the development of an effective "culturally relevant outdoor leadership training program" (p. 300) for an Ontarian Indigenous community connects to Lalonde's (2006) research on improving cultural resilience. Ritchie et al. (2010) used focus groups comprised of "Elders and mental health workers from the community" (p. 301). Although Ritchie et al.'s (2010) study did not measure resilience, the outdoor training program involved "Elders, cultural learning themes, using Ojibway (native language) terms" (p. 302); as a result, the outdoor training program may have increased cultural and participants' resilience. In Ritchie et al.'s (2010) study, the Elders and mental health personnel observed "that youth develop a sense of Aboriginal identity through stories, legends, and lessons from the past as well as growth opportunities through spiritual ceremonies and traditions, … learning the Ojibway language, and receiving teachings from Elders" (302). Perhaps, the CP has a better chance of improving students' resilience by incorporating as much Songhees and Esquimalt Nations' culture as possible to support students' First Nations identity.

Filbert and Flynn's (2010) study focused on determining whether or not "developmental and cultural assets would be associated with more resilient mental health and educational outcomes" (p. 562) for Ontario First Nations children and youth in care. Considering that 53% of BC children in care are First Nations (Ministry of Children and Family Development, 2009), Filbert and Flynn's (2010) study appears relevant to one of the CP's objectives (see Appendix A) which is to increase student resilience through a culturally relevant activity. Developmental assets include a person's characteristics, "self processes, or ecological supports that have been

consistently demonstrated to lessen risk and promote positive developmental outcomes (Scales, 1999; Scales, Benson, Leffert, & Blyth, 2000, as cited by Filbert and Flynn, 2010, p. 561). Cultural assets can be defined as communal resources which assist "ethnocultural groups to maintain their identities over time and experience more positive outcomes" (Filbert and Flynn, 2010, p. 561). Filbert and Flynn (2010) discovered that the children and youth with more developmental assets had "higher level of prosocial behavior, general self-esteem, and educational performance, and a lower level of behavioral difficulties" (p. 563). Additionally, youth "with more cultural assets (i.e., more opportunities to participate in First Nations culture) had significantly fewer behavioral difficulties" (Filbert & Flynn, 2010, p. 563). Given that the CP is a culturally relevant activity, it may have a positive impact on student behaviour.

Outdoor Adventure-Based Programs

Studies on the impact of outdoor adventure-based programs on at-risk youth have established that these types of programs can increase child resilience and its protective factors. For instance, Ungar et al. (2005) investigated two outdoor education programs, Winter Treasures and Choices Wilderness Program, which use wilderness experiences to help at-risk children and youth adapt to and cope with challenges. Ungar et al. (2005), stressed that strengthening relationships, teaching relationship building skills, and providing opportunities to self-reflect all enhance resilience. For an outdoor adventure program to benefit a participant's resilience, "there must be the right balance between the amount of risk and the level of competence the participant brings or can reasonably develop to meet the challenges of the experience" (Priest, 1999, as cited by Ungar et al. 2005, p. 324). Thus, students are more likely to benefit from the weekly Canoe Program if they bond to volunteers, learn teamwork skills, have an opportunity to reflect on their

outdoor learning, and experience success paddling the Voyageur canoes. Ungar et al. (2005) also argue that because outdoor adventure programs take place in the natural environment, they "offer unique health-related outcomes" (p. 332), such as "immersion and flow; rites of passage that address the maturity gap; and finding meaning and spirituality". According to Csikszentmihalyi and Kleiber (1991, as cited by Ungar et al., 2005, p. 332), immersion in an activity has to be intensive and of significant duration to have a measurable impact on the self. As students only paddle for one hour each week for 12 weeks (three times in the fall and nine times in the spring), engagement in the CP might not be frequent or long enough for students to "experience the difference between their new and old selves" (Ungar et al., 2005, p. 332). Ungar et al. (2005) list the goals for the Choice's Wilderness Program, such as "increase self-awareness and confidence….teach and practice teamwork" (p. 329). These goals are typical of programs for increasing resilience (Ungar, 2004, as cited by Ungar et al., 2005, p. 329). More importantly, these goals are similar to some of the CP's objectives (see Appendix A), such as improving students' teamwork skills and self-efficacy; thus, the CP is comparable to other programs designed to bolster resilience in children.

Morgan's (2010) study, *Get Up. Stand Up. Riding to resilience on a surfboard,* is the perhaps the most closely related to my research problem. Morgan analyzed a trial surfing program called Sunset Surfers for its impact on inner city, impoverished, eight to thirteen year olds in Sydney, Australia. His qualitative research demonstrated the surfing program improved the short-term "mood and behaviour" (Morgan, 2010, p. 62) of youth participants. Like the CP, which inspired this thesis, Sunset Surfers aims to increase resilience in mainly Aboriginal children by teaching them a challenging outdoor activity. Similar to Sunset Surfers, the CP

includes Indigenous mentors to validate the children's experiences. The positive effect of mentoring on a child's self-esteem is supported by Cooper, Estes, & Allen's (2004) study and Gilligan's (1999) case examples. For example, Cooper et al.'s (2004) review of research findings emphasized the use of mentors in outdoor education to help build participants' resilience. Morgan's (2010) study and Cooper et al.'s (2004) review underscored the importance of using a multi-faceted approach to increasing resilience in vulnerable children to ensure longer gains in positive personal attributes. Likewise, my research focuses on a canoe program that is one component of a whole school and community strategy to improve children's resilience.

Green et al. (2000) examined the effect a ropes course had on impoverished at-risk minority youth. To cultivate resilience, Green et al. argued that an adventure-based outdoor education program must include protective factors to decrease risk; these factors include "neighborhood resources, interested adults…sense of acceptance, controls against deviant behaviour, models for conventional behaviour" (Jessor, 1992, 1993, 1995, as cited in Green et al., 2000, p. 78). These protective factors are supported by the CP and the adult volunteers, teachers, and paddling mentors. Green et al. (2000) also emphasized that programs must contain a processing component to allow participants "to identify accomplishments and difficulties that they experience during the adventure-based activity" (p. 80). The importance of including reflection as part of the learning process in outdoor adventure programs is supported by other studies (e.g. Russell, 2000; Ungar et al., 2005). Importantly, Green et al. (2000) discovered the ropes course improved five protective factors of resilience for the treatment group, including: "'interested and caring adults'.… 'sense of acceptance', 'value on achievement' and 'ability to work-out conflicts'…. [and] 'neighborhood resources'" (p. 90).

O'Shea's (2008) dissertation on the possible impacts of a week-long outdoor adventure program (OAP) on adolescent girl's self-efficacy and self-esteem was seen as pertinent since the present study partly investigates whether or not students' sense of self-efficacy or self-esteem are influenced by the CP. O'Shea (2008, p. 11) states mastery experiences are key to informing beliefs of self-efficacy; Bandura (1977) would concur, as he writes "mastery of challenging tasks conveys salient evidence of enhanced competence" (p. 201). Because the elementary school students had the opportunity to master paddling skills, first in dragon boats over three weeks and then Voyageur canoes over nine weeks, there may be a chance of noticing a difference in self-efficacy and of self-esteem as reported in interviews.

Even though O'Shea' (2008) study did not find any measurable differences in protective factors in participants, there are numerous studies which demonstrate outdoor adventure programs can influence the protective factors of resilience. For example, Hattie et al. (1997) conducted a literature review and meta-analysis of 96 studies on adventure programs to determine the outcomes affected by adventure education, "investigate the differences between particular programs, and discuss the major educational processes that lead to the outcomes" (p. 44). Although the CP canoeing sessions do not last as long as trips in Outward Bound programs, the CP does have elements of adventure education in that it involves "doing physically active things away from the person's [child's] normal environment" (p. 44). In addition, the CP provides a group experience and an opportunity to master a challenging activity (Hattie et al., 1997, p. 45). Paddling in sync for extended periods of time, changing seats without rocking the canoe, and learning the proper paddle strokes present several challenges and degrees of difficulty. To organize the forty main impacts of adventure education, Hattie et al. (1997)

devised six categories: “leadership, self-concept, academic, personality, interpersonal, and adventuresomeness” (p. 47). In their meta-analysis, they found evidence that adventure programs do have significant immediate and longer-term impacts. For example, the most significant impacts of “adventure programs in the self-concept domain, were for independence, confidence, self-efficacy, and self-understandings, and they were further enhanced during follow-up periods” (Hattie et al., 1997, p. 67). The CP aims to promote students’ self-understanding and also their knowledge of their cultural, spiritual, and ecological connections to their local environment. Moreover, Hattie et al. (1997) discovered adventure programs impacted self-esteem more than other instructional programs. Adventure programs were also found to help participants learn better self-regulation (Hattie et al., 1997, p. 70); this is relevant to the present study as the elementary school students often have difficulty with self-regulation (School Principal, personal communication, March 26, 2013). It is crucial to note that not every adventure program is effective and some programs only appear to impact certain outcomes (Hattie et al., 1997, p. 70). The feedback that adventure program participants receive from the environment, group and instructors “…is the most powerful single moderator that improves affective and achievement outcomes” (Hattie et al., 1997, p. 75). Hattie et al. (1997) conclude their meta-analysis by proposing there are four ways that adventure programs impact their participants. First of all, they “… emphasize an immediate quality of experience, as well as aiming to have these immediate experiences impact later experience” (p. 74). Next, “adventure programs set difficult and specific goals and structure tasks so that participants can attain these goals” (Hattie et al., 1997, p. 74). In addition, adventure education augments the quantity and “quality of feedback that is vital to the experiential learning process” (Hattie et al., 1997, p. 75).

This coincides with the belief that experiential education works because people learn most efficaciously when they are immersed in experience (Priest & Gass, 1997; as cited in Garst, Scheider & Baker., 2001, p. 41). Finally, like Morgan (2010), Hattie et al. (1997, p. 75) hypothesize that adventure programs provide opportunities for participants to reflect on their dysfunctional coping skills and behaviours and substitute them with more adaptive positive ones.

Similar to Hattie et al. (1997), Cason and Gillis (1994) conducted a meta-analysis of adventure programs. Cason and Gillis (1994) sought to locate experimental studies of adventure programs, calculate the global outcomes for each program and make comparisons, and correlate outcomes to "program characteristics (length, participant population, and study methodology)" (p. 40). In Cason and Gillis' (1994) meta-analysis of 43 studies of adventure programs, youth participants experienced "a 12.2% improvement" (p. 46) in outcome measures, such as self-concept and "behavioural assessment by others" (p. 44). In addition, adolescent participants of adventure programs "are better off than 62% who do not participate" (p. 46). Greater effect sizes were noted for "longer programs and younger participants" (p. 46). However, Cason and Gillis (1994) underscore that their meta-analysis cannot demonstrate the full effects of adventure programming for several reasons. Comparable to Lubans, Plotnikoff, and Lubans, (2012), Cason and Gillis (1994), were concerned with the lack of "randomly assigned control groups" (p. 45) in most of the studies they reviewed. In addition, Cason and Gillis (1994) emphasize that their meta-analysis used experimental studies mostly obtained from dissertations or unpublished investigations, which generally have lower effect sizes than published studies. Moreover, there was a wide range of effect sizes and a substantial "variation in the findings" (p. 46). Plus, Cason and Gillis' (1994) meta-analysis was also limited by the deficiency of qualitative studies and

unevaluated variables such as “leadership training and leadership styles” (p.46), and a lack of detailed program description, which makes it harder for others to replicate and truly understand a study’s results.

Beightol, Jevertson, Gray, Carter, & Gass (2009) sought to evaluate the impacts of “an experiential, adventure-based ‘Anti-Bullying Initiative’ on levels of resilience” (p. 420). The program employed a combination of in-school activities and sessions at an outdoor ropes course (Beightol et al., 2009, p. 421). In their mixed-methods, quasi-experimental design, Beightol et al. (2009, p. 420) assessed the initiative’s impact on the resilience of Grade 5 students and analyzed gender differences. Beightol et al. (2009) noted that between pre-program and four months post-program, the treatment group female students experienced a substantial rise in self-efficacy and greater “levels of goals and aspiration” (p. 421), while male students only had increased self-efficacy.2009, p. 421). Beightol et al. (2009) also found that “providing increased levels of responsibility enabled the students to contribute to the external factors available in both classroom and peer settings” (p. 422). With respect to the CP, allowing the students to have more responsibility as they become competent paddlers, such as permitting them to be the bow paddler in a Voyageur canoe or teaching them how to paddle tandem canoes, may also promote internal protective factors, such as self-regulation, self-esteem, and self-efficacy.

Other studies of outdoor adventure programs provide evidence that these programs enhance the protective factors/resources of resilience. For example, in Caulkins’ (2010) case study of a school-based outdoor adventure program, high school participants reported wilderness “trips helped them overcome emotional/physical problems and taught lessons on building healthy relationships” (p. 272). In another study, Garst et al. (2001, p. 42) aimed to determine

the impact of an outdoor adventure program on the self-perception of adolescents at the end of the adventure trip and four months later, and if effects were sustained in an individual's home environment. The authors found "social acceptance and behavioural conduct increased immediately after the outdoor adventure trip, and that some behavioural conduct impacts may have remained four months after the trip" (Garst et al., 2001, p. 46). Outdoor adventure programs have qualities, such as escape, novelty, and challenge, which can combine in a distinctive way to cause positive growth; this may not occur in regular recreational programs which have different characteristics (Garst et al., 2001, p. 47). Schrader's (2012) dissertation on how at-risk youth experience resilience in outdoor adventure programs (OAPs) provides insight on how OAPs can build resilience. In Schrader's (2102) interviews, the adolescents "clarified their experiences by discussing the interactive effects of the circumstances that led to their increased resiliency" (p.120). The OAP in the study was the SOS Outreach program (Schrader, 2012). In every day's group snowboard outing and discussions, the program incorporated a value, from its "Core Values of "courage, discipline, integrity, wisdom and compassion" (p. 123). Each of Schrader's (2012) participants had "an average of four to eight years of this repetition and generalization" (p. 123). Consequently, the participants described how the experience of each of the core values and the program's community service component changed their behaviour and thinking both in and outside the program; in other words, the SOS Outreach program influenced their behaviour long-term (Schrader, 2012). Using grounded theory as a methodological approach to interpret her interview data, Schrader (2012) constructed a theory that "at-risk adolescents utilize opportunity, engagement and longevity in their process of building resiliency through outdoor adventure programs" (p. 112). The adolescents' process of

developing resilience was supported by themes of "personal enhancement, character development, mentoring, accountability and helping others" (p. 120). Like the modern view of resilience as the result of a dynamic interplay of biological and external systems (Sapienza & Masten, 2011), Schrader (2012) determined that these themes "occurred simultaneously and interacted upon each other and the adolescent to produce the resilient outcomes" (pp. 120-121). In addition, the at-risk youth greatly valued opportunities to assist others in the OAP; these opportunities "impacted the at-risk adolescent's ability to become resilient" (Schrader, 2012, p. 125).

Mann's (2007) mixed-methods study also validated the positive impacts of OAP's. Mann (2007) investigated the effects of an OAP called Project Challenge, on the psychosocial development and resilience of female at-risk youth. Regarding positive internal and external factors of resilience, "Project Challenge had a strong effect on self-confidence; a stronger than-moderate effect on self-esteem, mattering, and identity; and a moderate effect on perceived social support" (Mann, 2007, p. 13-14). Just as the Project Challenge "team members attempt to build authentic, positive, and supportive relationships as a context for increasing girls' self-esteem" (Mann, 2007, p. 101), CP volunteers extend caring relationships, which may help increase students' self-esteem.

Although Neill & Dias (2001) researched young adults' instead of youth's resilience, their study demonstrates a multi-week adventure program can increase participant's resilience. In their study, Neill & Dias (2001) set out to determine if outdoor adventure programs increased psychological resilience and if social support was an essential factor for improving resilience. According to Blum (1998, as cited by Neill & Dias, 2001, p. 36), social support is key forecaster

of a person's psychological resilience. Every participant in Neill & Dias' (2001) study experienced substantial increases in resilience; in fact, "the amount of change was three times larger than the average outcome in adventure education research (Hattie et al., 1997) and significantly larger than for the control group" (Neill & Dias, 2001, p. 39). The participants, who did not finish the adventure program, had reduced pre-program resilience scores; thus, Neill and Dias (2001, pp. 39-40) suggest that challenge in a program should be adjusted for different individuals to avoid excluding certain participants. Another important result of Neill and Dias' (2001) study is that "perceived social support was positively related to the growth in resilience during the Outward Bound program. More specifically, the perceived support from the least supportive group member was the best predictor of growth in psychological resilience" (Neill & Dias, 2001, p. 40). Since unsupportive group members can impede the psychological growth of other members, it is imperative program leaders be watchful for negative participants (Neill & Dias, 2001, p. 40). This correlates with Mitchell and McCall's (2007) emphasis on the importance of creating supportive peer groups in outdoor adventure programs. In the present research, the teachers, the volunteers, the high school paddling mentors and the researcher have tried to reinforce positive peer support amongst the elementary students in the CP. Neill and Dias' (2001) conclude that outdoor adventure programs can improve a participant's resilience, especially in the presence of peer and program leader support; however, they suggest that further research is needed to determine if this increase in resilience actually transfers to a person's life.

Sheard and Golby (2006) studied the impacts of an outdoor adventure education (OAE) degree program on college students' psychological growth. Unlike Russell (2000), Sheard and Golby (2006) did not find significant differences in psychological growth between control and

experimental groups or between male and female participants. However, second year OAE program students had significantly higher hardiness than the first year cohort; the higher hardiness may have been due to "the OAE experiences gained in the first year of their course" (Sheard & Golby, 2006, p. 203). Sheard and Golby (2006, p. 203) hypothesize that they may have measured the wrong psychological constructs, the OAE program activities were not suitable for impacting psychological growth, or the OAE program was too short for any significant differences to occur. Perhaps their participants already had pretty good psychological resources compared to people with lesser inner and outer protective resources, such as at-risk youth, so there was less potential for significant growth.

Hurtes et al.'s (2000) study of the impacts of ten youth recreation programs carried out over five sites also provides evidence that outdoor adventure recreation can enhance protective factors associated with resilience. Each of the programs they studied used Benefits-Based Programming (BBP) to foster "resiliency skills and attitudes" (Hurtes et al., 2000, p. 34). BBP creates programs that are designed to positively impact "…issues or concerns that are of importance to a particular community" (Hurtes et al., 2000, p. 36). While the "Teen Outdoor Adventure Recreation Program" (Hurtes et al., 2000, p. 37) was the only adventure-based recreation program, amongst the programs the authors evaluated, they did find the program's treatment group "had significantly higher mean scores on all ten protective factors relative to the comparison group" (p. 42). These protective factors included: "knowledge of neighbourhood resources, accepted and liked by others and family, positive attitude towards the future, ability to work with others, and perceived competence" (Hurtes et al., 2000, p. 43). Hurtes et al. (2000) also found that consistent staffing and regular participation by participants translates into

stronger relationships between staff and participants. As previously mentioned, caring relationships with adults are considered an external protective resource for children and youth.

Adventure and Wilderness Therapy

Other studies of adventure and wilderness therapy programs provide evidence of their benefits to resilience or the protective factors of resilience. In his dissertation, Gee (2009) studied the impact of outdoor peak experiences and wilderness therapy on youth attending a "residential attendance program for male juvenile offenders" (p. 14). The remembrances of the youth about their experiences in the program were analyzed in relation to what experienced wilderness program counsellors have reported (Gee, 2009, p. 2). When children interact with and experience the beauty of nature, they can have peak experiences (Hoffman, 1998, as cited by Gee, 2009, p. 25). People describe peak experiences as a "sense of freedom; sense of power; energy and vitality; contact with a better self; contact with a higher power" (Lester, 2004, as cited by Gee, 2009, p. 25). The youth in Gee's (2009) study reported wilderness therapy helped them have better self-regulation of emotions, mental lucidity, or affirmative feelings promoting mental health. Some counsellors also observed "a marked improvement in the ability of youth to control negative emotions" (Gee, 2009, p. 92). Wilderness therapy may effect changes in the psyche since the psyche developed to work best in small groups, like clans (Clark et al., 2004, as cited by Gee, 2009, p. 31). While the CP is not a wilderness therapy program, it has three similar elements: small groups, a natural setting, and a potential healing effect from interacting with nature. The CP's Voyageur canoes fit 8 students and 2 adults and the students have the opportunity to connect with a beautiful natural waterway and its indigenous flora and fauna. Importantly, Gee (2009) states that "successful risk taking, physical activity and healthy

competition" (p. 33) are crucial for increasing self-esteem. The CP allowed students to take part in a slightly risky physical activity and to sometimes race each other; however, it was unclear if this would translate to greater self-esteem.

Russell (2000) analyzed "four client case studies in four wilderness therapy programs" (p.170). The adolescent clients were mandated to take the program because of alcohol or drug abuse. Russell (2000) found caring wilderness program staff serves as an external protective factor and wilderness provides a good setting for people to reflect and get exercise. While Russell (2000, p. 175) discovered wilderness therapy does not benefit participants equally, common outcomes in the four clients were improved relationships with parents, disuse of alcohol and drugs, and an aspiration to do better in academics.

Walsh (2009) used an experimental methodology to assess the impacts of a wilderness program on the "self-efficacy, resilience and hope of youthful offenders" (p. 7). The Wilderness Endeavors Program was designed for "first time youthful offenders, or as an intervention to prevent youth from entering the juvenile justice system" (Walsh, 2009, p. 2). While no substantial change in overall resilience occurred in participants, "the Wilderness Endeavors Program had a significant positive effect on participant's self-efficacy and hope for the future" (Walsh, 2009, p. 117). In addition, participants, who did not reengage in criminal behaviour, had an optimistic future outlook. A positive vision for one's future promotes resilience. As Walsh (2009) states, "individuals with high levels of hope for the future are more likely to be self-efficacious, and may have a stronger ability to make positive adaptations to adversity" (p. 124).

The Montcalm Outdoor Challenge Program is another wilderness therapy program which aims to increase resilience in youth (Mitchell & McCall's, 2007). Mitchell and McCall's (2007)

article on the "Montcalm Outdoor Challenge Program" (p.22) highlighted the importance of mitigating any negative peer interactions to prevent them from diminishing any possible benefits of the CP. Children are more likely to benefit from a program that gets them "`hooked on helping`" one another" (Mitchell & McCall, 2007, p. 23). This hypothesis is similar to Schrader's (2012) grounded theory study which posited that youth partly increased their resilience by helping others.

