A Critical Analysis of the High School Outdoor Education Program in New Brunswick

by

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Abstract

Outdoor Education (OE) is a possible solution to the lack of outdoor activity currently experienced by young Canadians; one that has the potential to significantly improve their mental and physical health. OE in the province of New Brunswick's (NB) high school system takes the form of the Outdoor Pursuits (OP) course.This program evaluation investigated the effectiveness of the 1995 NB OP curriculum from the perspective of its teachers and has provided evidence supporting the value of teaching OE. Using a sequential mixed-methods approach, I gained a deeper understanding of the effectiveness of the OP program, the value the teachers place on it and the potential benefits associated with working with youth in nature. Due to the low number of respondents, this study lacks statistical validity; however, it effectively provides a rationale for maintaining and enhancing the OP program in the province of New Brunswick. Based on my research and the values placed on all the past outcomes, by the OP teachers, recommendations for an updated curriculum include that the outcomes be streamlined into four headings: ecological literacy, technical skill development, well-being, and group dynamics. I found that high school OE programs typically fall under the purview of the Physical Education curriculum and are therefore bound to the PE value orientations. As such, based on this research I have suggested a new OE-specific value orientation to help future OE curriculum developments. Recommendations include conducting a wider Canadian or North American study on OE, and following up on the impact of OE on high-school aged students.

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Chapter 1: Introduction

Many twenty-first-century youth have become disconnected from outdoor experiences. Louv (2008) pointed to the frequency of this dissociation when he coined the term *nature deficit disorder* to describe the consequences of a lack of time in nature, alerting Western society to the dangers of a nature-poor childhood. Louv (2008) described the *nature deficit disorder* as the "human costs of alienation from nature among them are: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses" (p. 36). Lest we ascribe such a disorder only to "inner-city" or urban settings, it is clear that nature deficit may occur in even a traditionally nature-rich environment as well. Further to this, one of the issues faced by youth today is that "seventy percent" of them spend only about an hour or less outdoors per day (David Suzuki Foundation, 2012). Equally concerning is that in most Canadian provinces only 15% of both middle and highschool aged students reported spending 2 hours or less per day in "screen-related pursuits" (Active Healthy Kids Canada report, 2013).

These statistics are a call to action: Lack of outdoor activity and subsequent "nature deficit" may have significant impact on the mental and physical health of young Canadians. This thesis suggests that outdoor education presents a workable solution to this problem. Introducing students to the pleasures and benefits of participating in organized outdoor education activities in a school setting has the potential to shift attitudes towards lifestyle, increasing the amount of time youth spend in the outdoors and improving physical activity levels (American Association For Physical Activity and Recreation, 2011). This is not a new concept as educational theorist, John Dewey (1916) proposed that, "education has no more serious responsibility than making adequate provision for enjoyment of recreative leisure; not only for the sake of immediate health, but still more if possible for the sake of its lasting effect upon habits of mind" (p. 140). In a

discussion about outdoor experiential education almost a hundred years later, Howden (2012) described how "time spent in hands-on efforts tend[s] to engage learners physically and emotionally in both the process of learning and the outcomes of the experience" (p. 43). Although a century of social and educational change separates these writers, both discuss the impact of outdoor activities on students' mental processes, a focus that points towards the potential of outdoor education to reduce the effects of "nature deficit disorder." Considering today's shift away from outdoor physical activity and its consequences, it is essential for today's educators to encourage youth to become more active.

New Brunswick educators have been working toward solutions to help solve their students' lack of experience in the outdoors. The New Brunswick Department of Education integrated outdoor education into the New Brunswick high school system via the grade eleven Outdoor Pursuits (OP) 110 course, which was developed and piloted in 1990, and officially adopted as an optional course province-wide in 1995 (New Brunswick Department of Education, 1995). In this course, high-school aged students learn communication, group dynamics, and team building while participating in a variety of outdoor activities such as canoeing, backpacking, orienteering, cross-country skiing, nature study, snowshoeing, climbing, rappelling, and outdoor cooking.