Experiential Education

Instead of directly measuring resilience and its protective factors, some studies investigated the psychological effects of adventure and experiential education. Kerr (2009) investigated which parts of outdoor experiential education and arts programs low socio-economic status "inner city youth perceived to have the greatest impact on their personal and social development" (p. 13). Participants in the outdoor education program declared they "gained confidence and emotional competence … developed a sense of empathy and respect for peers and adults, and … sense of agency" (p.90). Participants also reported their boost in confidence and emotional capability was due to "opportunities to build experience … adult models for behaviour and support from staff that care … strong peer relationships, and … overcoming challenges" (p. 86). Consequently, Kerr's (2009) results demonstrate experiential education enhances certain protective factors of resilience. Because the CP aims to help build resilience in the elementary school students as a preventative measure, Kerr's (2009) study is relevant because it concentrated on the importance of "preventative programs that help adolescents prepare for adulthood rather than on the treatment of problem behaviour among at-risk youth" (p. 142).

Another study of the effects of experiential education is Long's (2001) interpretative study, which explored the impact of a lengthy wilderness camp on at-risk teenage girls "with emotional and behavior disorders" (p. 100). Long (2001) investigated group members' thoughts related to experiential education and how this type of education influenced their lives. One theme which emerged from Long's (2001) interviews with participants near the beginning of their residency was an "increased sense of self-esteem" (p. 103). Attitudes derived from, and meaning of the experiential education activities, changed from the beginning, middle and end of the girls' participation. For example, by the end of the program, the girls realized that the ropes courses were "an important part of their treatment" (Long, 2001, p. 106).

Coholic, Fraser, Robinson, and Lougheed's (2012) article on the benefits of experiential learning to resilience was illuminating. Coholic et al. (2012, p. 345) examined and compared two programs which used either experiential techniques or the arts to increase the resilience of children in care. The experiential group program Coholic et al. (2012) assessed, aims to help "children in care develop resilience in the form of social, emotional, and academic competencies" (p. 347). In the arts-based program, children learned "how to pay attention and listen; use their imaginations; identify and explore their feelings, thoughts, and behaviors; practice mindfulness-based exercises and recognize and develop their strengths" (Coholic et al., 2012, p. 350). The "experience of fun" (Coholic et al., 2012, p. 354) in the arts-based program enabled certain children to cultivate "emotional regulation, which enabled more effective coping with a variety of challenges and that some improved their self-awareness and felt better about themselves" (Coholic, 2010, 2011; Coholic, Lougheed, & LeBreton, 2009, as cited by Coholic et al., 2012, p. 354). As a result of the experiential activity program, participants stated they were

more proficient at listening and learning and had increased confidence with mental work (Coholic et al., 2012, p. 354). In the experiential activity program, participants also thought the physical activities and "free-time components" (Coholic et al., 2012, p. 354) were the most enjoyable. Consequently, Coholic et al. (2012) propose that "fun, creative, and experiential methods can engage children with high needs … and … facilitate the learning of basic skills that they can build upon" (p. 354). A key component of successful experiential programs, whether they are arts-based, outdoor adventure-based or environmental education, is that they are enjoyable to participants. While, Coholic et al.'s (2012) study is of an arts-based program, it relates to the current study as the CP is a fun experiential program and the student participants have difficulties with emotional regulation (School Vice-Principal, personal communication, August 8, 2012) and are 100% vulnerable (Greater Victoria School District 61, 2012).

Psychosocial Sport, Play, Physical Activity and Leisure Programs

Another area of research of child and youth resilience stems from children and youth who experience traumatic experiences. Henley, Schweizer, de Gara, and Vetter (2007) discuss the benefits of using psychosocial sport and play programs to enhance youth resilience. These programs intend "to restore children's social well-being and psychological health within their community through group-focused practices, tailored to fit the contexts of local culture, traditions, needs and resources" (Boyden & Mann, 2005; Duncan & Arntson, 2004 ; Eisenbruch, 2004; Grotberg, 2001; Henley, 2007, as cited by Henley et al, 2007, p. 52). A key feature of psychosocial sports and play programs is that they provide opportunities for children to acquire "new problem-solving skills in managing their own emotions and behaviours, as well as to have

healthy peer relationships" (Henley et al, 2007, p. 54). Although Henley et al. (2007), provide no direct evidence, they suggest these programs boost "children's resilience processes" (p. 55).

Similar to Henley et al.'s (2007) discussion of psychosocial sports and play programs, Vetter et al.'s (2010) study also focused on a program to enhance resilience in traumatized children and youth. Vetter et al. (2010) explored the effects of program, which "combined recreation, sport, and psychosocial rehabilitation activities" (p. 1) on children and youth survivors of "the Beslan school siege" (p. 1). Vetter et al. (2010) aimed to determine if the program helped youth have "enhanced resilience processes and … more resilient life trajectories" (p. 2). Promoting resilience in traumatized people can increase various protective factors, such as problem solving skills (Connor & Davidson, 2003, as cited by Vetter et al., 2010, p. 1). In turn, youth with better problem solving skills are more likely to have better long-term resilience and navigate future difficulties (Boyden & Mann, 2005; Fok & Wong, 2005; Grotberg, 2001, Henley et al., 2007; as cited by Vetter et al., 2010, p. 10). In their study, Vetter et al. (2010) used the "Connor-Davidson Resilience Scale (CD-RISC)" (Connor & Davidson, 2003, as cited by Vetter et al., 2010, p. 3). Vetter et al. (2010) found that the average participant experienced "significant increases in resilience from the baseline value, at both the end of the one-week intervention and at 6-month follow-up" (p. 6). In addition, although participants, who were previous hostages, entered the program with "lower resilience scores than non-hostages" (p. 8), they had larger increases "in resilience than non-hostages six months after the program's completion" (p. 8). As Vetter et al. (2010) did not "identify mechanisms for resilience enhancement" (p. 9), the authors conclude it is difficult to determine which parts of the program enhanced the survivor's resilience and to what degree. Yet, Vetter et al.'s (2010) study is one of

several this researcher encountered which displays evidence that increases in resilience due to a specific program carried over into a person's life.

Lubans et al. (2012) examined 15 physical activity programs with respect to their capacity to "improve social and emotional well-being in at-risk youth (p. 9). Lubans et al. (2012) studied three types of programs: "outdoor adventure, sport and skill-based and physical fitness programmes" (p. 2). Five of seven outdoor adventure programs demonstrated "significant improvements in self-worth (Pommier & Witt, 1995), self-concept (Wu & Hsieh, 2006), resilience (Bloemhoff, 2006; Green et al., 2000), perceptions of alienation and self-control (Cross, 2002)" (Lubans et al., 2012, p. 4). Lubans et al. (2012) suggest that these results may be attributed to "calculated risk taking, the mastery of challenging tasks and positive social support from instructors and peers" (p. 9). Of the six sport and skill based programs, one study described enhancements in self-esteem, perhaps due to support of mentors, parents, and teachers (Lubans et al., 2012, p. 10). Furthermore, two studies displayed an affirmative impact "on physical self-perception in at-risk preschool children" (Goodway & Rudisill, 1996; Robinson et al., 2009, as cited by Lubans et al., 2012, p. 10). As Lubans et al. (2012) hypothesize, programs designed to improve motor skills, might increase "self-esteem in the physical domain" (p. 11) for young vulnerable children. Only one of the physical fitness program studies, which Lubans et al. (2012) examined, revealed a positive influence on self-concept in at-risk youth. Lubans et al. (2012) question the validity of the positive results reported by nine of the 15 studies as all studies had an elevated "risk of bias" (p. 11) and not many employed "randomised controlled trials" (p. 11). Although Lubans et al. (2012) declare that there is no evidence that physical activity programs result in long-term "improvements in social and emotional well-being" (p. 12), this

researcher has found studies which show long-term benefits from programs that incorporate physical activity, such as outdoor adventure therapy, (Beightol et al., 2009), outdoor adventure programs (Hattie et al., 1997; Schrader, 2012), wilderness therapy (Russell, 2000), and psychosocial sport and rehabilitation programs (Vetter et al., 2010).

Madsen, Hicks, and Thompson's (2011) study of the impacts of Playworks provided less convincing results of the impact of physical activity program on the resilience of elementary school students. Playworks is a "youth development program" (Madsen et al., 2011, p. 463), which uses "sports … games … play … [and] youth leadership" (p. 463) to "to decrease conflicts, increase positive relationships among students, and create better focus in class" (p. 463). According to Madsen et al. (2011), physical activity can be used to enhance protective factors of resilience. For example, physical activity has been shown to increase "emotional well-being" (Sagatun, Sogaard, Bjertness, Selmer, & Heyerdahl, 2007; Wiles, Jones, Haase, Lawlor, Macfarlane, & Lewis, 2008, as cited by Madsen et al., 2011, p. 463). Although Madsen et al., (2011) also found a general decline in protective factors for Grade 5 students over consecutive years for both experimental and control groups, students, who had more experience with the Playworks program, i.e., over consecutive years, had "significantly higher levels of physical activity, problem-solving skills, meaningful participation in school, and goals and aspirations" (p. 468). Subsequently, Madsen et al. (2011) conclude that programs, which encourage "positive youth development through physical activity appear to ameliorate declines in protective factors" (p. 469). In other words, even though environmental factors can negatively affect a child's resilience, youth development programs, which include physical activity, can act as a buffer by improving certain protective factors.

Finally, Gilligan (1999) presented case examples of programs which used leisure activities and mentorship to increase resilience of children in care. Gilligan argues children can build their self-esteem when they excel at activities that they choose "and significant others value" (p. 188). Based on case examples, Gilligan contends children can make increases in resilience from participating in cultural activities, caring for animals, and playing sports. Furthermore, Gilligan asserts mentors encourage children's "talents and interests … which help to build confidence, self-esteem and social skills" (p.191). Gilligan's (1999) case examples would suggest that the cultural activity of canoeing and the CP's mentorship have potential to benefit the resilience of the First Nations students at the elementary school.

Benefits of Environmental Education

Since the CP is an outdoor environmental adventure program designed to improve students' resilience and connect students to their natural environment, it is also important to conduct a literature review of the benefits of environmental education (EE) programs. There is research which demonstrates the rich benefits of environmental education (EE). For example, Chawla and Escalante (2007) reviewed and summarized studies of the benefits of education programs which use "environment as an integrating context (EIC) across disciplines" (p. 1). EIC educational programs are represented "by exploration of the local community and natural surroundings, hands on experiences of environmental discovery and problem-solving, interdisciplinary curricula, team teaching, and learning that accommodates students' individual skills and abilities" (p.1). Once the CP and school curricula have more connections to EE, the CP will be an EIC program because the CP already gives students regular opportunities to explore, interact with, and learn about their local environment. Plus paddling is a skill that all

students can learn, provided extra support is given to those with learning disabilities. Benefits of EIC programs include improved academic achievement and enhanced ability to think critically (Chawla & Escalante, 2007). EIC programs also increase student engagement in their learning and their desire to succeed (Chawla & Escalante, 2007). Academic achievement and involvement in learning are internal protective factors (Alvord & Grados, 2005). Moreover, EIC programs can help students feel attached to their local environment and motivate them to take care of it (Duffin et al., 2004, as cited by Chawla & Escalante, 2007, p. 2). Even though Alvord and Grados (2005) do not include attachment to one's environment in their protective factor category of "connections and attachments" (p. 240), this form of attachment could be considered a protective factor of resilience.

In a report completed for the State of Washington, Wheeler, Thumlert, Glaser, Schoelhamer, and Bartosh (2007) reviewed 76 studies of how EE influenced "academic achievement, career development, graduation requirements, self-esteem, engagement and motivation, [and/or] civic responsibility and service-learning" (p. i). With respect to the protective factor of academic achievement, 18 out of 20 studies revealed "a correlation between participation in environmental education and improved academic achievement" (p. ii). Moreover, Wheeler et al.'s (2007) review found "strong evidence that environmental education increases math and science achievement; some evidence that it increases social studies achievement; and mixed evidence that it increases language arts achievement" (p. ii). While 16 studies supplied "some evidence that environmental education has a positive impact on students' self-esteem, motivation and engagement" (p. iii), this effect could also be the result of "the often experiential nature of environmental education programs examined, which frequently involved

outdoor/adventure activities" (p. iii). The current literature review displays evidence that outdoor experiential and adventure-based programs benefit self-esteem (Gee, 2009; Hattie et al., 1997; Mann, 2007).

Outdoor adventure activities and environmental education share qualities, such as challenge, natural environments, escape, and novelty, which can help improve students' protective factors, such as self-esteem and connection to their natural environment. For example, Garst et al. (2001) discovered, outdoor adventure programs provide "novelty and escape" (p. 47) which promotes adolescents' growth in self-perception. Similarly, in a study of the impacts of an urban environmental education program on Grade 5 students, Milton, Cleveland, and Bennett-Gates (1995) found the escape and natural settings offered by outdoor education can allow some students, who have learning difficulties in the classroom, to discover new abilities and curiosities when they are away from classroom pressures and expectations.

In other study, Mannion, Adey, and Lynch (2010) investigated two school-community projects involving "intergenerational place-based education" (p. 1). Intergenerational place-based education enhances relations between generations and allows "values and ethical practices" (Mannion et al., 2010, p. 3) to be given to the next generation and provides a context for new values to germinate. Bonds between generations are a protective factor (Alvord & Grados, 2005; Werner; 2005). In the CP, students canoe on their local waterway, Elders give lessons to students, VCKC adult volunteers instruct students, and parents sometimes paddle with students; therefore, the CP could be seen as intergenerational place-based education. Mannion et al. (2010) also found intergenerational place-based education "improved appreciation of place" (p. 3). This type of EE can also encourage the development of "skills, knowledge and

understanding" (p. 3), and can make "learning more engaging and memorable, more tangible, sensory in nature, and materially focused" (p. 3). Development and mastery of skills increases self-efficacy (Bandura, 1997), which is an important protective factor. Furthermore, intergenerational place-based education can promote "new ways of understanding and changing how human culture and nature relate" (p.3). Because the CP connects students to their local environment and brings together Elders from First Nations and veteran paddlers from the VCKC, there is an opportunity for wisdom to be shared with students from both cultures.

Indigenous Environmental Education

Simpson's (2002) manuscript on Indigenous environmental education for post-secondary programs informed me of how to better design the CP to meet First Nations students' needs. Indigenous EE incorporates the interconnections between Indigenous culture, language, and spirituality, and the land. According to Simpson (2002), there are critical components to creating effective environmental education programs for Indigenous youth. Some of these are relevant for elementary school environmental education programs. First, Elders, who are the keepers of Indigenous wisdom, must be "at the fore of program and curriculum development as well as course instruction" (p. 17). Second, Indigenous EE should be based on "Indigenous education philosophies" (p. 17). While the CP allows students to learn and apply hands-on skills, it could more fully include "learning from emotional, intellectual, physical, and spiritual realms" (p. 18). Simpson (2002) also states Indigenous EE should employ "Indigenous ways of teaching and learning" (p.18) and Aboriginal languages. Furthermore, Indigenous EE should connect students "to the land in an emotional, spiritual, physical, and intellectual way" (p.19).

While Aikenhead and Michell's (2011) book is a guide for how science teachers should incorporate Indigenous knowledge in science curriculum, it shows how Indigenous ways of knowing are a natural fit with EE and Indigenous EE programs. Aikenhead and Michell (2011) review the similarities and differences between science as taught from a European perspective and "Indigenous ways of knowing nature" (p. 4). Indigenous knowledge can also be expressed as "Indigenous ways of living in nature (IWLN)" (p. 70). Similar to Simpson's (2002) description of effective Indigenous EE, IWLN emphasize experiential learning and are also "place-based" (Aikenhead & Michell, 2011, p. 70). In addition, IWLN are experienced "in the context of multiple relationships with nature and people" (p. 70); thus, IWLN support EE as taught from systems perspective. Furthermore, IWLN occur "in the pursuit of wisdom-in-action for the purposes of survival" (p. 70). Thus , it seems that IWLN have inspired place-based or ecological education, which "recaptures the ancient idea of 'listening to the land' and living and learning in harmony with the earth and with each other (Woodhouse and Knapp, 2000, p. 6).

Summary

As found in the literature, culture-focused, outdoor adventure-based, wilderness therapy, experiential, recreational, and environmental education programs can benefit a person's resilience and/or its protective factors. Contact with nature is also an important protective factor which buffers stress and promotes mental and physical health. While there seems to be few quantitative studies which show that increases in resilience, or the protective factors of resilience, persist over the long-term, qualitative research provides more evidence of this. Common themes across the studies reviewed demonstrate that effective programs, which aim to increase resilience in children, youth and young adults share certain characteristics. For

example, they provide caring supportive staff and mentoring, match the amount of challenge to the participants' skill and comfort levels, promote positive relationships among peers, involve the community, and increase participants' problem-solving skills and mastery. Although there are different models of resilience, an indigenous model, such as Gray Smith' (2012) is the most appropriate framework for this study. An outdoor environmental adventure program, such as the CP, is more likely to succeed in increasing student's resilience by incorporating students' indigenous culture and context. The CP is also more likely to connect students to their natural environment and culture by including the components of Indigenous EE and Indigenous ways of living in nature.

Chapter 3: Research Methodology

Research Design and Rationale

To investigate the Grade 5 students' experience of the Canoe Program (CP), the benefits of the CP, and how these benefits related to the protective factors of resilience, I chose a qualitative research design. Because I aimed to understand what the shared experience of the CP meant for students and those in close contact with the students, a phenomenological approach was appropriate (Creswell, 2007; Leedy & Ormrod, 2013). Richards and Morse's (2007) description of phenomenology also helped inform my choice of methodology. According to Richards and Morse (2007), a phenomenological approach tries to understand human behaviour in terms of "relationships to things, people, events, and situations" (p. 49). Since my participants are First Nations students taking part in a culturally relevant activity, a phenomenological approach would assist me in studying their "lived experience" (Richards & Morse, 2007, p. 49) and how it related to their resilience. From a phenomenological perspective, people and their experiences are inseparable from the world they live in (Richards & Morse, 2007, p. 49). In this study I utilized both descriptive and interpretive phenomenology. Interpretive phenomenology appealed to me because "understanding and interpretation are intertwined, and interpretation is an evolving process" (Richards & Morse, 2007, p. 49); I knew my understanding of the impacts of the CP would develop over time as my research progressed. In addition, interpretative phenomenology is aligned with the First Nations' view that knowledge is something they have a relationship to; "an Indigenous knower is intimately and personally interconnected with what it is they know" (Aikenhead & Michell, 2011, p. 68). Similarly, Van Manen (2010) states "a good phenomenological description is collected by lived experience and recollects lived experience –

is validated by lived experience and it validates lived experience." (p. 27). Since my study partly involves interpreting First Nations students' lived experience, it is logical to integrate a phenomenological approach connected with their cultural way of thinking.

Flood (2010) and Jones (2004) enlightened my views of phenomenology. Flood (2010) stated phenomenology is a process of "revealing meaning rather than on arguing a point or developing abstract theory" (p. 7); this fits with my desire to find out what the CP means for students. A researcher's goal must be to search for a phenomenon's essence by examining people's conscious experiences to determine how they give meaning to the phenomenon (Sadala & Adorno, 2002, as cited in Flood, 2010, p. 8). Flood's (2010) elaboration of the two main phenomenological approaches, i.e., "descriptive (eidetic) and interpretive (hermeneutic)" (p. 8) further enabled me to understand that both would assist me in describing and interpreting students' experiences of the CP and reflecting how their experiences and the CP's benefits related to students' resilience.

Jones' (2004) phenomenological exploration of how First Nations youth heal from suicide attempts increased my knowledge of how to conduct interviews, and analyze and validate the data. According to Jones (2004), phenomenological interviews were a good way to collect data from First Nations children and parents as this research tool is "similar to the storytelling tradition of First Nations culture" (pp. 46-47). As with Jones (2004, p. 50), I kept my interview questions mostly open-ended to avoid mixing my own expectations with the participants' experience of the phenomenon, and adapted or changed the questions as the interviewee described his or her experience. Moreover, I persisted in being open minded towards "the

unexpected and new elements of the descriptions" (Jones, 2004, p.50). Similar to Jones (2004, p. 50), I used probing questions to clarify interview responses.

Because I knew I would canoe with the Grade 5 students during the CP, I also decided to keep a journal of field observations for the nine weekly canoe trips. According to Patton (2002), field observations offer several benefits for qualitative research. My field notes allowed me to more fully understand the context of the CP which the students were experiencing (Patton, 2002). The field observations also allowed me to be "open, discovery-oriented, and inductive" (Patton, 2002, p. 262). Since students were engrossed with each other and the experience of the CP, my field observations helped me to discern aspects of their experience that they may not have been conscious of, or did not mention in their interview because it made them feel uncomfortable (Patton, 2002). Furthermore, my field observations allowed me to "draw on personal knowledge during the formal interpretation stage of analysis" (Patton, 2002, p. 262) and informed me of my research bias during my data analysis

Data Collection

To determine students' lived experience and benefits of the CP, I used pre-determined mostly open-ended interview questions for each participant group (see Appendices B, C, D, and E) and wrote field notes. Since general open-ended questions frequently elicit vague responses from young students, my questions were focused. Parents or guardians signed a parental consent form (see Appendix F) to allow their child to participate in the study. I chose to interview students because the Grade 5 teacher told me many students had weak written output skills. My decision to collect verbal instead of written data from students was reaffirmed when I conducted a written reflection activity one time after canoeing with students in April 2013. During that

activity, students required much prompting and assistance to write down their likes and dislikes of canoeing. Interview questions for school staff and VCKC volunteers were on the same sheet (see Appendix D) with a few extra questions for school staff. The literature on the effects of outdoor adventure-based programs (e.g. Beightol et al., 2009; Cooper et al., 2004; Green et al., 2000; Hattie et al., 1997) and the protective factors of resilience (e.g. Alvord & Grados, 2005; Werner, 2005) assisted me in devising questions to inquire about the possible benefits of the CP. The interview questions were meant to guide each interview, and other questions arose as the interview progressed.

To record individual adult and student interviews, I utilized two iPods with Belkin TuneTalk Stereo speaker attachments. One iPod served as a backup recorder. No video was taken to avoid camera shyness and minimize the discomfort of participants. Students at the elementary school are highly impulsive (School Vice-Principal, personal communication, August 8, 2012); thus, I choose to do individual interviews with students in a calm setting away from peer influence.

On May 7, 2013, I conducted pilot interviews with two students to ensure question suitability. With the help of my supervisor, I slightly revised some questions and added a few more regarding the cultural relevance of the CP and canoeing to improve data capture in relation to my research questions. Because students had commenced canoeing in April 2103, I waited 6 weeks for the CP to potentially have an effect; thus, I interviewed participants from mid-May to the first week in June 2013. When phoning parents to request an interview, I read a script (see Appendix G). On two occasions, I interviewed both parents of a particular student. Before starting each interview with participants, I read a scripted interview preamble for either students

or adults (see Appendices H and I), which informed participants of their right to withdraw from the study at any time and that there were no incorrect responses to the interview questions. I also periodically read definitions of self-esteem, self-efficacy and resilience from a list of definitions (see Appendix J) if I felt research participants' needed clarification on the aforementioned terms when I asked them questions regarding their observations of changes in these characteristics of students. I assigned a pseudonym to each participant to protect their anonymity in data. After each canoe session, I recorded student comments and behaviour and any fauna we encountered in my field journal on one side of the page and then made interpretations, or memos, of student comments and behaviour on the other side of the page (Leedy & Ormrod, 2013, p. 153).

Research Participants

Eleven children from the elementary school, aged 10 to 11 participated in this study. The student participant sample was comprised of 5 boys and 6 girls. In addition, all student participants are First Nations from the Esquimalt or Songhees Nations, which was confirmed using school records. The sample was gleaned from the number of Grade 5 students who brought back signed parental consent forms. Of the 12 students who returned their forms, 11 students were First Nations. I excluded the one student, who was not First Nations, as this study concentrated on First Nations children's lived experience of the CP and how it benefitted them.

The 13 adult participants, who were interviewed, are men and women, and included the following: the school principal, the Grade 5 teacher, two teaching assistants, five parents, an Elder, and three VCKC volunteers. Regarding school staff, I interviewed all staff, who were frequently involved with the Voyageur canoe outings. Of the two educational assistants, one was First Nations. I selected parents to be interviewed based on the Grade 5 teacher's advice on who

would open to and available for interviews. Although I inquired with both Nations to see which Elders I could interview and repeatedly attempted to contact Elders, due to time constraints, I was only able to interview one Elder from the Songhees Nation. I interviewed the three VCKC volunteers who had the most experience with paddling with the students.

Research Setting

This study investigated the students' lived experience of the CP, which occurred on the Gorge Waterway, near the elementary school. The Gorge Waterway connects to Victoria's harbour and thus is subject to the tides. In the past, the Esquimalt and Songhees Nations used the local waterways, such as the Gorge Waterway, for food, spiritual practices, and transportation (White & Cienski, 2010). In both Nations, there are still families that maintain a paddling tradition. There are places of First Nations cultural and historical significance along the Gorge Waterway and in Portage Inlet. Students walked or ran from the school to the VCKC Clubhouse, which had all the equipment needed for students to dragon boat and then canoe. During the CP, students dragon boated for three weeks in fall 2012 and then paddled in Voyageur canoes for nine weeks in April to June 2012. The students paddled from the VCKC Clubhouse along the Gorge Waterway towards Portage Inlet. In the last five weeks of the CP, we managed to paddle further each time into Portage Inlet. As students paddled, they saw local flora and fauna such as eelgrass, arbutus trees, river otters, seals, salmon, cormorants, eagles, crows, kingfishers, swans, Canada geese, and bufflehead sea ducks.

Bracketing

Before I began taking field observations and interviewing participants during the canoeing portion of the CP, I bracketed my prior knowledge of the phenomenon; that is, I detailed my "assumptions, knowledge, and expectations" (Richards & Morse, 2007, p. 51). This was done in order for me to approach the interviewees' statements and field journal data with as little as bias as possible (Richards & Morse, 2007). In other words, bracketing helped me focus on the participants' experience of the phenomenon (Creswell, 2007).

Bracketing of my assumptions.

My personal assumptions and biases stem from my involvement with the CP, conversations with the school principal, personal experience of resilience development, outdoor experiences and previous experiences of paddling with the students. As the CP coordinator and founder I have volunteered over 500 hours to organize and participate in the CP; consequently, I am hoping to see some positive changes in the students to demonstrate that the program is valuable. I am assuming that the canoe trips will be enjoyable and culturally relevant to students as they seemed fairly enthusiastic when I presented the proposal of the CP to the students in May 2012.

Above all, I helped organize the CP because I want to assist the students become more resilient. The topic of resilience appeals to me as I developed resilience early in my life due to learning to cope and heal from extensive bullying in my elementary and middle school years. I feel compelled to assist these students since I can appreciate their struggle to cope with their many challenges. Because I love the outdoors, adventure, and being on the water, I am assuming that the CP is also appealing to students. As I have already dragon boated with these students

during September and October 2012 and observed overall positive remarks from the students, I assume they like paddling. Furthermore, some students have asked me about the start date of canoeing part of the CP. There is a possibility students may also not enjoy Voyageur canoeing as much as dragon boating since there will be less people and less adults per boat; thus, they may have to paddle harder.

Bracketing of my presuppositions.

My review of the literature has informed my presuppositions of the student's experience of the CP. From reading Cason and Gillis (1994) and Ungar et al. (2005), I am concerned students will not be immersed for long enough or enough times in the CP since we will most likely be canoeing a maximum of 10 times this spring. Consequently, students and adult participants may report no changes in internal or external protective factors. Family relationships (Werner, 2005) and peer relationships (Alvord & Grados, 2005) as external protective factors are important and may have greater impacts on student resilience than the CP, which may overshadow or obscure any effects from the program. However, based on my literature review of outdoor adventure-based programs (Beightol et al., 2009; Caulkins, 2010; Garst et al., 2001; Hattie et al., 1997; Sheard & Golby, 2006), another of my presuppositions is that the CP may increase certain protective factors of resilience, such as self-esteem, self-efficacy, and caring relationships, for the elementary school students. Moreover, First Nations high school students will mentor the elementary school students in the canoes; thus, younger students may report feelings of increased self-esteem, according to my literature review (Cooper, Estes, & Allen, 2004; Gilligan, 1999; Morgan, 2010).

My presuppositions are also partly constructed from my conversations with the school principal, my experience in the classroom with these students, and GVSD 61's (2012) classification of these students as 100% vulnerable. For example, I am presupposing the students are not already resilient, yet I have not taken a baseline of their protective factors of resilience. Furthermore, I am presuming these students need to build up resilience and that any enrichment is good for them because they are socially, emotionally, and academically vulnerable (L. Moorhouse, personal communication, April 30, 2012; Greater Victoria School District No. 61, 2012). As a previous teacher-on-call, I have taught some of these students in the classroom and witnessed their behavioural difficulties and lack of self-control. In consideration of their behavioural issues and emotional, social and academic vulnerability, I sometimes feel a bit uncertain as to how much a short-term canoe program might positively affect students.

Data Analysis

To assist with the transcription of individual student and volunteer interviews, I employed a digital audio editor program called Audacity to transform all iPod recordings, which were in WAV files, into MP3 files. I then used a foot pedal, headset, and a transcription software program called Express Scribe Pro to transcribe all MP3 files. I employed Microsoft Word to type the transcription and typed time stamps next to each question. Once an interview was transcribed, I listened to the interview recording and read over the transcript a few times to "get a sense of the whole" (Giorgi, 1975, as cited by Hycner, 1985, p. 281). This step helped me better understand the themes which arose from the data analysis (Hycner, 1985, p. 281).

The coding and analysis of data was an intense multi-step procedure. To begin, I examined each of the transcribed interview files using the research software program NVivo 10

and selected noteworthy statements pertaining to student participants' experience of the CP and adult participants' responses regarding the benefits of the CP (Creswell, 2007). I coded these noteworthy statements by grouping "them into larger units of information, called 'meaning units' or themes" (Creswell, 2007, p. 159), or nodes, as referred to in NVivo 10 (QSR International Pty Ltd., 2011). In other words, the nodes helped me "cluster and label groups of expressions" (Richards & Morse, 2007, p. 171) that were closely related to each other. In addition, I hand coded my observations from my field journal using highlighters and Post-it notes with themes written on them. Afterwards, I integrated noteworthy statements from the journal entries into themes based on NVivo's nodes. Next, I printed off each node's cluster of noteworthy statements and wrote key words and summary phrases in the margins to generate lists "of nonrepetitive, nonoverlapping statements" (Creswell, 2007, p. 159). This helped me verify each theme. I also later compared these lists to what interviewees originally said to make sure my descriptions of their experience would be accurate (Richards & Morse, 2007).

Once I had confirmed the themes, I began the process of constructing rich descriptions of student experience and benefits of the CP. I utilized the aforementioned lists, significant statements in the nodes, and journal entries to describe the students' experiences of the CP and the perceived benefits; that is, I created "textural descriptions" (Creswell, 2007, p. 159). Often these descriptions also contained my own reflections of "setting and context" (Creswell, 2007, p. 159) for student experiences of the CP and the adult participants perceptions of the CP benefits; that is my descriptions also contained "structural description[s]" (Creswell, 2007, p. 159). To write these descriptions, I used the memo function of NVivo 10. I also utilized the memo function to write memos of my initial interpretations of how some perceived benefits and some

aspects of the CP impacted various protective factors of student's resilience. As I constructed meticulous rich descriptions of the students' experiences and perceived benefits of the CP from the previous textural and structural descriptions, I periodically member checked with the adult participants to see if my descriptions corroborated their experience (Patton, 2002). Because I only had ethical approval from GVSD 61 to interview students during the 2012/2013 school year, I could not contact the student participants as I conducted my data analysis during August and September 2013.

Credibility and Trustworthiness

Through the process of conducting interviews with different groups of participants and recording field observations, I was able to triangulate themes, which emerged in the data, and increased their credibility (Leedy & Ormrod, 2013; Patton, 2002). As part of triangulating the data, I juxtaposed my field observations and interview data to confirm themes and interviewee reports (Patton, 2002). I also compared "the perspectives of people from different points of view" (Patton, 2007, p. 559); that is, I analyzed the interview data from within and between interview groups for similarities and differences. Furthermore, I investigated whether themes in the data supported the conclusions of the resilience studies in the literature (Richards & Morse, 2007). In the individual interviews and my field notes, I also looked for evidence that the CP was not benefitting students. Since I accumulated field notes throughout April to early June, 2013, during canoe outings, this "prolonged and persistent engagement" (Merriam, 1998, as cited by Kool, 2012) increased the credibility of my observations. Finally, I conducted member checks with the adult participants during interviews, and afterwards, either by email or in person,

to validate my descriptions and interpretations (Patton, 2002) and ensure my bias was not influencing my data analysis.

Ethical Concerns

My study of First Nations children raised several important ethical concerns. To begin, my research involved First Nations children and was conducted at the elementary school and the Gorge Waterway, which are the traditional territory of the Esquimalt and Songhees Nations; consequently, I asked the Esquimalt and Songhees Nations' Band Councils for approval (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada, 2010). To interview students, I obtained the informed consent of both parents and students. Since I was conducting research with children, I had to have a current Criminal Record Check with GVSD 61. The confidentiality and privacy of student and adult participants were maintained as I employed pseudonyms in my thesis findings and discussion. Furthermore, I obtained ethical approvals from GVSD 61 and Royal Roads University to perform my research.

Chapter 4: Findings

Overview

This phenomenological study's goal was to investigate the experience of the Grade 5 students of the Canoe Program (CP) and to determine how the CP's benefits related to the protective factors of resilience. The following questions guided my study:

1. What is the experience of these children canoeing on a weekly basis?
2. How does a weekly canoe program benefit the Grade 5 First Nations students at the elementary school? And how do these benefits correspond to various protective factors of resilience?

The themes from the interview and journal data are grouped into two sections: benefits of the CP for students, and secondary findings. Students' lived experience of the CP is interwoven in both sections as their experience often supported evidence of benefits. All quotes cited from my field journal observations are followed by a date in parentheses. Although I have quoted student participants below, the findings sometimes include observations of non-student participants and of the entire Grade 5 class as a group.

Participants

11 student participants, three volunteer participants, four staff participants, five First Nations parent participants and one Elder participant were identified by pseudonyms. All pseudonyms and associated participant labels can be found in Table 1. Participant labels were attached to pseudonyms so that the reader could easily identify quotations as associated with one of the interviewed groups. In the interviews of school staff and students, I discovered that the

Table 1. *Participant Pseudonyms and Participant Labels*

Participant Pseudonyms	Participant Label
Charlie	Student Participant A
Bill	Student Participant B
Carrie	Student Participant C
Derek	Student Participant D
Jim	Student Participant E
Earl	Student Participant F
Freya	Student Participant G
Alice	Student Participant H
Emily	Student Participant I
Debra	Student Participant J
Betty	Student Participant K
Susan Hart	School Staff Participant A
Dan	School Staff Participant B
Anne	School Staff Participant C
Rachel Smith	School Staff Participant D
Patty	Parent Participant A
Monica	Parent Participant C
Peter	Parent Participant D
Roberta	Parent Participant E
Alex	Parent Participant F
Barb	Volunteer Participant A
Steve	Volunteer Participant B
Jack	Volunteer Participant C
Paul	Elder Participant A

Grade 5 class is a close-knit group because most of the students had been with each other since Kindergarten (Student Participant K, Student Participant C) and they are related through family ties and spend time in each other's homes (School Staff Participant D). As Rachel, school staff participant D, emphasizes, "they're also all related, it's like going to school with all your brothers and sisters". In the following descriptions of themes, "participant" is omitted when describing each participant group to avoid cumbersome writing.

Benefits of the CP for Students

There were many benefits of the CP that arose from the analysis of the interview and journal data. Themes of benefits are described below. The theme of self-efficacy, in particular, was strongly reinforced by student and adult participant reports and field observations. Themes of connection are frequent as the CP helped link students to each other, culture, school, community resources and nature.

Self-efficacy.

Gains in physical competence.

When students were asked how the canoe program affected their paddling skills, students all reported they had become either stronger paddlers and/or had better timing. Other paddling improvements students noticed included splashing less, knowing the paddle commands, increased endurance and paddling faster. For example, besides becoming a stronger paddler, Emily admitted her technique improved as she used to bring the paddle "way far back" past her hip. Carrie stated, "I'm getting way stronger than I usually am, I'm getting real strong now, because of the canoeing". Bill acknowledged he had become "better and better at it". Although Derek found paddling a bit difficult at the beginning, he stated "after I got the hang of it, probably one of my natural skills". Freya affirmed she was "getting faster ... stronger". Freya also felt "awesome … when we went the farthest". Even Earl, who was on a racing team, explained he was getting better because he had the chance to practice advanced skills; he stated "I think a little bit more strength in my pull-backs, and I'm starting to practice my stretch [reaching forward with the paddle] in the canoe now". One of Charlie's favourite moments was

going fast in the dragon boats. As all student participants reported they were better paddlers, it is probable that students' sense of generalized self-efficacy had increased.

Other things that may have contributed to students' self-efficacy were giving students increased responsibility and teaching them new physical skills or allowing them to practice skills. The researcher, volunteers, and teacher observed that once students became used to the routine of canoe outings, they naturally started finding their own proper paddle and personal flotation device (PFD) sizes. This gave them a chance to apply the knowledge we had taught them regarding paddle and PFD sizes. When asked what she liked about the CP, Betty declared, "We all get to, like race to the canoe club.... And when we get there, we could just get our life jackets, our paddles, and then like basically just go down". Also, I noticed that some students began to try bent shaft paddles so they had a chance to explore different equipment and gain knowledge of its use. Towards the end of the CP, once canoes were off the canoe trailer, we allowed students to help bring the canoes down to or out of the water. Students began helping the adults on their own; we did not ask the students for help. For instance, Betty explained she liked helping "with carrying the boats down" and Earl stated "I like to bring it up, which we just tried to do, (laughs) which is heavy." As students gained competence in paddling and teamwork, they felt more capable and wanted to help move the canoes out of the water. Jack, Rachel and I observed the students taking ownership of the program in this manner. Allowing students to help with adult tasks likely increased their knowledge of equipment and sense of self-efficacy, since not only could they do more tasks, but they could also help the adults.

More evidence that some students had obtained a sense of self-efficacy from their experience of the CP, was that their gains in arm strength and paddling skills seemed to help

some students believe they could attempt or improve at various physical activities, such as swimming, learning to ride a bike, skateboarding, boxing, canoe racing, or longer canoe trips. For example, Alice admitted she will be better at swimming. She stated "Because at first, before I started canoeing, I was really bad at it and I mostly use my arms in swimming". Plus, Earl explained his increased strength would help him in his boxing training. As a result of his gain in strength, Bill acknowledged he could go on longer canoe journeys, and Emily expressed she could "probably race this year". Furthermore, Carrie stated "We could all learn, learn how to like canoe, and we're, well, we're probably going to go on canoe journeys". Two parents confirmed their children were probably more confident in the physical realm partially because of the CP. Regarding her son Earl, who canoe races, Monica expressed the CP "probably helped him become more confident puller". For Patty, the CP taught her daughter "more skills. So, she's starting to be open to trying more things".

The CP naturally allowed many students to enhance their self-efficacy because the CP permitted students to practice paddling on a regular basis and it broadened student's life experience. As Dan explained, "it's like walking, right, the more you do it, you will get better every single time". Furthermore, Rachel expressed "anytime you broaden a person's world, you can't help but build in feelings of competence, because they've experienced something more".

Most staff and volunteers remarked that students' timing, paddling skills, and/or endurance had improved, which supports students' observations of advances in their own paddling skills. For example, Barb reported "the timing has improved". According to Dan, the students' experience of paddling a 300 pound Voyageur canoe, sometimes against current, "really helped them see what they capable of doing". Like Jack, Rachel, and Barb, Susan

observed skill development, such as “getting into the boat, getting out of the boat, keeping low, learning the terms.... and being able to pull”. Similar to Rachel, Anne declared students who enjoy paddling and “those that have an aptitude for it, are obviously getting more proficient”. From Barb’s observations, there was a marked difference in student’s endurance compared to the beginning of the CP when “there wasn’t a child in that boat that paddled the whole time”. In addition, Barb asserted “they go farther now, they go faster now”. Similarly, I noted in my journal “we went pretty far today, farthest ever” (May 7, 2013). These observations help validate students’ gains in endurance and strength. Although Steve, volunteer participant B was uncertain if students experienced feelings of self-efficacy in the Voyageur canoes as “the individual’s effect on the overall, is much less easy for... kids to pick up” than in tandems canoes, all students reported improvements in strength, timing, technique, and/or endurance from paddling the heavy Voyageur canoes.

Volunteers also reported students acknowledged their gains in self-efficacy and this manifested in their behaviour. Barb, volunteer participant A, remarked, “I’ve had a variety of them come in and say, ‘You know, I paddled the whole time’”. Barb’s observation demonstrates some students recognized they were becoming more competent paddlers. More importantly, by telling her, a “virtual stranger” Barb emphasized “that’s a sign of self-confidence”. Students likely felt a sense of pride in their accomplishment, which would be beneficial to their self-esteem. Jack noticed, there was “more of an assuredness about them” and “when they’ve recognized that they’ve done well, you can see it, you can see their, their, just the comments, and the way they operate”. Another way students demonstrated their physical self-efficacy was when they used their knowledge of physical skills and safety to coach each other or adults. For

example, Susan mentioned one student told her “you have to put your body against the side [gunnel]”.

Gains in mental competence.

Part of the challenge of outdoor adventure education activities is learning to overcome fears. By persevering in an activity and overcoming fears, people “reinforce their sense of efficacy” (Bandura, 1977, p. 194). In the beginning of the CP, Barb observed that a couple students were “too terrified to get in the boat” and some students were reluctant to change seats because they did not want to fall in the water. The CP functions to help remove these fears. As Barb related “They’re here to learn to be comfortable, and to overcome fears that are, are not actually true, we’re not going to dump them in the water”. Thus, changing seats was included in each dragon boat practice so students became used to changing seats and balancing the boat. Students also learned to trust their teammates to keep them safe by bracing the boat. Although some students were still reluctant to change seats while in the Voyageur canoes, Susan, Barb, and Jack noticed students quickly became comfortable entering the canoes. The CP’s Water Safety Day most likely improved students’ confidence for getting in the canoes and not being afraid of the water since students learned PFD’s hold them up in the water. The trust students had in PFD’s and their peers’ paddling skills may be the reason Carrie reported “we weren’t really scared of the water”.

Feelings of self-esteem.

Most volunteers and staff agreed that students, who were willing to participate, experienced feelings of self-esteem from their improved paddling skills and endurance. The majority of students could learn how to paddle or improve their paddling skills and they

experienced success, which encouraged feelings of self-esteem. Anne thought students who enjoyed canoeing "have gotten better and feel good about that". Plus, Anne asserted student's self-esteem increased because "they're able to do it, to be successful". Similarly, Barb states, "that's how your self-esteem goes up; you learn to do stuff and you learn to do it well". Allowing students to help carry the canoes and retrieve their proper life jacket and paddle size also probably generated feelings of self-esteem in students. Moreover, students who were proficient at canoeing were positively "reinforced for doing a good job" (Volunteer Participant A). From a cultural aspect, Dan believed canoeing reminded some students of affirmative teachings and good memories, which made students feel better about themselves. While Jack and Steve were both uncertain if all students' self-esteem was affected, similar to Anne, Jack surmised that the CP "has increased their self-esteem, (pause) definitely, of the ones that have been really involved in it".

Students' feelings of self-esteem also seem to have been enhanced when caring adults were present. For example, Susan reported that having parents, relatives, and the community watch students canoe "has been a good thing for self-esteem". In addition, Susan emphasized it was important to students that the volunteers and staff in the canoe could see what the students could do. Similarly, students were proud of their increased endurance when they told Barb; she recalled "they were clearly proud of themselves for being able to do it [paddle the whole way]". When students have a connection with a caring adult, and that adult gives them positive attention for what they accomplish, a feeling of pride emerges. As Susan affirmed, students were "very proud of themselves". Students also knew that the volunteers were donating their time just for them; consequently, they may have had feelings of self-esteem from knowing the adult

volunteers truly cared about them. According to Susan, the CP gave the school "a whole other level of pride that we have not been able to hook onto". The fact that the elementary school was the only school in the district to receive the CP seemed to generate feelings of self-esteem in some students. For example, Betty was proud her school was "the only school that gets it [CP]".

Mentorship may have helped build positive future outlook.

The mentorship by both the Esquimalt High School mentors and VCKC volunteers may have helped build students' affirmative future outlook. In Susan's opinion, the high school mentors benefitted student resilience by making "a connection for what they [students] could do in the future". The students saw that their First Nations mentors successfully made it to senior high school. The mentoring and caring demonstrated by the teaching staff and VCKC volunteers also may have given some students a positive outlook for the future as Bill commented "someday I would want to be like you guys helping other people learn how to canoe".

The CP may have encouraged short-term self-regulation.

The CP may have helped promote short-term self-regulation in students. Overall, volunteers and staff noticed students listened to instructions and behaved better by the end of the program. For example, Jack noticed students became "calmer, more assured, and more focused on the job at hand". Similar to Peter, parent participant D, Susan, staff participant A, explained balancing the canoe automatically teaches students self-regulation since the canoe "needs self-regulating, and then you balance yourself". Moreover, paddling seemed to help calm Derek down after he became mad at his classmates for teasing him (School Staff Participant D). In Rachel's words, "it's showing him that exercise helps". However, Rachel had also taught this student in class to self-regulate anger by spreading his fingers on his legs whenever he felt angry

and clenched his fists. Again the positive changes seen in students are the result of many protective factors and positive experiences in students' lives. While Anne observed "the sort of calming effect, and the exhaustion that followed" canoe outings helped students better self-regulate temporarily, she acknowledged "the sort of lasting effect of being calm and focused is very short-lived". In the canoe, Dan found it was hard to notice changes in a particular student's self-regulation because Rachel and I often moved students around due to their behavioural issues.

Another factor that appeared to support students' self-regulation was routine. Most of the school staff and volunteers expressed the CP's routine was important. For instance, Anne thought it was significant that the CP happened "every single Tuesday, same time, same place, same group of volunteers". As students became used to the routine, they became better behaved. For example, Susan reported, "there's less running around, they're putting on their life jackets, they now know the routine". Near the end of the program Steve observed that student had become familiar with the routine and there was less behaviour problems; he remarked "they line up, they get in the boat, they don't mess around the way they used to", but Steve questioned how much of their improved self-regulation was due solely to routine and if the improvement "translates into school".

Improved teamwork skills.

Students became better at teamwork in terms of paddling together, helping adults, and behaviour with peers. For example, Bill found he was "better of going out on the water, and paddling with others". In addition, five students reported they had better paddling timing. Paddling in time was part of teamwork; that is, students watched the person in front of them and

the bow paddler. Anne affirmed students were "working together more as a team". Susan asserted students had made "significant gains, some children more than others"; some students with learning disabilities struggled with paddle timing. From my observations, the volunteers reminded the students to paddle in time when the boat started rocking, so students soon learned the benefits of paddling in time: balancing the boat, faster paddling, less splashing, and reduced hitting of paddles. According to Jack, students were also more comfortable being part of a team since they helped move the heavy canoes at the end. In addition, Barb remarked that there was less name calling, which meant better teamwork since "having your teammate's back is what teamwork is about".

As part of teamwork, students also became better at listening to and following commands. For instance, Betty remarked, "Like when they say "Brace", I know what to do. Susan and Jack both noticed the students listened to commands better and coached each other when their peers made a mistake or braced to keep the boat safe. Rachel felt that students had strengthened as a team and improved listening to commands, but "still a lot of them are not paddling in time".

Staff, parents, and volunteers agreed canoeing naturally teaches students teamwork. Dan remarked "it's almost like they have no choice but to [work together]". Likewise, Peter declared "your canoe can't move by one person with a whole bunch of people in. Everybody has to work together, coordinate together". Alex remarked canoeing imparts students "the teamwork and the feelings, the happiness, and the strength that they need to carry in that canoe". Steve, volunteer participant B, thought the CP, at the very least, "teaches them to move in a group".

Canoeing taught students lessons about life.

Some adult participants perceived the CP to provide experiential education which gave students insights to life and promoted personal growth. For example, Peter, parent participant D, explained outdoor activities like the CP teach students life skills. According to Peter, when students learn to canoe, they quickly grasp "if you sit in a canoe, it's not going to move unless you paddle". For Peter, canoeing gives students an understanding that in life they have to "do something in order to achieve it". Peter concluded the CP gave his daughter a more profound understanding of herself and how things work in life. Regarding school staff perceptions, similar to Rachel, Anne reported the CP gives students "an education outside the classroom".

Another life lesson students learned as part of the CP was to respect life. We invited one to two Elders to bless the canoes, the children, and their journeys at the beginning and end of the program. Part of the Elders message to the children was about respecting life. Alex recalled part of the lesson: "you have to respect the paddle, respect the canoe, respect the water and everything that's inside the water, that lives inside the water". If students paddled a traditional canoe made out of cedar, then they could be taught that "that tree took its life for us to paddle on, to travel on, or to race on" (Parent Participant F). According to Alex, respecting the canoe, the water, and life helps you to examine how you conduct yourself in life. Alex stated his people "look at how we carry ourselves, and how you carry that canoe in, in life", which I confirmed meant how one takes the lessons you learn while canoeing and apply them to your life.

CP was culturally relevant.

The CP was culturally relevant to the Elder, students and their parents since canoeing is part of First Nations culture, history, and family tradition. Canoeing, according to Paul the

Songhees Elder, is “the way of our life…. It’s a huge part of our culture”. For Paul, canoeing is “the way we still get around”. As Alice, student participant H, commented, “I like it [canoeing] because it’s in our culture”. For Carrie, canoeing with her class from the VCKC clubhouse, up the Gorge and then back, reminded her of how her ancestors had “to take all their families and all the things they’d need” and canoe to different hunting grounds in the winter. Moreover, the experience of being in the Voyageur canoes was authentic for Carrie; she expressed, “it’s like you’re canoeing in a canoe, like a wooden canoe and everything, it feels like that, I feel like I’m safe there”. Carrie’s experience of feeling safe in the canoe has probably also developed from her families’ active participation in Tribal Journeys and being introduced to paddling when she was very young. As Peter, her father proclaimed, “she’s a water baby like me”. Plus, Patty, parent participant A, overheard her daughter, Betty refer to the cultural relevance of the CP while talking to her friend. According to Patty, Betty had remarked the CP “was part of our culture, and that they get to learn about nature, and they get to learn a little bit about their culture”.

The CP was also culturally relevant to many students as canoeing is an important activity they do with their family, relatives, or on a racing team. A couple of students articulated how their family went on canoe trips, including Tribal Journeys. For instance, Bill and his family paddled “from Ahousaht back to Tofino”. Carrie recounted the time her Mom paddled on a Tribal Journey to Lummi. Although Earl thought canoeing was another hobby he did, his family had canoed for generations; Earl declared “It’s a long line of pulling”. Freya mentioned her uncle wanted her to learn to canoe so that she would carry on tradition and paddle with her own kids.

According to parents, the CP was culturally relevant because it helped students connect with their culture and their ancestors' history. Parents mentioned the canoe was important because it was the "main form of transportation" (Parent Participant C) used to visit family, travel between villages, gather resources, and for canoe races. For instance, Patty stressed the canoe "was absolutely integral to our economy and for the trade". Three parents commented that the canoe was used to travel the waterways, which were their "traditional highways" (Parent Participant A). To Roberta, parent participant E, the CP was culturally relevant because it meant that her daughter, Alice was "travelling the routes of her family history, the ancestors on her dad's side". For Patty, the CP was culturally relevant and "integral to this school, with over 96% Indigenous population". Monica recalled that canoe races are an important part of First Nations culture and history and reasoned the CP could encourage students to try out for various canoe races. According to Peter, the CP was culturally relevant because canoeing "from a cultural perspective, it's being in touch with your roots…. [and] a great way to be in touch with oneself with, through their own history of their ancestors".

The CP was also culturally relevant as it taught students aspects of First Nations culture and spirituality. For instance, Paul was pleased that we were "teaching the students…how to ask the proper ways, you know, the protocols, to follow the protocols" when we invited the Elders to bless the students, the dragon boats, and our journeys at beginning of the CP. While on the water, Dan sang paddling songs, and shared traditional teachings around canoe etiquette and historical First Nations uses of some of the places along the Gorge Waterway. On some days, students saw that "Dan wore his traditional cedar hat and used his traditional cedar paddle" (April 9, 2013). When Dan sang paddling songs, "it felt like the song's sound filled the whole of

the Gorge Waterway" (April 9, 2013), and he brought "in the water's spirits" (Staff Participant A). As Paul mentioned, "there are songs, certain songs that you have to sing out there when you are paddling, that keeps the spirit alive". Some students sang along with Dan during one canoe trip (Staff Participant A). After singing a song, Dan also explained what the song was about, who made the song, and who has permission to sing it. Perhaps after seeing Dan's example, Derek thought canoeing symbolized "Native pride". Carrie claimed the CP taught her "more things about Native". For the last paddle outing, an Esquimalt Elder prayed for the students and I had recorded she "told the kids to let go of any bad feelings inside them so they would paddle with a clean spirit/state of mind" (June 4, 2013). As well, on the CP's last paddle, a parent commented some people in her culture believed the two eagles, which were flying above us "were their ancestors watching them [paddlers]" (June 4, 2013).

Overall, the staff and volunteers thought the program was culturally relevant for students. Anne expressed the CP had "huge cultural significance" because canoeing was part of students' "culture and their history". Similar to Paul, the Elder, Susan emphasized canoeing was part of students' cultural identity. Likewise, Dan explained for students who "come from canoeing families … because their own families come from these forms of transportation, and within that, then there's a whole bunch of things that come with that, it's their identity, it's their creation stories, songs, dances". From Dan's perspective, the CP also "helps create a lot of questions" in students' minds about the history and cultural practices connected to canoeing families, which generates opportunities for him to teach students about the kinds and purposes of different types of canoes and paddles. Moreover, Susan observed students developing familial connections to the Gorge Waterway, such as hearing students say "'My dad was on these waters' or 'My

grandfather said he had been'". Canoeing, according to Susan "is inherent in their, in their nature". Furthermore, Jack recalled the Elders had told the students the Esquimalt and Songhees Nations used to race on the Gorge Waterway. As Jack remarked, the CP was "returning them [the students] to the water where they, their traditional society was based".

A couple adult participants had reservations about the cultural relevance of the CP. From Rachel's perspective, the CP was not culturally relevant because of a lack of cultural connection. When I member checked with her, Rachel disclosed the CP was about "white privileged people taking them [students] on their water" (R. Smith, personal communication, September 5, 2013). On the other hand, when Dan and the parents were in the canoe, Rachel affirmed "they brought the culture and the CP allowed them room to express their culture" (R. Smith, personal communication, September 5, 2013). Plus, Rachel added that the "place-based learning" (R. Smith, personal communication, September 5, 2013) aspect of the CP was culturally relevant since "the Gorge Waterway is their water" (R. Smith, personal communication, September 5, 2013). Steve also had doubts about the cultural relevance of the CP. Steve supposed that canoeing "can't be that much of their culture, if they can get one person who can stern". Steve also stressed that in order "for the students to take something out of the program that will help them....it has to reinforce something that is, that they see in their, their home community". It is likely, as Dan alluded to, that the CP was more culturally relevant for students whose families own canoes, or take part in canoe races and/or Tribal Journeys.

Improved mental and physical health.

The CP was perceived to benefit both the mind and body of students. According to participant responses, canoeing helped students find balance and release stress and negative

emotion. For 12 weeks, the CP included a period of walking or running, plus a period of paddling, which likely improved students' physical and mental health.

Canoeing helped bring balance in student's lives.

The act of balancing the canoe as a metaphor for having balance in one's life was linked to some students', parents', and staff interview responses. For example, Earl, student participant F, and Dan, school staff participant B, mentioned the traditional teaching which states the canoe will tip over if a person is angry or unbalanced emotionally,. According to Peter, parent participant D, an angry person makes the canoe feel heavier "because someone's not pulling their weight". If a person is angry or shifting from thought to thought all the time, he or she is not balanced emotionally or mentally. Similarly, Peter expressed, "when you're in a canoe, if everybody's moving around, your canoe is going to be unbalanced, it's going to be shifting around back and forth". Subsequently, Peter added canoeing will help his daughter, Carrie, "for bringing balance to herself" and "gives her a greater understanding of, of herself personally, how to be, how to act as a group, how to work together as a group, and how to work at balancing as a group". Susan, school staff participant A, asserted the CP teaches students to balance the canoe to keep it safe and in doing so, they have to self-regulate to balance themselves. Programs such as the CP have the potential to bring more balance into education, where regular classroom learning is combined with outdoor experiential learning. As Susan stated, "learning has to be body, mind and spirit, and we've done a lot of pencil and paper here over the years, and so now, we get body, mind and spirit together".

Canoeing was healing for students.

The Elder, a parent, and the School Principal reported that the CP can be healing for students since canoeing can help relieve students of their stress and bad feelings. For example, Paul, a Songhees Elder recounted, "my dad and my grandfather always taught me ... if you don't feel yourself, grab your paddle, grab your canoe and get out there. Let everything wash away". Similarly Alex, parent participant F, related that some of his people believe canoeing and the ocean can heal people:

> It relieves stress that you carry inside your heart or your mind. It just drops in the water as you are canoeing. When you are canoeing forward, you leave your feelings that you don't want to carry behind. And we believe that the, the creatures that are in the sea take it, and take it way out into the deep of the ocean, and, so it doesn't get picked up by someone else.

Furthermore, Alex declared canoeing "uplifts our spirits, and gives us some strength to carry on". In addition, Susan remarked students benefitted from the "healing you have by being on the waters" and similar to Alex, she also believed "the water automatically washes away pains and sorrows". Susan also stated it was beneficial for students to see the blue and green in nature as they canoed.

Reports from a school staff member, some students, a parent, and a volunteer also suggest the CP benefitted students' mental health. Dan, school staff participant B mentioned the CP was "a chance to get in touch with yourself in the elements". Alice, Charlie, Debra, Freya and Jim reported they liked being on the water and Emily enjoyed "seeing the water". Roberta, parent participant E, recalled that her daughter "tells us that, she's happy to do it, she feels better

when she's...she comes off [the water]". From a non-Indigenous perspective, Barb, volunteer participant A, reflected the CP gave students "the whole feel of being on the water", which for her is a "positive feel".

Exercise enhanced physical and mental health.

Staff, VCKC volunteers, and parents agreed the CP helped students to exercise and get outside. For example, Anne, Rachel, and Steve reported students benefitted from getting outside and breathing fresh air. Dan thought the CP gave the students an "an opportunity to get on the water". For Rachel, the teacher "getting the kids active and outside to me is one of the most important things". Peter, parent participant D thought canoeing was "healthy exercise" and Monica, parent participant C acknowledged the CP gave students a valuable opportunity to exercise outside and for her son to practice his paddling skills. Not only did students paddle for 40-50 minutes each time, they also walked or ran 1.5 km each way between the elementary school and the VCKC Clubhouse. The walk took them approximately 25 minutes to complete and the run 15 minutes. As a result, the students had an average of 70 to 100 extra minutes of physical exercise each week. Furthermore, as Anne, school staff participant C pointed out, the exercise released endorphins, which gave students a euphoric or happy feeling; thus, this was another manner in which the CP benefitted students' mental well-being.

Enjoyable group experience supported peer relations.

Students enjoyed the shared group experience of the canoe program. For instance, 10 out of 11 student participants responded that the canoe program was fun and one student participant thought it was good. While most of the students enjoyed paddling or pulling as they often called it, seven students liked the social aspect of paddling with their friends. As Carrie recounted, "I

got all my friends around me, and we're all having fun". Two students also liked that the CP was inclusive; everyone in their group could canoe and learn to paddle. Other social aspects of the CP which some students enjoyed were screaming under the bridge, singing, talking about scary animals in the water from movies, racing to the clubhouse, or eating cake at the end of dragon boating.

School staff, volunteers, and parents confirmed that students enjoyed the CP. For example, Anne, school staff participant C, said "for the most part, it's, it's something that they enjoy, they look forward to". In my field journal, I recorded that "Jack said he could see the kids were having fun - you could easily see it on their faces" (April 16, 2013). As Barb, volunteer participant A, offered "You get to get in a boat and paddle. It's kinda hard to find the downside, as long as the weather's not too bad". Peter, parent participant D, recalled his daughter had told him "she had a good time and her arms are sore".

The enjoyable shared group experience of the CP supported peer relations. Anne agreed the CP helped students connect with each other. Susan expressed the shared experience "outside of the normal realm" helped students bond to each other. Jack, volunteer participant C, reported, "I felt I could see the group together being much more social". Moreover, Jack observed the students were "more cohesive as a group" and "much more supportive of each other". However, this may be due to maturation or other experiences instead of the canoe program, for as Rachel mentioned "they've come together in a lot of ways as a group".

Enhanced school connection and experience.

Student participants unanimously thought the CP made school more interesting. For some participants, it was a novel activity. For Charlie and Emily, it was their first time canoeing.

For Betty, each week meant going in a different canoe with a different group. Derek thought it was "interesting because it's like going on a little field trip". For others, the CP was a weekly highlight that they looked forward to and some students enjoyed the break from the regular school routine. In fact, Bill did not want to miss school in case canoeing was moved to another day. Carrie mentioned that her classmates would talk about the CP sometimes and "then we'd be like 'Oh, I can't wait till Tuesday because we get to go canoeing'". Earl said the CP made school more interesting because it meant doing something fun outside. Derek and Alice also reported the CP was more interesting than school; thus, they may have appreciated the experiential learning opportunities of the CP. Finally, Freya thought the CP was a highlight and it made school more interesting because Mrs. Smith had read them a canoe story.

School staff, one volunteer, and two parents reported the CP helped increase students connection to school. Both Jack, volunteer participant C, and Rachel, the teacher, underscored the involvement of the school staff in the CP helped connect students to school. As Rachel said, "we've reinforced that we're doing this because we believe in them". Students also knew that Rachel was making a huge effort for them since she is afraid of the water. Jack asserted children were more connected to school "when the children see the teachers out of their natural classroom environment, putting effort in". According to Susan, the CP "has been one of the most powerful things we've been able to offer our children, in the last year and a half". Susan remarked that some students would come to school because they knew the CP was happening that day and one student "personally shaped up his behaviour just to be out in those canoes". Susan also claimed the CP connected students to school because "it isn't done every day, and it's culturally relevant, culturally significant, and culturally honouring". Although volunteer participants Steve and Barb

could not tell if the students were more interested in school, it is understandable since they only saw them for about one hour a week for 12 weeks. Steve found that "it's difficult to engage their interest" in the waterway's natural history as students were paddling and "they're always looking at the students around". On the other hand, Jack stated students were "more involved in what's going on" with the CP. From the parents' perspective, Roberta mentioned Alice "doesn't like to miss [canoeing] at all" and it helped Alice to be "motivated to stay, stay strong-minded about being here". Monica reported her son "looks forward to the days that he has canoeing".

Enriched connection to community resources.

By creating connections between the VCKC, the two Nations, the elementary school, and the high school, the CP connected students to community recreational resources, their traditional waterway and caring adults and teenagers. For example, Barb thought the CP made it possible for students to take advantage of local volunteers, equipment, and the waterway; she remarked the CP "was a creative use of time, of resources that were literally being unused during the daytime, to do something good". According to Jack, the CP was "one of those programs that can be very good for outreach where you've got the youngsters being involved with adults in a different scale, and the teachers". From Susan's perspective, the location of the elementary school is unknown to many people, but the CP created greater awareness of the students and school as the "community sees us, the Aboriginal families know we are out on those waters".

The CP also connected students to other caring adults in the community, especially the VCKC volunteers. The volunteers, staff and I were all involved with the CP because we wanted to help the students. According to Barb, the CP was a chance for us to "make stuff better than it

was when we got here". For VCKC volunteers, it was also an opportunity for them to pass on their love of paddling and the water (Volunteer Participant A).

Student reports confirm the VCKC volunteers were caring effective role models. Most students expressed volunteers treated them "nicely" and "with respect". For instance, Carrie reported, "They treat me nicely". Students also described volunteers as being funny, awesome, good, nice, patient, and/or kind. Four students recounted the volunteers helped teach them to paddle. For instance, Alice mentioned "they teach us how to keep in time". Two students thought they were skilled. For example, Earl observed "They know what they're doing, that's for sure". Bill and Earl also thought volunteers kept calm for the most part. For example, when some of his classmates were arguing, Bill remembered "the stern was being funny. He said to one of the kids, 'Are you a man or a mouse?'" The only time Earl saw volunteers get mad was when a student was trying to tip the boat; thus, the volunteers had firm boundaries around student safety. Carrie claimed the volunteers motivated her to keep paddling, as she commented "They try to keep me going in canoeing. They'll be like, "'Okay, everybody, keep in time please, we don't want to be last and everything (laughs)'".

Besides connecting students to caring adults, the CP helped connect the elementary student to high school students. Four students thought it was fun being with the mentors because they liked seeing their relatives. For instance, Betty enjoyed being with her older sister and splashing her. For Earl, who was the tallest boy in the class, it was also fun since he felt small next to the mentors. Derek, who was often bullied by some of his classmates, liked the mentors as they were nice to him. Perhaps the older mentors also provided him a sense of safety. Because some students preferred canoeing with just their peers and two students recounted high

school students teasing or bossing elementary school students, the high school students require mentor training in advance.

Linked students to nature.

Student and Elder comments demonstrate the CP help connect students to their environment. Many students reported they enjoyed being in nature. Students appreciated being outside, breathing the fresh air, being on the water, or seeing the water. For instance, Emily mentioned, “I like paddling, and seeing the water”. For Debra, her favourite experience was viewing “the baby swans” on the mother's back. Earl liked jumping out of the canoe into the water when the canoe beached. He also wished the canoe program occurred daily. According to Paul, the Elder, the CP taught students about the movements of water. When you canoe, Paul says, “you learn how to read the waters. You learn to see what the water’s going to do”.

Most volunteers and school staff reported that it was important to connect students to their local natural environment. For example, Rachel underscored students should receive “more outdoor education” and asserted that since the students are “ocean people”, the waterway “gives us a common place to meet them”. In addition, Anne remarked “it’s just so important for this particular group of students to bond with each other and the natural environment because it’s part of their culture and their history”. Susan stated the waters were healing for students and that research existed that demonstrated “blue and green are very calming colours”. Barb hoped the CP exposed students to “actual wildlife and the environment that’s around them, and why it’s, why it’s important, why it’s useful to them”. Some students, such as Betty, do not have natural environments at home to play in, so CP gives them an opportunity to interact with a natural environment.

From my observations, the CP did allow students to experience their local environment. For example, in my field journal on multiple dates, I recorded all the animals students reported seeing, sometimes close to their canoe. These animals included: salmon, river otters, seals, kingfisher, heron, swans and their cygnets, Canadian geese and their goslings, bald eagles, and cormorants. I also noted student observations, such as Betty's, who "told me about seeing a seal and that its head looked soft" (April 30, 2013). Since I observed students touching the water as they paddled, playing with the eelgrass, pointing out animals in and out of the water, learning about the waterway's flora and fauna, and experiencing how the tides and wind affected the water, the CP likely connected them to their local environment.

Helped to address vulnerability.

Volunteers, staff and parents reported the students were socio-economically and emotionally vulnerable and that the CP helped to mitigate this. From a socio-economic standpoint, not every student at the elementary school came from families that either had a canoe or could afford to go canoeing with their children or pay for paddling lessons. Regarding school sport or recreational field trips, families and the school have tight budgets and "don't have three hundred dollars a time for a bus" (Parent Participant A). Peter, parent participant D, acknowledged "it's a very low income school with a lot of underprivileged First Nations children, and any other children that come here". Like Patty and Peter, Dan thought the CP was important "for the students that actually, that don't get an opportunity to participate with canoe families". Outside of school, organized sports are too expensive for many students; therefore, they have less opportunity to learn self-discipline and teamwork; consequently, the CP provides students an opportunity to learn these things (School Staff Participant A).

The lack of self-discipline and teamwork skills can be part of students' emotional vulnerability. Rachel related the following story to illustrate the fact that we must support the emotional needs and development of students instead of focusing on trying to manage behaviour in the canoes.

> "Another, another EA [educational assistant], she brought it [boxer shorts] in because her son had grown out of them. So I wasn't going to put them out for them to choose, and then they fought over them (pause) and then I saw them on one of the kids today, and I thought, it's the underneath stuff, it's all the hidden stuff. They don't have those things. They might look presentable on the outside, but they don't have those core things they need (pause) and the same goes when we take them canoeing. You know, we're trying to deal with all this behaviour, but it's all that underneath stuff (pause) that needs to be supported."

Rachel's boxer shorts analogy demonstrates that student's do not always have the "emotional boxers", i.e., the emotional tools, to know how to properly self-regulate and behave in socially acceptable ways. For some students, this begins with a lack of emotional and social support at home (School Staff Participant D). From Peter's perspective, the "canoeing program would help those children that need these kind of things where they don't get the attention they need at home". According to Jack's point of view, the regular classroom environment may not be meeting the needs of certain students, but the CP may provide an opportunity for these students to "see a totally different aspect of themselves" and feel good about their abilities.

Students' socio-economic, emotional and academic vulnerabilities are related to each other. As Rachel, school staff participant D, states, "every student in the class, except for maybe

one, has significant challenges, either academically, at home, behaviour, but they're all related". In addition, students' socio-economic and emotional vulnerability can act as a negative feedback loop, as resilience enhancing programs, like the CP, can sometimes exclude schools like the elementary school because the students "don't have the clothing, they don't have the skills, they don't have the behaviour, they don't have the behaviour expectations, they struggle with some focus and listening skills" (School Staff Participant A).

Themes: Secondary Findings

There were other themes that developed from the data analysis besides the benefits of the CP for students. These themes are elaborated below with descriptions and examples. Some themes were derived from a combination of students' lived experience and adult interview data.

Traditional uses and tales of canoes.

As an attempt to determine the cultural relevancy of the CP, I asked students how the canoe was related to their culture and history and to recall Indigenous stories involving canoeing or canoes. Regarding how the canoe related to First Nations history, seven students needed prompting for them to recall what their ancestors used canoes for. Out of the 11 student participants, only one student could not recall how canoes were used in the past. The other students reported the canoe was used for hunting, fishing, and/or transportation. A couple students also knew their ancestors used it to trade with other First Nations, and one student said they raced canoes long ago and today.

Regarding stories about canoeing, three students remembered a story and one offered a traditional teaching about canoeing. Betty, Bill and Freya retold a story Mrs. Smith had told them in class about two brothers going canoeing to "get their mom a present" (Student

Participant K), but then waves came and their boat got tipped over by a whale. The older brother drowned because he did not practice swimming in cold water every day unlike his younger brother, who did even though "the other kids laughed at him and made fun of him" (Student Participant B). For Bill, this story meant you had to "Follow (pause), what you have to like do and stuff, and do important things to like, survive, and, in the wild, to survive. Learn how to use the weapons to defend yourself." Instead of a story, Earl related a First Nations teaching regarding the canoe:

> If you're mad or upset when you go out on a canoe, it, it might tip you, and you never disrespect a canoe, you never, like hit it on purpose or drop it. You never drop your canoe or it will never let you go on again. Whenever you go on, you'll just tip.

Gender difference in behaviour and teamwork.

From the students', teacher's, some volunteers' and my personal observations, the girls were much calmer and happier and had better teamwork than the boys, when the girls and boys paddled in separate boats, for two weeks during dragon boating and for several weeks during canoeing. Alice, Carrie, Emily and Freya preferred paddling with just the girls because the boys were yelling at them to paddle, fighting with them, not paddling, or splashing them. Betty also preferred being with the girls because "all us girls are really good friends". Alice thought "the girls know how to be nice, and keep calm, and say good things". Emily thought the girls knew how to keep in time better and liked being with her friends. Freya preferred paddling with the girls "because they tell stories, make it more fun".

Teacher, volunteer, and my observation confirmed student experience. For example, Rachel thought the girls paddled "pretty, pretty, peacefully". From Barb's perspective, "there

was a clear gender difference" at the beginning of dragon boating when the girls paddled on their own. According to Barb, the girls "were charming, they were, you know, pleasant, they were easy to get along with, they wanted, just wanted to do things well", whereas "everybody in the boy boat, including you, was pulling their hair (laughs)"; however, as Barb pointed out, "it may just be that girls are (pause) quicker off the mark". Rachel, Barb and Jack commented on how the girls had better teamwork compared to the boys. Barb and Jack both remarked how the girls encouraged and spoke nicely to each other, unlike the boys. As well, Jack reported that "the girls seem to have really taken on the challenge and worked together, and they're happy to work together", "the girls felt more cohesive together", and that "there wasn't the cooperative and encouragement comments, when they were mixed". From my perspective, the girls appeared happy paddling in their own canoe. For example, on May 14, 2013, I wrote in my journal that the girls in their canoe were "softly singing" and "paddled mostly together", which was quite a contrast to my canoe, where "almost the whole way, Derek and two other students exchanged verbal insults". Part of the peaceful atmosphere in the girl's canoe was also due to Rachel's decision to move Betty and Debra to the seat in front of the stern to prevent other students from teasing them for having troubles paddling in time.

Negative peer interactions.

Although students mentioned few dislikes, such as cold weather, paddling with chapped skin, walking to the VCKC, or walking barefoot on the rocks to get to the canoes, one prominent dislike was negative peer interaction. When there were negative peer interactions in the canoe, students teased each other, verbally bullied each other, splashed each other, tried to scare each other by rocking the canoe, or act passive aggressively by not paddling. For example, Charlie

reported “they’re always teasing Derek…. they’re saying he’s lily dipping”. On land, they would rough house (i.e. push and/or grapple) either on the walk to the VCKC or at the clubhouse and tease each other. Bill complained a peer “tried pushing me off of the side by where you walk into the door”. Negative emotions and negative peer interactions were significantly higher when students had no choice to go canoeing. This observation was shared by the teacher, two educational assistants, a VCKC volunteer, and I. According to the First Nations teaching mentioned by Dan and Earl, when negative emotions are present, the canoe can tip. Consequently, Earl was worried the canoe was “going to tip” when some other boys were angrily insulting each other.

Sometimes what appeared to be negative peer interactions, was only playful teasing. For example, Bill reported some kids told others to “shut up and paddle” but he thought it was funny. It also appeared to be a macho thing for boys to tell one another from my personal observations. However, for students who were struggling to paddle after the walk, this teasing may have been perceived as negative.

Choice promoted positive peer interactions and self-regulation.

When Rachel gave students the choice of whether to go canoeing or stay behind in the park on the second to last canoe trip, about one quarter elected to stay behind, and it removed the negative peer interactions in the canoes. Subsequently, Rachel recounted: “I felt safe paddling. There was positive, I heard kids laughing, I heard kids just chatting and enjoying themselves.” In my field journal, I recorded “Rachel reported… students’ behaviour in the canoes was markedly different…and Barb agrees” (May 28, 2013). Anne’s observations confirmed these positive peer interactions:

> A lot of the kids were saying today when they got off that it was the best one they'd ever been on, and I think that was primarily because the kids that didn't want to participate, weren't actually in the canoe.

Rachel declared students were "happier because there wasn't any dissension in the canoe. There wasn't anyone in there that hadn't chosen to be in there". In addition, some students were happier because we adapted the program to them, i.e., gave them a ride to the VCKC, so they had energy to paddle.

Choice allowed students to practice self-regulation and opt out if they did not want to paddle. The elementary school students are vulnerable and have many challenges in their lives; consequently, sometimes they are not emotionally or physically able to paddle on a given day. For example, Barb observed in her interview that students had "low energy" on the dragon boat paddle after Thanksgiving. According to Dan, some of these students lived in foster care and they missed out on Thanksgiving. Choice would have permitted these students to opt out of dragon boating after the emotionally challenging weekend.

CP too short for bonding for volunteers but helpful for school staff.

Although the CP helped link students to caring adults, the CP did not last long enough for adult volunteers to bond to students. For example, Barb felt that it was hard to bond and learn the names of students since students were moved around between canoes and she only saw them "once a week, for an hour". Plus, as Steve aptly pointed out, students are "so busy, at this age, with each other". School staff generally found the CP assisted them to work with students. For example, Susan reported the enjoyable shared experience had helped her become "more connected with our older students" and Rachel felt the CP was one of many "positive

interactions with" the students which helped her "work with them". While Anne felt she had already bonded to students, she could not tell there was any difference because she "was watching from shore". Even though Dan knows many of the students' families, he did notice some of the students "take [him] a little bit more seriously now" because of his skills as a stern and his knowledge of stories and songs, which he shared.

Little challenge.

The CP presented little challenge for most students because they had previously canoed. Only two students had never paddled before the CP and two had kayaked. The other students had paddled in a canoe with family, relatives, friends, at summer camp, or on a racing team. Earl, who trained five days a week on a canoe racing team, only found the CP challenging when the water was rough and he was paddling "against the current". Even though Emily had never paddled, she knew the basics because her friends at school had explained them to her before the CP began. Alice, Betty, and Derek found learning to canoe a little challenging. Charlie only found the first day difficult and Debra found canoeing difficult. Rachel, staff participant D, noticed Debra and Betty had trouble keeping in time.

CP did not seem to benefit all students.

The CP did not seem to benefit two students, and perhaps more, because of either a lack of challenge or struggles with paddle timing. For example, on one canoe outing, I recorded that two students "were barely paddling" (April 23, 2013). The next week, Jack, volunteer participant C, had the same observation of the two students (April 30, 2013). Afterwards, Susan, staff participant A, told me "some students struggle with coordination and timing because of learning disabilities" (April 30, 2013). I also observed these two students chose not to come on

some canoe outings. In addition, others students, including Earl were on a racing team which practiced five days a week. Earl told me they sometimes had to paddle by themselves in the ocean to a marker and then paddle back to shore, so the level of challenge in the CP may not have been enough for some students to have developed increased self-efficacy or feelings of self-esteem. For example, I noted one student "refused to come canoeing because it was boring" (May 22, 2013).

CP benefitted others.

The CP also benefitted non-First Nations students, school staff and volunteers. For example, the CP was seen as a way for non-Indigenous students to become "interested in Aboriginal history and stories" (School Staff Participant C). Paul the Elder, and Peter, parent participant D stated the CP benefited both First Nations and non-First Nations students. As well, Rachel remarked the CP "got me connected to the community" and into the habit of doing regular field trips. Furthermore, not all the volunteers had their own grandchildren; thus, it was beneficial for the volunteers to connect with the students (Volunteer Participant A).

Summary of Findings

The findings of this study validate the CP as a culturally relevant program with many important benefits for students which promote their resilience. Enhanced self-efficacy, as a theme, was strongly corrobated by student, adult and my journal observations. Student recognition of their increased self-efficacy in paddling skills, timing and/or endurance likely generated feelings of self-esteem. Students' self-esteem was also supported by VCKC volunteers and community members who watched them paddle. Moreover, the mentorship of VCKC volunteers and high school students appeared to promote students' positive future self-

concept. The CP inherently taught students teamwork skills and life lessons, such as the importance of taking initiative.

Themes of connection were prevalent in the data. Not only did the CP link students to each other and their school through a fun shared learning experience, it also created a bridge to community resources, such as the VCKC's canoe equipment and experienced volunteers, high school students, and the Gorge Waterway. By reconnecting students to their traditional waterway, the CP also helped relate students to their cultural tradition of paddling, places of cultural significance along the waterway, ancestors' history, spirituality, and environment. The CP provided numerous opportunities for students to interact and learn about the waterway's flora and fauna. The connection to nature and the water and the physical exercise of the CP was reported to benefit students' mental and physical health. By connecting students to school, community resources, their traditional waterway, and nature, the CP helped address students' vulnerabilities. These connections also benefitted non-Aboriginal students, staff and volunteers.

Other themes point towards program improvements. The girls enjoyed paddling more and had better teamwork when separated from the boys. Allowing students to opt out of canoeing when they were not emotionally ready to be in the canoe promoted positive peer interactions in the canoe and students' self-regulation. Students who have learning disabilities or found the CP lacking in challenge may not have benefitted as much from the CP.

In the next chapter, the benefits of the CP will be related to the protective factors of resilience and how the findings demonstrate the CP improves student's resilience. Discussion will also include the CP's strengths pertaining to education and environmental education.

Chapter 5: Discussion and Recommendations

Overview

In this chapter, I discuss how the CP's benefits relate to the protective factors of resilience. It was periodically difficult to ascertain students' lived experience of the CP's benefits as some students frequently needed prompting to answer the interview questions and students' answers to the questions occasionally lacked thoughtfulness, which can be expected from their age level. To mitigate these difficulties, interview data from students was triangulated with adult participant data whenever possible.

This chapter begins with a discussion of research limitations and inherent bias before delving into the CP's benefits. The findings from this study suggest the canoe program had many significant benefits for the elementary school students. Although the benefits are mostly discussed separately in this chapter, it is important to note, that like protective factors, benefits overlap and interconnect with each other to enhance students' resilience. In addition, some risk factors are discussed in relation to their effect on protective factors.

Research Limitations

Improvements in specific protective factors for students may be the result of other variables in students' lives within school and outside school, besides the canoe program. The literature review affirms this possibility. For example, Sapienza and Masten (2011), Ungar et al. (2007), Werner (2005) all underscored that a person's context impacts their resilience. In addition, Alvord and Grados (2005) acknowledged protective factors overlap and interact with each other. Furthermore, Masten and Reed (2005) stated resilience is "multidimensional and

configural" (p. 80) and admitted it is difficult to develop pathway models of resilience as "lives unfold from myriad transactions among systems and in idiosyncratic ways" (p.81).

Sports programs, academic support programs, such as Fast Forward or Byte Camp, school resilience and meal programs, parental relationships and maturation were some of the variables which may have impacted the protective factors and resilience of the elementary school students. For example, Rachel observed students were better at teamwork compared to when they first started dragon boating, but believed it was the result of many things, such as maturation, students being together as a group, and "team building within the classroom". When asked about other changes in students from the CP, Rachel stated "it's hard to say, because everything they do, it all works together". Regarding changes in confidence, Patty acknowledged the CP had given her daughter "a little bit more confidence and, because she's learnt some more skills", but added that school programs, such as Fast Forward, and outer-school programs like Girl Guides also "plays a role in it". Like Rachel and Barb, Patty expressed maturity accounts to a degree for improvements in students. Moreover, Rachel noticed an increased interest in school in students, which may have been due to the canoe program, "but more than anything, just because it's part of the whole experience". In addition, Anne stated students' interest in school can be due to other factors such as "Rachel's classroom…breakfast program… [or the] lunch program". Although Barb and Jack perceived an increase in hardiness in students, this could be due to students getting used to the CP's routine or becoming more physically fit. Furthermore, in the last year and a half, school staff have instigated new programs to promote student resilience "after having Monique Gray Smith give a workshop at the school"

(School Staff Participant A); these programs may additionally impact students' protective factors of resilience.

The duration and immersion of the CP also may not have been sufficient for significant changes in protective factors to occur. As mentioned in the literature review, Cason and Gillis (1994) discovered programs of longer duration had greater impacts on participants. Plus, Schrader (2012) theorized adolescents built resilience over years in the outdoor adventure program she studied. Many of the studies of outdoor and adventure programs I reviewed investigated programs done over consecutive days or weeks. The participants in these studies were immersed in the programs more intensely for longer periods than students in the CP. Consequently, it may have been unrealistic to expect observable changes in certain protective factors like self-regulation, since students only paddled 40-50 min per week for three weeks in the fall and nine weeks in the spring.

Inherent Bias

It was evident from data analysis that volunteers and staff desired the CP would benefit students. The volunteers and staff participated in the CP because they believed the CP was a good thing for students and wanted to make a difference or as Barb stated "make stuff better than it was when we got here". Bias was evident in some of the staff responses, but less so in those of the volunteers. For example, when I questioned Rachel if the CP helped students develop self-efficacy, she replied "I believe so, because I believe in it, because I think it's great". When I asked Susan if students became better at self-regulating themselves in the canoes, Susan responded, "Definitely. Yes. Oh yeah, I know a lot of those children, and I can unequivocally make that statement." Many of Susan's initial responses to whether or not she had seen certain

changes in students were quite enthusiastic and positive. Although bias was evident, the triangulation of data from different interview groups and my journal observations supports the credibility of the findings.

How the CP's Benefits Relate to the Protective Factors of Resilience

The power of the CP lies in its ability to connect students to each other, school, community resources, culture, and nature. Like the web of life's many interconnections promote its resilience, the CP created numerous interconnections between students' inner and outer resources which strengthened these resources and students' resilience. For example, the enjoyable shared experience of the CP connected students to each other and the school, but also promoted self-regulation and teamwork. I explain the effect of the CP's benefits and some of their interconnections on various protective factors below.

Self-efficacy.

Triangulated data from the interviews suggest that all student participants achieved increased self-efficacy. The CP naturally helped expand student's life experience and skill set. As Rachel stressed "anytime you broaden a person's world, you can't help but build in feelings of competence because they've experienced something more". By the end of the CP, student participants experienced success becoming a better paddler (i.e., timing, strength, endurance), and they had an opportunity to master paddling in a Voyageur canoe and gain self-efficacy. In addition, some students recognized their gain in paddling endurance and reported it to adult volunteers. Moreover, students' gain in competence and confidence was demonstrated when they coached others in canoe safety and timing, helped the adults with the canoes, selected their own PFD and paddle, and became less afraid of getting into the canoes or changing seats. As

mentioned in the literature review (O'Shea, 2008; Masten & Reed, 2005), mastery experiences create feelings of self-efficacy. According to Bandura (1997), mastery experiences from participating in an activity "provide the most authentic evidence of whether one can muster whatever it takes to succeed" (p. 80). In addition, the level of challenge was low enough for all students to experience success paddling, which also help increase their beliefs of self-efficacy. As Bandura (1997) states, "successes build a robust belief in one's personal efficacy" (p. 80). While many students reported they did not find canoeing difficult as they already knew how to paddle, they still made gains in paddling timing as observed by volunteers, staff, and myself. Furthermore, "for young children, high effort means the acquisition of more ability" (Nicholls and Miller, 1984, as cited by Bandura, 1997, p. 83); thus, students also likely experienced increases in self-efficacy because of their substantial efforts to paddle a 300 pound Voyageur canoe for up to 50 minutes. Like Dan stated, "it really helped them see what they capable of doing". When students had the choice to go canoeing, they were happier, which helped facilitate gains in self-efficacy. According to Forgas, Bower & Moylan, (1990), people are more likely to have more positive judgements of their ability to perform or "self-serving attributions" (p. 817).

In the literature review, self-efficacy is considered a protective factor (Hurtes et al., 2000) or within a category of protective factors of resilience (Alvord & Grados, 2005). Because the CP most likely increased student's self-efficacy, the CP helps support students' development of resilience. This finding is congruent with the results of other studies of experiential and outdoor adventure programs (Beightol et al., 2009; Hattie et al., 1997; Kerr, 2009). By enhancing student's self-efficacy, the CP supports one of Gray Smith's (2012) four blankets of resilience, i.e., "Sense of Self" (p. 49).

Self-esteem.

Outdoor adventure and experiential programs like the CP have been shown to benefit self-esteem (Gee, 2009; Hattie et al., 1997; Mann, 2007). Self-esteem is a protective factor of resilience (Alvord & Grados, 2005; Gray Smith 2012). It is probable that students had feelings of self-esteem for their increased endurance and paddling skills since self-esteem is partially derived from "personal competence" (Bandura, 1997, p. 12). As well, students likely had feelings of self-esteem from being able to help with the canoes. The literature review supports the notion that giving children responsibility to carry out and master tasks can enhance self-esteem (Alvord & Grados, 2005). Because the CP is an activity with which most students can experience success and gradually expand their abilities, it is more likely to support self-esteem and the child's "sense of self" (Gray Smith, 2012, p. 52). The CP also allows students to build self-esteem from "successful risk taking, [and] physical activity" (Gee, 2009). For example, some students overcame their fear of getting into the dragon boats and canoes. Moreover, towards the end of the CP, some students were proud of their increased endurance. In addition, similar to Whitbeck et al.'s (2001) findings, students, such as Derek, who thought canoeing represented "Native pride", may have developed feelings of self-esteem from canoeing and the cultural teachings from Dan and the Elders. Furthermore, students may have experienced feelings of self-esteem from the mere act of spending time in nature (Pretty et al., 2005; Wells & Evans, 2003).

Giving students the power to decide to go canoeing or not, may have provided students more of a sense of control over their lives and promoted feelings of self-esteem. Rachel emphasized that much of school is "done to them" so it's important whenever possible to provide

students choice and "include them in the decisions". Offering students choice permits them to "partner in their learning, as opposed to being directed" (School Staff Participant D). As mentioned in the literature review, a sense of control over one's life is considered a protective factor of resilience (Werner, 1993, as cited by Green, Kleiber & Tarrant, 2000). When students choose activities and do well, they may gain self-esteem (Gilligan, 1999).

Enjoyable shared experience promoted peer connections and self-regulation.

The enjoyable shared group experience of canoeing on the Gorge Waterway enhanced peer connections and self-regulation. Students enjoyed socializing with each other while paddling. The majority of students preferred paddling with members of the same gender because they were their friends. Since the girls experienced more positive social relations when they paddled on their own, they may have experienced larger increases in protective factors, such as self-efficacy, ability to work with others, and self-esteem, than if they paddled with the boys. On their own, the girls may also have had a better chance to gain self-efficacy and feelings of self-esteem since they may have been intimidated by stronger boys and the pressure to compete and perform. In addition, Rachel reported that allowing students the choice of whether or not to come canoeing created an "emotionally stronger" team, which supported peer relations. Volunteers, staff and I also noticed how much happier and better behaved students were when they had choice. If students are happier, they are more likely to encourage each other, which can strengthen relationships.

The literature demonstrates that positive peer relations in outdoor adventure-based (e.g. Neill & Dias, 2001; Lubans et al., 2012) and experiential programs (Kerr, 2009) boost resilience and/or its protective factors. Positive relationships with peers are an important protective factor

within Alvord and Grados' (2005) protective factor category of "connections and attachments" (p.240). Friendships play a key part in facilitating "emotional, social, and educational adjustment" (Rubin, 2002, as cited by Alvord & Grados, 2005, p. 240), and probably more so for this group of students since they live in close-knit communities and they are classified as 100% vulnerable (Greater Victoria School District 61, 2012). A couple articles (Brendtro et al., 2005; Mitchell & McCall, 2007) underscored the importance of creating supportive peer groups to build resilience in children. The CP likely assisted in strengthening peer relations and fulfilling students' need for belonging (Brendtro et al., 2005).

The fun shared experience of the CP also enhanced students' self-regulation especially when they had a choice. Giving students a choice also respected First Nations teachings around the canoe which encourage self-regulation. As Dan mentioned, we were respecting "what's been taught at home for them" which is "they're not supposed to go in a canoe feeling a certain way". This may be because of their emotional state or "something that may be going on in life for them" (School Staff Participant B). Like Rachel, Roberta, parent participant E, thinks that part of the CP is about helping students make "good choices", such as coming to school, or not going canoeing if they are feeling upset. In addition, choice allows school staff to respect students' feelings and be more sensitive to the challenges many of them face. Moreover, when students are able to self-regulate their emotions and conduct, they "elicit positive attention from others" (Alvord & Grados, 2005, p. 240) which translates into better interactions with adults. By offering students choice, they learn to recognize if they are not feeling up to canoeing and opt out of canoeing; thus, students learn to better self-regulate and the experience is more fun for everyone.

As mentioned in the literature review, enjoyable experiential education programs can engage students and help them develop self-regulation (Coholic et al., 2012). Self-regulation is an important protective factor of resilience (Alvord & Grados, 2005; Werner, 2005). Although the students' enjoyment of the CP, the option to choose to canoe, the CP's routine, the act of balancing a canoe, the modeling of appropriate behaviour in the canoes by peers and adults, and the physical exercise seem to have helped students self-regulate in the short-term, this effect appeared to dissipate quickly. Morgan (1999) also observed only a short-term improvement in self-regulation and affect in participants. Studies of outdoor adventure-based programs (Cason and Gillis, 1994; Hattie et al., 1997; Lubans et al., 2012) and experiential education programs (Coholic et al., 2012) have found that programs like the CP do build self-regulation or behaviour improvement in participants; however, outdoor adventure-based programs often occur for consecutive days instead of an hour per week.

Teamwork.

Students improved in paddling as a team, listening to adult volunteers, following commands, and helping move the canoes in and out of the water. Thus, the CP enhanced teamwork skills. Similarly, Hurtes et al. (2000) found that the "Teen Outdoor Adventure Program" (p. 42) improved participants' capability for working with others. Permitting students to help move the canoes gave students more responsibility, which may have promoted the external protective factor of teamwork. According to Beightol et al. (2009), giving children more responsibility can encourage external protective factors.

Improved teamwork could also be influenced from interconnections to other protective factors. Students experienced increased self-efficacy, feelings of self-esteem and supportive peer

and volunteer relationships in the CP, which all could have contributed to better teamwork. For instance, when the girls paddled on their own, it is likely their better social relations helped further their teamwork. Students' enjoyment of the CP and habituation to the CP's routines also likely enhanced their teamwork capabilities.

CP strengthened connection to land and possibly cultural identity.

The CP connected students to their traditional waterway through the cultural activity of canoeing and the inclusion of Indigenous environmental education (EE). One component of Indigenous EE is connecting students to the land since "Indigenous knowledge comes from the land" (Simpson, 2002, p.19). The Elders' traditional teachings and Dan's sharing of paddling songs and traditional places along the Gorge Waterway also helped connect students to their culture and traditional waterway. The life lessons the Elders bestowed upon the students were derived from millennia of living in harmony with nature. This included the lesson on respecting the paddle, the canoe and everything "that lives inside the water" (Parent Participant F). Part of creating a "sense of culture" (p. 69) is teaching "children the sacredness of all creation and that they may love and respect all living things" (Gray Smith, 2012, p.70). Learning life lessons from the Elders also strengthens Gray Smith's (2012) fourth blanket of resilience, i.e., "Sense of Culture, Language and Connection to Land" (p. 69). Similar to Simpson's (2002) guidelines for Indigenous EE, Gray Smith's (2012) fourth blanket of resilience underscores the core of support programming for First Nations students "needs to be culture that is inclusive of language and connection to land" (p.69). As "Indigenous ways of living in nature" (Aikenhead & Michell, 2011, p. 70) are placed-based, experiential, and occur "in the pursuit of wisdom-in-action for the purposes of survival" (Aikenhead & Michell, 2011, p. 70), other life lessons students may have

learned from canoeing, such as the importance of having mental balance and taking initiative could also be considered part of Indigenous EE. Using Indigenous EE to increase students' connection to the land can potentially increase ecological resilience as students, who are attached to the land, are more likely to care for it.

The cultural activity of canoeing, the Elders' teachings, and Dan's sharing of paddle songs and traditional places also may have bolstered students' cultural identity, especially as Dan emphasized, for students who "come from canoeing families". According to Aikenhead and Michell (2011), reinforcing students' connection to the land simultaneously strengthens their sense of cultural identity since "Indigenous peoples' self-identities are imbued with … a strong sense of place" (p. 74). However, it is uncertain if the CP enhanced cultural identity partly since I do not know if students acquired "a strong sense of place" (Aikenhead & Michell, 2011, p. 74). From the literature review, Indigenous cultural identity can be enhanced by engaging in culturally relevant leisure activities (Iwasaki & Bartlett, 2006) and developed through "stories, legends, and lessons from the past as well as growth opportunities through spiritual ceremonies and traditions … language, and receiving teachings from Elders" (Ritchie et al., 2010, p. 302). If the CP helped strengthen cultural identity, then it would also assist in reinforcing individual and cultural resilience (Lalonde, 2006). The importance of using culturally relevant activities to boost a person's resilience is well supported by the literature review (e.g., Filbert & Flynn, 2010; Gilligan, 1999; Gray Smith, 2012; Iwasaki & Bartlett, 2006; Lalonde, 2006; Ritchie et al., 2010; Ungar et al., 2007; Whitbeck et al., 2001). While Rachel and Steve had reservations of the cultural relevance of the CP, it is important to remember the following: the CP was initiated by non-First Nations, it will take time to build commitment to the CP from the Nations, and

students' parents are not always available. Like Paul the Elder stated "it's a great thing that the elementary school is doing…. we can't teach them all, all of them, by ourselves".

Canoeing and nature promoted students' mental and physical health.

This study found that the CP benefitted students physical and mental health through teaching students mental balance, exposing them to the healing nature of paddling and the water, increasing their level of physical exercise and connecting them with nature. Exercise itself can decrease blood pressure, enhance self-esteem and improve mood (Pretty, Peacock, Sellens, & Griffin, 2005). Health is an important protective factor of resilience for all humans (Werner, 2005). Since numerous First Nations communities have an increasing diabetes epidemic (Young, Reading, Elias, & O'Neil, 2000) and an absence of physical activity puts people at risk for diabetes (MacCallum, 2011), it is vital to help the students adopt and enjoy healthy habits of exercise, such as canoeing. The literature review demonstrates that outdoor adventure programs (e.g., Cason & Gillis', 1994; Caulkins, 2010; Hattie et al., 1997) promote mental and/or physical health. It is also important to recall that culturally relevant leisure, such as the CP, encourages "spiritual or emotional/psychological renewal" (Iwasaki & Bartlett, 2006, p. 333). Similarly, the Elder, Parent Participant F, and School Staff Participant A stated paddling or being on the water cleansed people of mental anguish.

The CP also improved students' mental and physical health by connecting them to their local traditional waterway and its flora and fauna. The literature also supports this finding by concluding that children and adults, who spend time in nature, have better mental and physical health (e.g., Berto, 2005; Gee, 2009; Li, 2010; Li et al., 2007; Park et al., 2010,; Pretty et al., 2005; Taylor et al., 2001; Wells & Evans, 2003). For the vulnerable students in the elementary

school, exposure to the nearby waterway is very important to help ease their life stress (Wells & Evans, 2003). While paddling on the waterway, students touched the water, breathed the fresh air, felt the rain, wind, and sunshine on their faces, played with the eelgrass, experienced the tides and close encounters with local wildlife and learned about local flora and fauna and how wind and water interact. As indicated by the literature, outdoor adventure-based programs engross students in nature and "offer unique health-related outcomes [such as] ….finding meaning and spirituality" (Ungar et al., 2005, p. 332). Moreover, feedback from interacting with natural environments also helps to improve emotional outcomes (Hattie et al., 1997).

CP's educational benefits.

The CP facilitated student's connection to school and learning because it was an enjoyable, social, experiential, outdoor environmental adventure program and it included teaching staff, Elder, parent, and adult volunteer involvement. As stated in the literature review "fun, creative, and experiential methods can engage children with high needs" (Coholic et al., 2012, p. 354). Moreover, experiential learning experiences found in outdoor environmental education programs captivate students (Chawla & Escalante, 2007). The CP also engaged students since it involved teaching staff and adult volunteers and is place-based; in other words, the CP is "intergenerational place-based education" (Mannion et al., 2010, p. 1). Because the CP made school more interesting for students, the CP helped build alternate connections to school and the school community for students. Connecting students to school is one of the goals of GVSD 61's Aboriginal Education Enhancement Agreement (Greater Victoria School District 61, 2005). Interest in school and learning engagement could be included in Alvord and Grados' (2005) "School Achievement and Involvement, IQ, and Special Talents" (p.241) category of

protective factors. A study by Jessor, Van Den Bos, Vanderryn, Costa, and Turbin (1995) has demonstrated that a "personal orientation and commitment" (p. 932) to school is a potent protective factor. By increasing the connection of students to their school, the CP was also helping to meet students' need for belonging (Brendtro et al., 2005).

The CP could have other educational benefits for students. The literature shows that natural environments improve attention (e.g., Berto, 2005; Taylor et al., 2001). If we integrated more Indigenous environmental education across the curriculum while using the CP to bring lessons to life, e.g., conducting water quality testing to see if we are respecting the water and the life within it, it is possible we could further engage students and improve academic achievement. The literature supports this suggestion as it reveals environmental education enhances academic performance (Chawla & Escalante, 2007, Wheeler et al., 2007).

Linked students to community resources.

The CP also strengthened students' resilience through connecting them to community resources: the VCKC, the Gorge Waterway, and caring adults.. Community resources, such as recreation programs, are considered an external protective factor (Alvord & Grados, 2005; Ungar, 2005; Werner, 2005). In addition, the CP reinforced student's resilience through linking students to the First Nations community's traditional resource, the Gorge Waterway. From interviews with the parents, Elder, and some staff and volunteers, the CP is enriching Gray Smith's (2012) third blanket of resilience, i.e. "Sense of Community" (p. 63).

As part of strengthening students' ties to community, the CP introduced students to other caring adults in the community. Students perceived the VCKC volunteers as caring, kind, knowledgeable, skilled, and encouraging. Having supportive relationships with caring adults

outside the family is considered a protective factor (Alvord & Grados, 2005; Green et al., 2000; Russell, 2000; Werner, 2005). By developing "trusting connections" (Brendtro et al., 2005, p.132), the CP is helping to fulfill students' need for belonging (Brendtro et al., 2005) and promote their resilience (Ungar et al., 2005).

Mentorship enhanced several protective factors.

The use of mentors in outdoor adventure-based and leisure programs can help build resilience and its protective factors (Cooper et al., 2004; Gilligan, 1999; Green et al., 2000; Schrader, 2012). In this study, the mentorship of the high school students and the VCKC volunteers seemed to encourage some of the elementary school students to have a positive or hopeful outlook for the future, which is considered a protective factor (Hurtes et al., 2000; Walsh, 2009). Alvord and Grados (2005) include a positive future outlook in their protective factor category known as "proactive orientation" (p. 239). As cited in the literature review, outdoor adventure-based (Hurtes et al., 2000) and wilderness programs (Walsh, 2009) can create a hopeful future outlook in participants. A person with a hopeful future outlook may be more likely to surmount future adversity (Walsh, 2009). Susan believed the high school mentors helped provide a positive future outlook for students. Although some students did not like having the high school mentors in the boat, it is important to provide authentic mentors "with whom Aboriginal children can identify" (Morgan, 1999, p. 59). Authentic mentors may also help promote a "sense of collective cultural identity" (Lalonde, 2006, p. 57) which assists First Nations children and youth to have a positive future outlook and navigate past hardship (Lalonde, 2006).

The high school students and VCKC volunteers also provided good role models. Although Bill and Carrie reported the high school mentors bossed them around and Bill stated they also teased a student, the high school mentors also modeled appropriate behaviour for students. Modeling of appropriate behavior is considered another protective factor (Jessor, 1992, 1993, 1995, as cited in Green et al., 2000). For example, high school mentors followed adult instruction and helped transport the canoes to and from the racks. The VCKC volunteers were also good role models for students as they were consistently patient, kind, caring, cooperative and supportive, and modelled proper canoeing skills and behaviour.

While Cooper et al. (2004) and Gilligan (1999) emphasize the use of mentors to build self-esteem, the VCKC volunteers may have facilitated feelings of self-esteem and self-efficacy in students more than the high school mentors for five reasons. First, the VCKC volunteers were significantly more skilled and knowledgeable in canoeing than the high school students. Consequently, they were able to more effectively teach students proper terminology, paddling strokes, canoeing skills, such as switching seats, and canoe safety. In contrast, according to student participant reports, some high school students did not know how to paddle in time or how to sit in the canoes. Barb, volunteer participant A, also noticed that the high school students were “standing around with no idea of what to do, or how to figure out what to do next”. To be an effective mentor, a person needs to be proficient in the skill he/she is demonstrating, otherwise, feedback and instruction have less meaning. Second, volunteers benefitted students’ self-efficacy and self-esteem by positively reinforcing good teamwork skills, paddling strokes, and endurance. On the other hand, two students remarked the high school mentors scolded elementary school students for not paddling in time when they were. As shown in the literature

review (e.g., Hattie et al.,1997; Lubans et al., 2012; Mann, 2007), positive feedback from program staff and volunteers is a factor for improving emotional outcomes in participants of outdoor adventure-based programs. Third, VCKC volunteers, as experienced canoe paddlers and instructors, likely had more rapport and trust with students than the mostly inexperienced high school students. VCKC volunteers were with students for 12 paddling sessions compared to the high school students, who came for four weeks; thus, the VCKC volunteers additionally had more time to build rapport and trust. There was also less overall rapport between the high school mentors and the students because the Grade 5 class is close-knit and they do not readily accept new young people into their group (School Staff Participant D). Plus, students were told that their class was the only one to receive the CP. As Rachel observed, her students "were much happier, when the older kids weren't there. Yeah, this is their thing (pause) and that broke it up". Instruction and feedback are more effective if trust and rapport exist. Fourth, overall, students reported a more positive experience with VCKC volunteers. Fifth, VCKC volunteers kept students safe by diffusing angry conversations with humour and having firm boundaries and rules around boat safety. Because students felt safe, they could enjoy the paddling experience more and concentrate on their paddling. When students can focus on a skill, they are more likely to improve and gain self-efficacy.

Strengthened community.

As displayed in the findings, the CP also benefitted non-First Nations students, school staff and volunteers. Since the CP is a community effort, it brings together people who normally do not socialize with each other. Through establishing ties between the school, the VCKC, the children, parents, and Elders of the Songhees and Esquimalt Nations, the CP helps to build

community. By strengthening social relations and understanding of each other's cultures, the CP is helping the community at large to become more resilient.

Supporting protective factors addresses vulnerability.

The CP enhances many protective factors associated with resilience, and in doing so, helps to mitigate the students' academic, social and emotional vulnerability. The literature review provides evidence that outdoor adventure-based programs (Beightol et al., 2009; Green et al., 2000, Hattie et al., 1997; Hurtes et al., 2000; Kerr, 2009), psychosocial sport, recreation and play programs (Madsen et al., 2011; Vetter et al., 2010) and contact with nature (Berto, 2005; Gee, 2009; Li, 2010; Li et al., 2007; Park et al., 2010,; Pretty et al., 2005; Taylor et al., 2001; Wells & Evans, 2003) can improve resilience and/or its various protective factors. With respect to academic vulnerability, the CP helped meet the needs of students who required more kinaesthetic learning experiences. Like Jack stated, "sitting in a desk in a classroom is not necessarily the best environment for some of the students". Outdoor environmental education provides novel natural environments where students, who struggle with traditional classroom learning, can explore, escape and develop new skills and abilities away from the pressures of the classroom (Milton et al., 1995). For example, Derek, who had trouble sitting still in his desk (Staff Participant D), realized paddling was "one of my natural skills". If students, who are kinaesthetic learners, gain confidence in physical abilities, it may give them more willingness to attempt learning regular subjects. As found in the literature, outdoor environmental education can help boost learning engagement, academic achievement and self-esteem (Chawla & Escalante, 2007; Wheeler et al., 2007).

Elements Which Possibly Diminished the CP's Benefits

Aside from the benefits of the CP, there were also variables that were part of the CP or part of students' lives which may have hindered gains in protective factors and prevented some students from benefitting from the CP. Some of these risks increased when students did not have a choice to go canoeing. In chapter 6, recommendations are made to mitigate these risks.

Lack of choice.

From Rachel's and my points of view, at the beginning of the CP, we were focusing on the wrong thing - moving kids around the canoes each week to deal with students teasing and antagonizing each other - but we should have first asked if students were ready to go in the canoes. To illustrate this idea, Rachel related the story of her training her dog and focusing on the task, instead of seeing if her dog was actually ready and paying attention. Rachel observed when unwilling students were asked to get in the canoe, they acted out by not paddling, splashing others or teasing their peers. In turn, several students would often begin teasing the unwilling students. These negative peer interactions were observed by other staff and volunteers. Moreover, I noted similar observations in my field journal on 5 separate dates. For example, on April 23, 2014, I wrote that two students "were barely paddling…. kids taunting each other a bit". When a student stops paddling, Rachel stated that "it can encourage that bullying behaviour". Dan believed when unwilling students, such as Derek, were forced to be in the canoe and then their peers teased them for not paddling or lily-dipping, it "made it difficult for the students to feel any confidence in themselves". If the unwilling students did not feel confident about themselves, it is less probable that these students had feelings of self-esteem or an increased sense of self-efficacy.

As mentioned earlier, a lack of choice may have also decreased some students' ability to self-regulate. Dan reported some students "already knew they're on self-regulation, they're going 'Okay, I don't want to be out there'". When we compelled these students to go canoeing, we removed an opportunity for them to self-regulate. Since we often do not know what is occurring in a student's life or mental state, it is best to allow them a choice so they can learn how to make good choices and self-regulate; after all, students "would know themself best" (School Staff Participant B). Not giving students a choice also made Rachel's job more difficult; she recalled "it's been fighting with certain kids to get them there, and then fighting to get them into the canoe, and then, (laughs), fighting to get them to work with somebody else".

Negative peer interactions.

Negative peer interactions were another risk which negated benefits of the CP and hindered students' gains in protective factors. Since a Voyageur canoe is a much smaller confined space than a classroom, the canoe seemed to flush out behavioural issues, especially when students were not given a choice. As Rachel stated, "every single kid has behaviour issues, you know, when you think about it in that way. And I can mask it sometimes in the classroom, because I can spread the environment out, but in there, you see it". The canoe's confined space also probably magnified unwilling students' negative feelings towards themselves and others.

When unwilling students splashed, name-called, bullied others, and resisted paddling, it started a chain reaction of negative peer interactions which probably hindered students' protective factors. It was less likely students had feelings of self-esteem or a sense of self-efficacy with a high level of negative peer interactions in the canoe. Regarding the literature, Neill and Dias (2001) found a lack of support from fellow participants in an outdoor adventure-

based program can obstruct the psychological growth of participants. For example, Charlie complained the other students said he did not paddle in time, but in his opinion he did. With support from other students, Charlie would probably more easily experience feelings of self-efficacy towards paddling. From Charlie's comments and my observations, it was obvious certain students bullied Derek both in and out of the canoe. For example, Charlie reported a peer told "Derek to stop lily dipping" even though Derek was paddling. On one occasion, I observed a group of boys surround Derek, while Derek and another student exchanged verbal insults. Such negative peer interactions cannot support self-esteem or self-efficacy for the bullied victim. In our limited experience, much negative peer interaction was removed by allowing students the choice of whether to go canoeing or do an optional enjoyable activity.

A question of challenge.

Most students reported they did not find the CP challenging, as they already knew how to paddle; thus, some of these students may not have experienced gains in self-efficacy due to the challenge focus of learning to paddle. This may have been the case for students, such as Earl, who practiced five days a week on a canoe racing team. Regarding Brendtro et al.'s (2005) Circle of Courage, the CP may not have fulfilled every student's need for mastery since there was not enough challenge. According to Bandura (1997), "To succeed at an easy task is redundant with what one already knows and therefore, does not call for any efficacy reappraisals" (p. 82). As mentioned in the literature review, increases in confidence (Kerr, 2009) and self-esteem (Lubans et al., 2012) can partly come from conquering challenge tasks.

However, in outdoor adventure activities, risk must be balanced against the ability we can expect a child to develop to overcome an activity's challenge (Priest, 1999, as cited by Ungar et

al., 2005). Similarly, Gray Smith (2012) writes, in order to support "a healthy sense of self" (p. 52), we need to "use activities that gently stretch the child's abilities. This helps them tolerate small amounts of 'healthy' stress and teaches that effort is needed to learn new things" (p.52). In the case of the CP, the risk was minimal and the ability to paddle or increase paddling skills was easily attainable, even for Earl, who canoe raced, but still found he had "a little bit more strength in [his] pullbacks" and was able to practice reaching forward with the paddle. Although the simple challenge of learning to paddle was not relevant for Earl, he created his own challenge of improving his stroke. While many students reported they did not find canoeing difficult as they already knew how to paddle, it was obvious to staff, volunteers, and I, that it was initially difficult for students to paddle in time. By the end of the CP, students had made gains in paddling timing and endurance as observed by all volunteers, most staff, and myself. Even though the paddle strokes were basic, students still had to gain physical strength and stamina to paddle the 300 pound Voyageurs for longer distances; thus, I think there was sufficient physical challenge in the CP.

Stamina and interest.

Rachel noticed not all students had the energy to walk to the VCKC and then paddle continuously for 40 to 50 minutes. As Rachel stressed, "not everybody wants to do an activity that is that demanding". When students stopped paddling, Rachel observed the "back-biting" would begin. It is probable this teasing hindered or diminished the self-efficacy and self-esteem of tired students. Some students were also less interested in the CP. For instance, Anne mentioned, "you're going to have a small minority of kids that just really aren't into it and it doesn't matter what, what you do". Jack added, "some of them are still, (sigh) really not seeing

the value of being in the boat". While all student who did participate enjoyed the CP and reported the CP made school more interesting, it appears that some of the non-participant students were uninterested in the CP. As mentioned earlier, it was important for self-regulation, positive peer interactions, and reinforcing cultural beliefs to honour student choice. Students, who are not engaged or having fun in an activity, are less likely to develop self-regulation (Coholic et al., 2012).

Learning or mental disabilities.

Some students had a learning disability or other disability, such as fetal alcohol syndrome, which may have hindered any change in self-efficacy and self-esteem. As Susan remarked, "children, who are not able to keep the rhythm of counting and therefore, [cannot keep] the rhythm of paddling". Sometimes, when certain students had trouble with timing, other students sometimes teased or scolded them. Teasing or scolding would not benefit these students' self-efficacy or self-esteem. For other students, who have attention difficulties, canoeing for 40-50 minutes may be too much. For example, Rachel explained it is difficult for some students, like Derek, to stay seated in the canoe "even though they're moving with their arms".

Influences of negative behaviour management approaches.

Susan hypothesized when teachers used natural consequences and excluded students from canoeing "because they weren't good in something else", these students were less likely to feel good about themselves or their abilities. According to Rachel, some students had a tough time just getting to the VCKC and they needed understanding, opportunities to redeem themselves, and choices so they could build resilience. Shaming created resentment in students, did not deal

with the root cause of misbehaviour, prevented students from benefitting from the CP and if anything, depreciated some protective factors of resilience, such as self-esteem.

Students' vulnerabilities.

Students' vulnerabilities added to the challenge of helping them with the CP. To understand the depth of students' vulnerabilities, we need to recognize the history related to First Nations residential schools and the Sixties Scoop created cycles of intergenerational trauma, which left some families with challenges such "poor parenting skills … difficulty forming healthy relationships … poverty … addictions" (Gray Smith, 2012, p. 30). In other words, the students "are living every day in trauma that is generational" (School Staff Participant D, personal communication, October 10, 2013). We are dealing with, as Rachel stated "the effects of the colonialism and residential school for generations". Consequently, many First Nations parents do not trust or support schooling, which is one reason why students "don't come ready and willing, to participate" (School Staff Participant D). It is more difficult to engage resistant or unwilling students in programs like the CP. In addition, nearly all students in Rachel's class have "significant challenges, either academically, at home, behaviour, but they're all related" (School Staff Participant D). Overall, the CP benefitted students' resilience; however, it was merely one piece in the support systems these students require.

Conclusions

The findings of this phenomenological study demonstrate the CP, as an outdoor environmental adventure program, has numerous benefits which support and interconnect many external and internal protective factors, thus helping to promote and potentially increase students' resilience. Like ripples connecting both sides of the Gorge Waterway, the CP created

interconnections between cultures, nature, community resources, school, and students, which likely enhanced their positive influences on the students' protective factors of resilience. While this study found convincing qualitative data that the CP increased students' self-efficacy, there was also some indication that the CP generated feelings of self-esteem in students, and temporary self-regulation. The enjoyable shared experience of the CP encouraged positive peer relations, self-regulation and teamwork. The traditional teachings, paddling songs, and cultural activity of canoeing on their traditional waterway reconnected students to their waterway and possibly enhanced their cultural identity, both of which promote resilience. The contact with nature and physical activity benefitted students' mental and physical health. As some of the students may be at risk for diabetes, it is important for increase physical activity levels for these students in an enjoyable manner. Moreover, the CP linked students to community resources, including the experienced caring VCKC volunteers whose encouragement, positive feedback, humour, kindness and instruction benefitted students' protective factors. Allowing students to choose between canoeing and an alternate enjoyable activity was determined to promote the protective factors of positive peer relations, teamwork, self-efficacy, sense of control, self-regulation, and positive relationships with caring adults.

The CP also has educational benefits. It combines outdoor adventure and Indigenous environmental education to provide culturally relevant experiential learning, which engages students with different learning styles and connects them to their school. In addition, the CP provides intergenerational place-based education for students through Elder teachings and the VCKC volunteers. If the CP becomes part of an integrated environmental education program at the school, there is a greater possibility it will improve students' attention and academic

performance. The contact with the nearby waterway may also benefit students' attention, stress levels, mood, and creativity, which may facilitate better peer relations and learning in the classroom. While there were some elements, such as negative peer interactions, which were risks to students fully benefitting from the CP, simple adjustments to the program will minimize these risks. In the final chapter, I make suggestions for further research and ways to improve the CP.

Chapter 6: Recommendations

Possible Future Research

This phenomenological study investigated the lived experience of students of the Canoe Program (CP) as well as the benefits of the CP and how they related to the protective factors of resilience. Now that we better understand the benefits of the CP, future research could include quantitative research using rating scales and/or checklists to evaluate student's levels of protective factors pre and post CP. Students' levels of protective factors before and after treatment could be compared to a control group. The CP may also have a larger observable impact on protective factors, such as self-regulation, if the program was held twice a week over a number of weeks and included more culture. It may be wise to avoid measuring self-esteem, as I encountered one study (Granleese & Joseph, 1994) which found self-esteem to be fairly constant at this age.

At the same time, I think it would be challenging to conduct a true experimental study of the effects of the CP on student resilience for several reasons. Because there are many protective factors and processes associated with resilience, it would difficult to separate the effects of the CP compared to other external resources in students' lives. Second, it would be strenuous to find a suitable control group of school children. Even though Victoria has another school with a high percentage of First Nations students, like the elementary school in this study, the context for these students is different since more of them live off reserve and their school has different enrichment programs, which have dissimilar effects on resilience. Third, if a researcher used control and experimental groups from just the elementary school, it would raise ethical questions regarding denying one class from participating in a beneficial program like the CP. Due to time,

weather, teacher, volunteer, and program constraints, it is not feasible to extend the CP's length to accommodate two groups; one canoeing in the fall and one in the spring. A quasi-experimental approach may be more appropriate.

If a quasi-experimental approach was attempted, it would be good to measure levels of resilience and various protective factors pre-treatment, post-treatment, and six months post-treatment to determine the duration of any potential effects from the CP. For example, it would be interesting to evaluate the post treatment effects on self-regulation, which may be short-lived. In my literature review, it was noted that post-treatment assessment aids "outdoor adventure program providers to identify program influences" (Garst et al., 2001, p. 48). This would also better enable us to improve the CP. Plus, any discovery of long-term effects from the CP would support the results other studies of outdoor adventure-based programs (Beightol et al., 2009; Hattie et al., 1997; Schrader, 2012).

While it is somewhat difficult to determine differences in self-esteem, self-regulation and other protective factors of resilience in students due to the many influences in students' lives, it may be easier to evaluate the health effects of the CP. As mentioned, physical health is a protective factor linked to an individual's resilience (Werner, 2005). Research could be undertaken to assess students' blood pressure, body mass index and other biometrics pre and post CP. Considering that First Nations are at risk for obesity and diabetes, programs like the CP need to be studied for physical health benefits.

Although there are many possibilities for further research on the educational outcomes of the CP, here are several suggestions. A quasi-experimental study could be performed to determine the CP's effect on attention. Since many students in the school are below average in

literacy and numeracy, it would be valuable to assess the CP's effect on students' academic performance, especially if more Indigenous environmental education is integrated into the CP and school curriculum. Further research could also be done to develop a more effective paddling program for students with learning disabilities, who have trouble with counting and timing of paddle strokes.

Programming Recommendations:

Based on participant responses, journal observations, and my own personal reflections, I would like to offer the following recommendations to improve the CP in order to maximize benefits for students and minimize any risks that may interfere with the CP's ability to positively influence students' resilience.

Minimize negative peer interactions.

If we minimize negative peer interactions, students will have a better chance of benefitting from the CP. The first thing we should do to decrease negative peer interactions is to give students a choice to go canoeing or do some other enjoyable learning activity. As Bronson (2000) states, "teachers can support self-regulated learning by allowing individual choices among appropriately challenging alternatives and providing assistance in ways that support a child's independent effort and perceived control over the outcome" (p. 36). Students will then be able to better self-regulate their emotions since they will opt not to go in the canoe if they are not feeling up to it. Rachel suggests she could work with the Grade 4 teacher in order to have one teacher "stay back and do project-based learning here on something else" or have one group "film it from the shore". Then students could "switch part way through the year" (School Participant D).

As part of the process of allowing students make a choice and self-regulate, Dan recommends following cultural tradition and gathering paddlers in a circle before and after canoeing. As Dan states, the circle "is a safe place to actually express your true emotion, without being judged". This would be "the best way to check on self-regulation" (Staff Participant B). Dan also feels our canoe trips would be safer if students had a choice. Only students who wanted to paddle, would go on a canoe trip; thus, there would be less teasing, less acting out, less conflict, and the stern paddler could devout him/herself to steering and keeping the whole canoe safe. The circle talk would also help students clear their mind before canoeing and then afterwards, reflect and commit to memory things learned while canoeing. As First Nations have an oral tradition and many students have difficulty with written output, having the circle as a way to discuss insights and observations would be a good way for students to reflect. Studies (e.g., Green et al., 2000; Russell, 2000; Ungar et al., 2005) in the literature review underscore the need for outdoor adventure programs to contain opportunities for participants to reflect to recognize successes and what they have learned. On the other hand, it is important that most, if not all students come along for the first one or two times, in order for them to receive basic paddle and safety instruction with the group. Plus, it is important for students to have at least one paddle session so they can make an informed choice. As Rachel says, "sometimes … you have to bring everybody along because they won't try things".

Adjusting the seating position of paddlers is another way to decrease negative peer interactions. Following Rachel's example, we could place students, who are having trouble with paddle timing, in the seat next to the stern, in order to avoid teasing from other students. We could also put the weakest paddlers near the stern, so that they could pull their paddles out of the

water and stop paddling whenever they were tired, without aggravating other students. In addition, placing the girls and boys in separate canoes decreases the teasing and splashing, and improves the experience for the girls. If all steps are taken, and students still misbehave, it is important for the teacher to have a group meeting to hold students accountable. When Rachel did this on one occasion, Jack noticed "a definite changeover [in behaviour] from then on". Finally, we should arrange a separate introductory paddling session with some VCKC volunteers for any student who joins the CP after it begins. This will avoid the frustration some students experienced with one newcomer, who had "no idea of how to paddle" (School Staff Participant D).

We can also avoid negative peer interactions by giving students, who do not have the stamina to walk to the VCKC, a ride or a school bike to travel to the VCKC. Consequently, they will be less likely to stop paddling or tease others because they will have the energy to paddle. If students are emotionally and physically ready to canoe, there will be less negative peer interactions. Since students will be in a better mood, they will relate better with their peers and volunteers, creating stronger friendships. As Rachel states, when "we start to tailor it to their needs, they start to build relationships with the people around them and in the canoe".

Continue to adapt the CP to suit student needs.

When we adapt the CP to fit students' needs, we provide a learning experience that can be supported by protective factors. Besides changing the CP to minimize negative peer interactions, Susan suggests we give more coaching and scaffold instruction for students with learning disabilities or mental challenges such as fetal alcohol. These students could also be placed in the rear of the canoe to minimize their frustration and embarrassment of not being able

to paddle in time. Instead of loudly counting paddle strokes in the canoe, a drummer might be more effective in helping these students learn to paddle in time. Teaching these students tandem canoeing may be more beneficial as timing is less important than in Voyageur canoes. Because students prefer to paddle with friends of same gender, we should try to accommodate this desire whenever possible so that the CP is a more enjoyable experience.

Avoid using negative behaviour management approaches.

By adapting the CP to meet and respect student needs, there should be much less acting out or misbehaviour in the canoe. If students misbehave in school or in the canoe, Susan advises we do not withhold canoeing privileges since this does not enhance their resilience. We must remember we created the CP for the students who "struggle just to get there" (Staff Participant D). It is important for school staff to keep in mind that students may not be getting their emotional needs met at home. As a result, they may act out or misbehave, but rather than withholding canoeing privileges, it is better to focus on the needs of the student (School Staff Participants A, D).

Help students overcome small fears.

Although the CP's water safety day teaches students to trust their PFD's, it is also important to encourage students to become comfortable with changing seats in a Voyageur canoe in order for them to realize they will not tip over the boat and fall in the water (Volunteer Participant A). While we frequently changed seats in the dragon boats, Barb recommends we do this more often in the Voyageur canoes to help students overcome this small fear. As Barb says, "it's a learning experience. You want everyone to be successful at it".

Increase cultural relevance.

To improve connection to culture and environment, the school should accept Paul's generous offer to bring his traditional canoes and bestow traditional teachings. In Paul's opinion, it would increase the cultural relevance of the program by having "the kids experience, sitting on, what's been created, what we made, what our ancestors taught us to make". It might be a possibility for students to try out other traditional canoes too, such "sea-going canoes, our war canoes, our singles, our doubles" (Elder Participant A). Paul would also like students to learn the songs associated with his canoes, "so they can carry it on". Plus, Paul could show students how to wake up a traditional canoe, which is to "brush it off with cedar branches...sing a song around it that will bring the cedar back to life from its rest".

I agree with Rachel that it is not possible for white people to teach Indigenous culture "in a truly cultural way" (R. Smith, personal communication, September 5, 2013); thus, we should follow Simpson's (2002) guidelines of Indigenous environmental education (EE) and invite First Nations Elders to instruct students in the songs, language, and teachings associated with canoeing. The most important thing we can do to increase the cultural relevance of the CP is to ask "our Indigenous communities for their ideas" (School Staff Participant A). In a conversation Susan had with an Esquimalt Elder, the Elder suggested another way to integrate more Indigenous culture in the CP would be to have children "make their own paddles, and make their own canoe" (School Staff Participant A). Here again, a First Nation Elder or carver, could teach students how to make a paddle. In addition, Elders could introduce students and teachers to some Coast Salish vocabulary for canoeing. Then we could use these words when referring to canoe equipment and the natural surroundings. Furthermore, teachers and students could learn to

count to 10 in Coast Salish so that they could count their paddle strokes in Coast Salish. By implementing the above measures to increase cultural relevance, we would be honouring the goals of GVSD 61's (2013) Aboriginal Education Enhancement Agreement.

Ensure effective mentorship.

It is my recommendation the high school teacher trains the high school students in paddling skills and mentorship before they canoe with the elementary school students. It would be a more positive experience for students if the high school mentors would be knowledgeable and skilled in paddling and mentoring. Even with this change, the elementary school students may still feel like the high school students are intruding on their canoeing program. It also might be beneficial if elementary students, who are experienced paddlers, are given chances to help coach their peers who are new to paddling. When participants in an outdoor program have opportunities to help one another, they support each other's development of resilience (Mitchell & McCall, 2007; Schrader, 2012).

Include more environmental education and connections to classroom learning.

Some of the canoe outings should be dedicated to natural history, such as learning the common names of the flora and fauna of the Gorge Waterway. Barb, volunteer participant A, would like to see teachers "relating what they see out there (pause) to whatever they're covering in their classrooms". In my opinion, the CP provides an excellent opportunity for teachers to integrate more environmental education into the classroom. Teachers could connect lessons on habitat, sustainability, and First Nations resource use, including ethnobotany, to canoe outings. Activities such as indigenous plant and animal identification, temporary specimen collection with dip nets, eel grass transplanting, and basic water quality testing could engage student

interest and help connect them to their local environment. Students could also learn about the relationship of the Voyageur canoe to Indigenous canoes and history, e.g., birch bark canoes and Métis use of Voyageur canoes.

Commit to recruitment.

Steve emphasizes there has to be First Nations community and teacher interest and commitment to the program for it to continue. In Steve's words, "it's something they really have to want to do…. if it's going to take root in a school". There also has to be willingness of both parties to become trained as Steve does not know how many other volunteers are available on a regular basis to volunteer for the nine week canoeing portion of the program. We will have to recruit parents annually. Since both parents in many families are not always available, we may have to make appeals to the wider community.

Take risks and try new things in the CP.

If we intuitively sense a change is needed in the CP or a student makes a logical suggestion to improve the program, then we should seize the opportunity to make it happen. Being able to take reasonable risks to try out something new with the CP is consistent with the one of the purposes of outdoor adventure education. For example, when we decided to allow students a choice of whether or not to go canoeing, it was observed that students were much happier with having a choice. Furthermore, we could increase students' level of knowledge, self-efficacy and teamwork, especially for students who canoe race, if we can teach them tandem canoeing. According to Steve, in tandem canoeing, "kids have to learn some degree of teamwork with just the two of them, because neither party can sort of do it well on their own". Taking risks to change the CP when needed will ensure it continues to evolve to better serve

vulnerable students and provide culturally meaningful experiences to help these students increase their resilience.

Conclusion

The CP is an effective outdoor environmental adventure program which helps connect students to each other, school, culture, community resources, and environment. In turn, these outer resources have many interconnections with each other and with students' inner resources, all combining to strengthen students' overall health and resilience. The caring VCKC volunteers and school staff, help facilitate students' connection to the waterway, and support students' self-efficacy, self-esteem, self-regulation, and teamwork. The First Nations high school mentors help connect students to their community, cultural identity, and future outlook. Through its interconnections, the CP brings cultures and communities together, reinforcing community resilience. The CP's interconnections reflect the interconnections and interdependence human and ecological communities rely on to stay healthy and resilient. Through its interconnections, the CP not only enhances student resilience, but also integrates social and environmental justice as it helps to address students' vulnerabilities and reconnect students to their natural environment. By enhancing student resilience and connection to nature, students will be more able and willing to improve and protect the ecological resilience of their beautiful traditional waterway.

Addendum

Interview Excerpt

"…many are called, but not all answer, and a year, almost two years ago, I called out to you, saying James, could we please have something here, a garden, a connection to the water, canoeing, anything, and that you not only did your masters work, but you listened to the call, and if you could please put that in as an addendum, and a thank you. Huy ch q'u, Huy ch q'u ce'em."

References

Aikenhead, G. & Michell, H. (2011). *Bridging Cultures: Indigenous and Scientific Ways of Knowing Nature*. Toronto: Pearson Canada, Inc.

Alvord, M. K., & Grados, J. J. (2005). Enhancing resilience in children: A proactive approach. *Professional Psychology: Research and Practice, 36*(3), 238-245. doi: 10.1037/0735-7028.36.3.238

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review (84)2, 191-215. Retrieved from http://www.ou.edu/cls/online/LSPS5133/pdfs/bandura.pdf

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.

BC Ministry of Children and Family Development (2009). *Aboriginal children in care*. Retrieved from http://www.fndirectorsforum.ca/downloads/aboriginal-children-in-care-10-09.pdf

BC Ministry of Education. (2013). *FSA Grade 4, February 2013*. Retrieved from http://www.bced.gov.bc.ca/reports/pdfs/fsa/06161010.pdf

Beightol, J., Jevertson, J., Gray, S., Carter, S. & Gass, M. (2009). The effect of an experiential, adventure-based “anti-bullying initiative” on levels of resilience: A mixed-methods study. *Journal of Experiential Education, 31*(3), 420-424.

Berto, R. (2005). Exposure to restorative environments helps restore attentional capacity. *Journal of Environmental Psychology, 25*(3), 249-259. doi:10.1016/j.jenvp.2005.07.001

Brendtro, L. K., Brokenleg, M., & Van Bockern, S. (2005). The circle of courage and positive psychology. *Reclaiming Children and Youth, 14*(3), 130-136.

Bronson, M. B. (2000). Recognizing and supporting the development of self-regulation in young children. *Young Children, 55,* 32-37. Retrieved from http://www.smccd.edu/accounts/franciscoe/ece260/Promoting-Self-Regulation.pdf

Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada (2010). *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (Catalogue No: MR21-18/2010E-PDF). Retrieved from http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/Default/

Cason, D. & Gillis, H. L. L. (1994). A meta-analysis of outdoor adventure programming with adolescents. *Journal of Experiential Education, 17*(1), 40-47.

Caulkins, M. (2010). Alternative experiential education in Western Canada: A narrative program evaluation. *Journal of Experiential Education, 32*(3), 270-274.

Chawla, L. & Escalante, M. (2007). *Student Gains From Place-Based Education*. Children, Youth and Environments Center for Research and Design, University of Colorado. Retrieved from http://www.foresthistory.org/education/Curriculum/StudentGains-Chawla.pdf

Coholic, D., Fraser, M., Robinson, B., & Lougheed, S. (2012). Promoting resilience within child protection: The suitability of arts-based and experiential group programs for children in care. *Social Work with Groups, 35*(4), 345-361. doi:10.1080/01609513.2011.624974

Cooper, N., Estes, C. A., & Allen, L. (2004). Bouncing back. *Parks & Recreation, 39*(4), 28-35.

Creswell, J. W. (2007). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches* (2nd ed.). Thousand Oaks, California: Sage Publications.

Filbert, K. M., & Flynn, R. J. (2010). Developmental and cultural assets and resilient outcomes in First Nations young people in care: An initial test of an explanatory model. *Children and Youth Services Review, 32*(4), 560-564. doi:10.1016/j.childyouth.2009.12.002

Flood, A. (2010). Understanding phenomenology. *Nurse Researcher, 17*(2), 7-15.

Forgas, J. P., Bower, G. H., & Moylan, S. J. (1990). Praise or blame? Affective influences on attributions for achievement. *Journal of Personality and Social Psychology, 59*(4), 809-819. doi:10.1037/0022-3514.59.4.809

Garst, B., Scheider, I., & Baker, D. (2001). Outdoor Adventure Program Participation Impacts on Adolescent Self-Perception. *Journal of Experiential Education, 24*(1), 41-49.

Gee, C. M. (2009). *Wild epiphany: Turning youth care inside out.* (Master's thesis, University of Northern British Columbia, Prince George, Canada). Available from ProQuest Dissertations and Theses database. (Publication No. MR60819)

Gilligan, R. (1999). Enhancing the resilience of children and young people in public care by mentoring their talents and interests. *Child & Family Social Work, 4*(3), 187-196. doi: 10.1046/j.1365-2206.1999.00121.x

Granleese, J., & Joseph, S. (1994). Reliability of the Harter self-perception profile for children and predictors of global self-worth. *The Journal of Genetic Psychology, 155*(4), 487-492.

Gray Smith, M. (2012). *The ripple effect of resiliency: Strategies for fostering resiliency with Indigenous children*. Victoria, Canada: Little Drum Consulting.

Greater Victoria School District 61. (2011). *School growth plan 2011-12*. Victoria: Greater Victoria School District 61.

Greater Victoria School District 61. (2012). 2012/13 *CommunityLINK budget: Draft #3*. Victoria: Greater Victoria School District 61.

Greater Victoria School District 61. (2013). *The spirit of alliances: A journey of good hearts and good minds. Greater Victoria School District Aboriginal education enhancement agreement 2013-2018*. Retrieved from http://www.bced.gov.bc.ca/abed/agreements/sd61.pdf

Green, G. T., Kleiber, D. A., & Tarrant, M. A. (2000). The effect of an adventure-based recreation program on development of resiliency in low income minority youth. *Journal of Park & Recreation Administration, 18*(3), 76-97.

Hattie, J., Marsh, H. W., Neill, J. T., & Richards, G. E. (1997). Adventure education and outward bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research, 67*(1), 43-87.

Henley, R., Schweizer, I., de Gara, F., & Vetter, S. (2007). How psychosocial sport & play programs help youth manage adversity: A review of what we know & what we should research. *International Journal of Psychosocial Rehabilitation, 12*(1), 51-58.

Hurtes, K. P., Allen, L. R., Stevens, B. W., & Lee, C. (2000). Benefits-based programming: Making an impact on youth. *Journal of Park & Recreation Administration, 18*(1), 34-49.

Hycner, R. H. (1985). Some guidelines for the phenomenological analysis of interview data. *Human Studies, 8*(3), 279-303.

Iwasaki, I., & Bartlett, J.G. (2006). Culturally meaningful leisure as a way of coping with stress among Aboriginal individuals with diabetes. Journal of Leisure Research, 38(3), 321-338.

Jessor, R., Van, D. B., Vanderryn, J., Costa, F. M., & Turbin, M. S. (1995). Protective factors in adolescent problem behavior: Moderator effects and developmental change. *Developmental Psychology, 31*(6), 923-933. doi:10.1037/0012-1649.31.6.923

Jones, L.A. (2004). *How First Nations youth heal from attempting suicide: a phenomenological study* (Master's thesis, Vancouver, Canada). Retrieved from https://circle.ubc.ca/handle/2429/16233

Kerr, R. L. (2009). *The view from here: The perspectives of inner city youth in experiential education programs*. (Master's thesis, Kingston, Canada). Available from ProQuest Dissertations and Theses database. (Publication No. MR65154)

Kool, R. (2012). *Trusting QUAL Research*. PowerPoint slides. Retrieved from http://learner.royalroads.ca/moodle/

Krasny, M. E., Lundholm, C., & Plummer, R. (2010). Resilience in social–ecological systems: the roles of learning and education. *Environmental Education Research, 16*(5-6), 463-474. doi: 10.1080/13504622.2010.505416

LaDuke, W. (1993). Voices from white earth: Gaa-waabaabiganikaag [Transcript]. Retrieved from http://neweconomy.net/publications/laduke/winona/voices-from-white-earth

Lalonde, C. E. (2006). Identity Formation and Cultural Resilience in Aboriginal Communities. In R.J. Flynn, P. Dudding, & J. Barber (Eds.), *Promoting Resilience in Child Welfare* (pp. 50-71). Ottawa: University of Ottawa Press.

Lee, T.Y., Cheung, C.K., & Kwong, W.M. (2012). Resilience as a Positive Youth Development Construct: A Conceptual Review. *The Scientific World Journal, 2012*, 1-9. doi:10.1100/2012/390450

Leedy, P. D., & Ormrod, J. E. (2013). *Practical research: Planning and Design* (10th ed.). Boston, MA: Pearson Education.

Li, Q., Morimoto, K., Nakadai, A., Inagaki, H., Katsumata, M., Shimizu, T., & Miyazaki, Y. (2007). Forest bathing enhances human natural killer activity and expression of anti-cancer proteins. *International Journal of Immunopathology and Pharmacology, 20,* 3-8.

Li, Q. (2010). Effect of forest bathing trips on human immune function. *Environmental Health and Preventive Medicine, 15*, 9-17. doi: 10.1007/s12199-008-0068-3

Lubans, D. R., Plotnikoff, R. C., & Lubans, N. J. (2012). Review: A systematic review of the impact of physical activity programmes on social and emotional well-being in at-risk youth. *Child and Adolescent Mental Health, 17*(1), 2-13. doi:10.1111/j.1475-3588.2011.00623.x

MacCallum, L. (2011). Preventing type 2 diabetes. *Pharmacy Practice, 27*(2), 13-17.

Madsen, K. A., Hicks, K., & Thompson, H. (2011). Physical activity and positive youth development: Impact of a school-based program. *Journal of School Health, 81*(8), 462-470. doi:10.1111/j.1746-1561.2011.00615.x

Mannion, G., Adey, C. & Lynch, J. (2010). *Intergenerational Place-based Education: Where schools, communities, and nature meet*. Stirling: University of Stirling for Scottish Centre for Intergenerational Practice. Retrieved from http://www.scotcip.org.uk/files/documents/IG_Place-based_Education.pdf

Mann, J. M. (2007). The influence of project challenge on levels of psychosocial development and resilience in adolescent girls at risk for delinquency (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3381387)

Masten, A. S. & Reed, M. J. (2005). Resilience in development. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 74-88). New York: Oxford University Press.

Milton, B., Cleveland, E., & Bennett-Gates, D. (1995). Changing perceptions of nature, self, and others: A report on a Park/School program. *The Journal of Environmental Education, 26*(3), 32-39.

Mitchell, M., & McCall, H. J. (2007). The Montcalm outdoor challenge program. *Reclaiming Children and Youth, 16*(1), 22-27.

Morgan, P. (2010). 'Get up. Stand up.' Riding to Resilience on a Surfboard. *Child & Family Social Work, 15*(1), 56-65. doi: 10.1111/j.1365-2206.2009.00637.x

Moustakas, C., (1994). *Phenomenological Research Methods*. Thousand Oaks, California: SAGE Publications.

Mykota, D. B., & Schwean, V. L. (2006). Moderator Factors in First Nation Students at Risk for Psychosocial Problems. *Canadian Journal of School Psychology, 21*(1/2), 4-17.

Neill, J. T., & Dias, K. L. (2001). Adventure education and resilience: The double-edged sword. *Journal of Adventure Education and Outdoor Learning, 1*(2), 35-42.

Orr, D. W. (1994). *Earth in mind: On education, environment, and the human prospect*. Washington, DC: Island Press.

O'Shea, K. M. (2008). *Exploring the benefits of an outdoor adventure program for improving self-Esteem and self-Efficacy and reducing problem behaviors in adolescent girls* (Doctoral dissertation, University of Montana). ProQuest Dissertations and Theses,

Retrieved from http://search.proquest.com/docview/304519121?accountid=8056. (304519121).

Park, B., Tsunetsugu, Y., Kasetani, T., Kagawa, T., Miyazaki, Y. (2010). The physiological effects of Shinrin-yoku (taking in the forest atmosphere or forest bathing): Evidence from field experiments in 24 forests across Japan. *Environmental Health and Preventive Medicine, 15*(1), 18-26. doi: 10.1007/s12199-009-0086-9

Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods* (3rd ed.). Thousand Oaks, California: Sage Publications.

Pretty, J., Peacock, J., Sellens, M., & Griffin, M. (2005). The mental and physical health outcomes of green exercise. *International Journal of Environmental Health Research, 15*(5), 319-337.

QSR International Pty Ltd. (2011, April 5). NVivo 9 Tutorial: Work with audio, video and images [video file]. Retrieved from http://www.youtube.com/watch?v=domX-waoadA&lr=1

Richards, L. & Morse, J.M. (2007). *Readme First for a User's Guide to Qualitative Methods* (2nd ed.). Thousand Oaks, California: Sage Publications.

Ritchie, S. D., Wabano, M. J., Young, N., Schinke, R., Peltier, D., Battochio, R., & Russell, K. (2010). Developing a culturally relevant outdoor leadership training program for aboriginal youth. *Journal of Experiential Education, 32*(3), 300-304.

Russell, K. (2000). Exploring how the wilderness therapy process relates to outcomes. *The Journal of Experiential Education, 23*(3), 170-176.

Sapienza, J. K., Masten, A. S. (2011). Understanding and promoting resilience in children and youth. *Current Opinion in Psychiatry, 24*(4), 267–273. doi: 10.1097/YCO.0b013e32834776a8

Schrader, L. L. (2012). *A grounded theory investigation of at-risk youth who participate in outdoor adventure programs*. (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (Publication No. 3507581)

Sheard, M., & Golby, J. (2006). The efficacy of an outdoor adventure education curriculum on selected aspects of positive psychological development. *Journal of Experiential Education, 29*(2), 187-209.

Shellman, A. (2011). Fostering resilience through outdoor education. *The Taproot (Cortland, N.Y.), 21*(1), 4-11.

Simpson, L. (2002). Indigenous environmental education for cultural survival. *Canadian Journal of Environmental Education, 7*(1), 13-25.

Taylor, A. F., Kuo, F. E., & Sullivan, W. C. (2001). Coping with add: The surprising connection to green play settings. *Environment and Behavior, 33*(1), 54-77. doi 10.1177/00139160121972864

Ungar, M. (2005). Pathways to resilience among children in child welfare, corrections, mental health and educational settings: Navigation and negotiation. *Child & Youth Care Forum, 34*(6), 423-444. doi: 10.1007/s10566-005-7755-7

Ungar, M., Brown, M., Liebenberg, L., Othman, R., Kwong, W. M., Armstrong, M., & Gilgun, J. (2007). Unique pathways to resilience across cultures. *Adolescence, 42*(166), 287-310.

Ungar, M., Dumond, C., & Mcdonald, W. (2005). Risk, resilience and outdoor programmes for at-risk children. *Journal of Social Work, 5*(3), 319-338. doi:10.1177/1468017305058938

Van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. Albany, New York: State University of New York Press.

Vetter, S., Dulaev, I., Mueller, M. Henley, R. R., Gallo, W. T., Kanukova, Z. (2010). Impact of resilience enhancing programs on youth surviving the Beslan school siege. *Child and Adolescent Psychiatry and Mental Health, 4*(11), 1-11. doi:10.1186/1753-2000-4-11

Walsh, M. A. (2009). *Wilderness adventure programming as an intervention for youthful offenders: Self-efficacy, resilience, and hope for the future*. (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (Publication No. 3373431)

Wells, N. M., & Evans, G. W. (2003). Nearby nature: A buffer of life stress among rural children. *Environment and Behavior, 35,* 311-330. doi: 10.1177/0013916503035003001

Werner, E. E. (2005). Resilience research: Past, present, and future. In R. DeV. Peters, B. Leadbeater, & R. J. McMahon (Eds.), *Resilience in children, families, and communities: Linking context to practice and policy* (pp. 3-12). doi. 10.1007/0-387-23824-7_1

Wheeler, G., Thumlert, C., Glaser, L., Schoelhamer, M. & Bartosh, O. (2007). Environmental Education Report: Empirical Evidence, Exemplary Models, and Recommendations on the Impact of Environmental Education on K-12 Students. (Report No. 07-0036). Retrieved from http://www.k12.wa.us/environmentsustainability/pubdocs/eereport.pdf

Whitbeck, L.B., Hoyt, D.R., Stubben, J.D., & LaFromboise, T. (2001). Traditional culture and academic success among American Indian children in the Upper Midwest. *Journal of*

American Indian Education, 40(2), 1-20. Retrieved from http://jaie.asu.edu/v40/V40I2A3.pdf

White, W.A., & Cienski, A. (2010). *No, We're Water People* (Background paper). Retrieved from http://www.esquimaltnation.ca/resources/No,%20We're%20Water%20People.pdf

Woodhouse, J. L. & Knapp, C. E. (2000). *Place-Based Curriculum and Instruction: Outdoor and Environmental Education Approaches*. Retrieved from the ERIC database. (ED448012 2000-12-00)

Young, T. K., Reading, J., Elias, B., & O'Neill, J. D. (2000). Type 2 diabetes mellitus in Canada's First Nations: Status of an epidemic in progress. *Canadian Medical Association Journal, 163*(5), 561-566.

Appendix A

Canoe Program (CP) Objectives

1. To improve the overall resilience of the elementary school Grade 5 students by:
    a. Helping connect students to their land, water, history, culture, school, and community resources through regular canoe trips on the Gorge Waterway.
    b. Increasing student physical activity and health through a weekly water paddling activity
    c. Increasing self-esteem, self-efficacy, and team work skills through training/group practice to achieve student mastery of paddling skills
    d. Increasing student self-regulation through canoe paddling experience

2. To establish an annual month-long paddling mentorship program with the high school students
3. To be inclusive of students who come from lower socio economic backgrounds and diverse cultures
4. To promote safe paddling
5. To gradually train parents and teaching staff to stern and bow Voyageur canoes, in order for the CP to be mainly self-sufficient
6. To involve the Victoria Canoe and Kayak Club (VCKC) volunteers in the canoe program to create a stronger school community for students

Appendix B

Interview Questions for Children

1. Before dragonboating last September, did you ever paddle? With whom?
2. What do you think about the Canoe Program?
3. What does canoeing mean to you?
4. How is canoeing related to your culture and history?
5. Can you tell me a story about canoeing, maybe something you heard from your Elders, your family, or in school?
6. When you were canoeing with the other Grade 5's, how did you feel?
7. Can you tell me about a memorable time while paddling this year?
8. If you think about the start of the dragon boat program and now, have your paddling skills changed? If yes, how? If no, why do you think not?
9. What did you think about the adult volunteers?
10. How did the adult volunteers in the canoe program treat you?
11. What did you think about the high school students paddling with us?
12. Was learning to canoe difficult? Now that you have learned how to canoe, do you think you could learn to do other difficult or challenging things in your life?
13. Did the canoe program make school make school more or less interesting? Why?
14. Was there anything you didn't like about canoeing?

Appendix C

Interview Questions for Parents

1. What does canoeing mean to you?
2. How is canoeing related to your culture and history?
3. What do you think about the elementary school Canoe Program?
4. Has your child talked about the Canoe Program? What did he or she mention?
5. What do you think the Canoe Program means for your child?
6. What effect do you think the Canoe Program has on your child?

Appendix D

Interview Questions for VCKC Volunteers and School Staff

1. What do you think about the elementary school's Canoe Program?

2. Thinking back to the start of the canoe program, have the students' teamwork skills changed? If yes, how? If no, why do you think not?

3. Thinking back to the start of the canoe program, have the students' paddling skills changed? If yes, how? If no, why do you think not?

4. What other changes did you see in the students as a result of the canoeing program?

5. For teachers and educational Assistants: Did you think the canoeing program helped increase students' interest in school? If yes, how? If no, why do you think not?

6. Do you think the students got better at self-regulating their behaviour in the canoes if you compare their behaviour at the beginning and end of the program? If no, why do you think not? If yes, how? (For teachers and educational assistants): If yes, has this difference transferred to the classroom?

7. Originally, we set up the program to try to increase students' self-esteem, self-efficacy, and resilience. Do you think the Canoe Program allows students to develop feelings of self-efficacy (feelings of competence)? If yes, how so? If no, why not?

8. Do you think the Canoe Program helps increase student self-esteem? If yes, how so? If no, why not?

9. Do you think the canoe program is having a positive effect on students' resilience? If yes, how so? If no, why not?

10. Looking back from the start of the Canoe Program until now, how would you describe your interactions with students during the canoe program? Have you bonded to students? (For teachers and educational assistants: Has the canoe program helped increase your bonding to students?)

11. What is the value of the elementary school's Canoe Program for students?

Appendix E

Interview Questions for Elders

1. What is your personal relationship to the canoe?
2. How is canoeing related to your First Nations history and culture?
3. What is the value of the Canoe Program to the First Nations students at the elementary school?
4. What would you like to see added to the Canoe Program?

Appendix F

Parental Consent Form

STATEMENT OF INFORMED CONSENT

Paddling Towards Resiliency: Benefits of Canoeing for Vulnerable First Nations Children

March 7, 2013

Dear parent(s) or caregiver(s):

My name is James Skwarok, and I am doing a research project on the canoe program at the Elementary School, in which your child is participating. This research project is part my Masters of Arts in Environmental Education and Communication at Royal Roads University. My status as student with Royal Roads University can be confirmed by telephoning Dr. Liza Ireland, Acting Program Head at

This document establishes an agreement for your child to participate in my research project. My research goal is to determine how the weekly canoe program benefits Grade 5 students at the Elementary School. If my research shows the canoe program significantly benefits students, it will increase the possibility that other elementary school students will have the opportunity to participate in the canoe program in future years.

In this study, I will individually interview ten Grade 5 students. Before the interview, each student will be told he/she may withdraw from the interview at any point. Each interview will last about 10 minutes. Interview questions will explore students' thoughts and feelings of the benefits of learning to paddle and how the adult volunteers treated them. Interviews will be audio-taped and summarized. Your child's name will not be used anywhere in the data; instead I will use a pseudonym. All data will be kept strictly confidential and secure; only myself and my thesis supervisor, Dr. Nevin Harper will look at the data. Audio recordings will be deleted within three months of the completion of my research project. If your child decides to withdraw from the interview, any audio recording will be deleted immediately after the interview.

In addition to submitting my final report to Royal Roads University in partial fulfillment for a Master's degree in Environmental Education and Communication, I will also be sharing my research findings with Songhees Nation, Esquimalt Nation, the Elementary School Staff, and the Victoria Canoe and Kayak Club. I may use the research results to write a journal article. Once the study is finished, if you would like a copy of the summary of results, please contact me at

Your child's participation will not affect his/her grades. You have the right to refuse your child's participation in this study or to withdraw your consent at any time during the study without any consequences. Your decision will be maintained in confidence. If you would like to know more about the study before signing the parental consent form, please phone me at

By signing this letter, you give free and informed consent for your child to participate in this project.

Name: (Please Print): _____

Signed: _____

Name of Child: (Please Print): _____

Signature of Child: _____

Date: _____

Name of Researcher: James Skwarok

Signature of Researcher: _____

Date: _____

Appendix G

Telephone Script to Request In-person Interview with Parent(s)

Hello, my name is James Skwarok, and I'm the organizer of the canoe program at the Elementary School. I am carrying out a research project on the canoe program. The research project is part of my Masters of Arts in Environmental Education and Communication at Royal Roads University. My status as a student with Royal Roads University can be confirmed by telephoning Dr. Liza Ireland, Acting Program Head at

The goal of this research is to determine how the weekly canoe program benefits Grade 4 and 5 students at the Elementary School. If my research shows the canoe program highly benefits students, it will increase the possibility that other elementary school students will have the opportunity to participate in the canoe program in future years.

Besides interviewing teaching staff, canoe program volunteers, and students, I would like to interview a few parents, whose children are participating in the canoe program. The interview will take about 10-30 minutes to complete and will be recorded.

The information you provide will be summarized in the body of the final report. At no time will your name appear in the report. Instead, I will use pseudonyms, which are fake names so that no one will know what you said. All interview data will be kept strictly confidential and secure; only my thesis supervisor, Dr. Nevin Harper, and I will have access to the data. Audio recordings will be erased within three months of the completion of my research project. If you decide to withdraw from the interview, any audio recording will be deleted immediately after the interview.

In addition to handing in my final report to Royal Roads University as part of a Master's degree in Environmental Education and Communication, I will also be sharing my research findings with Songhees Nation, Esquimalt Nation, the elementary school staff, and the Victoria Canoe and Kayak Club. I may also use the research results to write a journal article. A copy of the final report will be published and archived in the Royal Roads University Library.

You do not have to participate in this research project. If you do choose to participate, you are free to withdraw at any time without any consequences. In addition, if you choose not to participate in this research project, this information will also be maintained in confidence.

Do you have any questions? Would you be interested in participating in the project? Could I please schedule an interview with you at a time and place that would work for you?

Appendix H

Interview Preamble for Student Participants

Hi (student name). As you know, my name is Mr. Skwarok, and I am doing a research project on the elementary school's canoe program. This research project is part of my Master of Arts degree in Environmental Education and Communication at Royal Roads University.

As part of my research, I would like to ask you some questions to see what you think of the canoe program. The interview will take 10-30 minutes to complete and I will use this IPod to record your voice. Here are the interview questions (Participant will be shown the list of interview questions.). Are there any words that you do not understand? I may also ask you a few additional questions or change these questions a little bit to help you understand them. There are no wrong answers to the questions and you are not being marked on your answers.

Besides handing in my final report on this research to Royal Roads University for my Master's degree, I will also be sharing my research with Songhees Nation, Esquimalt Nation, the elementary school staff, and the Victoria Canoe and Kayak Club. I may also use the research results to write a journal article. A copy of the final report will be published and stored in the Royal Roads University Library.

What you tell me will be summarized in the final report. At no time will your name appear in the report. Instead, I will use pseudonyms. A pseudonym is a fake name that I will give you so that no one will know who said what in my report, except me. Everything you say will be kept private; only my thesis supervisor, Dr. Nevin Harper, and I will be able to look at what you said. The audio recording of your voice will be erased within three months after I finish the final report. If you decide to stop participating in the interview, any audio recording will be erased immediately after the interview.

You do not have to participate in this research project. If you choose to participate, you are free to back out or stop participating at any time without any consequences. Also, if you choose not to participate in this research project, I will not tell anyone.

Do you have any questions? Let's begin the interview.

Appendix I

Interview Preamble for Adult Participants

My name is James Skwarok, and this research project, Paddling Towards Resiliency: Benefits of Canoeing for Vulnerable First Nations Children, is part of the requirement for a Master of Arts degree in Environmental Education and Communication at Royal Roads University. My status as student with Royal Roads University can be confirmed by telephoning Dr. Liza Ireland, Acting Program Head at .

The research will consist of this interview and will take about 10-30 minutes to complete. Here are the interview questions (Participant will be shown the list of interview questions.). I may ask additional questions or slightly modify these questions to better suit the interview. In addition to submitting my final report to Royal Roads University in partial fulfillment for a Master of Arts degree in Environmental Education and Communication, I will also be sharing my research findings with Songhees Nation, Esquimalt Nation, the elementary school staff, and the Victoria Canoe and Kayak Club. I may also use the research results to write a journal article. A copy of the final report will be published and archived in the Royal Roads University Library.

The information you provide will be summarized in the body of the final report. At no time will your name appear in the report. Instead, I will use pseudonyms, which are fake names so that no one will know what you said. All interview data will be kept strictly confidential and secure; only my thesis supervisor, Dr. Nevin Harper, and I will have access to the data. Audio recordings will be erased within three months of the completion of my research project. If you decide to withdraw from the interview, any audio recording will be deleted immediately after the interview.

You do not have to participate in this research project. If you do choose to participate, you are free to withdraw at any time without any consequences. In addition, if you choose not to participate in this research project, this information will also be maintained in confidence.

By completing this interview, you are giving me your informed consent. Do you have any questions? Let’s begin the interview.

Appendix J

Definitions of Psychological Terms for Interviews

Self-esteem:

- “Sense of personal worth and ability that is fundamental to an individual's identity” (Concise Encyclopedia online)
- “A confidence and satisfaction in oneself : self-respect” (Merriam-Webster online dictionary)

Self-efficacy:

- “Self-efficacy refers to beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3).
- “A person's estimate or personal judgment of his or her own ability to succeed in reaching a specific goal, for example, quitting smoking or losing weight, or a more general goal, for example, continuing to remain at a prescribed weight level” (The Free Dictionary online)

Resilience:

- “…the process of effectively mobilizing internal and external resources in adapting to or managing significant sources of stress or trauma” (Lee, Cheung, & Kwong, 2012, p. 2).