Purpose

This study focused on the delivery of the outdoor pursuits program in the Canadian province of New Brunswick (NB) to answer the question, "What is the current state of high school outdoor education (OE) in New Brunswick?" Specifically. this program evaluation, using mixed-methods, investigated the effectiveness of the 1995 New Brunswick (NB) Outdoor Pursuits (OP) curriculum from the perspective of its teachers. Using themes uncovered in the OE

literature, I have critically appraised the delivery of NB's high school OE program. The study focused on several thematic concerns that the literature highlighted: course content (Ewert, 1989; Ewert, McCormick & Voight, 2001; Hattie, Marsh, Neill & Richards, 1997; Martin, 2010; Paisley, Furman, Sibthorp & Gookin, 2008), safety standards (Henniger, 1994; Lam, 2005; Niehues, Bundy, Broom, Tranter, Ragen, & Engelen, 2013; Stan & Humberstone, 2011), and teacher training and certification (Rhoades, 1972; Stan & Humberstone, 2011; White, 2012). I also examined the frameworks that were the basis for the original OP curriculum and those commonly used to create physical education (PE) curricula to ascertain best practices for future curriculum revisions. Based on discussions I had with a representative from the NB Department of Education in 2014, I investigated the effects of the 2013 Inclusive Education Policy (Policy 322) on the OP progam and finally, based on my personal interest, I investigated the proliferation of the Duke of Edinburgh's Award amongst the OP programs. This study focused on high schools in the province of NB that offered the grade 11 OP program as of June 2014. In addition, a purposive sample of Canadian schools that offer similar courses was invited to participate in the study to facilitate a comparative analysis.

Study Rationale

Although it is critical that any curriculum be reviewed at regular intervals to better meet student needs; the OP program had not been reviewed since its inception in 1990. As an OP teacher in NB, I had witnessed the personal growth, relationships, and bonds that students develop by participating in outdoor experiences. In my experience, this course had been successful in meeting the learning objectives set forth in the curriculum; however, I believed that not all topics were covered equally across the province and that some of the compulsory core activities were no longer being taught due to a lack access, equipment or time constraints. I also

believed that many OP teachers worked in relative isolation prior to this research. Furthermore, throughout the 1990s, the OP course had been run by only a small number of schools, but it subsequently had spread province-wide. Because the number of OP teachers had increased over time, it had become important to gather information regarding their values and needs in relation to their programs.

Furthering the need for review, the Department of Education of NB had released its updated Physical Education and Health guidelines in 2007. Because the OP program falls under the Physical Education and Health purview, the OP curriculum should align with the three general Physical Education and Health curriculum outcomes: doing, knowing, and valuing (Department of Education, 2007, p. 1). The 1995 OP curriculum, which in my opinion was content-based and focused solely on the knowing outcomes, was centered on a compulsory set of core activities, and supplemented with optional prescribed activities. In my opinion, this format did not match up with the 2007 updated guidelines. My research into current OE practices suggested commonalities to the outcomes of doing, knowing, and valuing that could be integrated into the updated curriculum. Furthermore, my research into the current OE literature regarding course content emphasized themes directly related to all three of the updated PE outcomes—doing, knowing, and valuing. Most theorists encouraged teachers to teach and evaluate the retention of skills and to model environmentally-friendly behaviours. The literature's focus on safety standards related to the outcome of "valuing" in that students learn the value of participating safely through the teacher's demonstrations, teachings, and mitigation practices. Attention to teacher certification and training connected to the outcome of "doing": Regulations limit what OP teachers are allowed to do with their students based on the teacher's certifications. Therefore, by examining the existing state of teacher certification, a plan could be

developed to standardize an acceptable minimum level of outdoor-related skills for all OP teachers.

Other shortfalls suggested further need for curriculum revision. The original OP curriculum was not written in a fashion that would allow the teachers opportunities to develop their students across all three of the domains of learning: psychomotor, cognitive, and affective. Hagler and Morris (2013) posited that the first domain, psychomotor development, involves directly observable movement skills. The curriculum document could account for these skills by suggesting that teachers use a variety of outdoor activities in their OP program. The cognitive development domain, which involves thinking and is only observable through behaviours or products of thinking (Hagler & Morris, 2013), could be developed through the many problem-solving and group-initiative tasks set up for the students. The affective development domain, which measures a student's values and beliefs, can only be seen, "through attitudes, behaviors, and choices that express values" (Hagler & Morris, 2013, p. 35). It could be observed while students participate in co-curricular trips.

A final useful framework for curricular revision is the Revised Bloom's Taxonomy. Curriculum developers commonly use taxonomies of learning to develop outcomes because they "help educators identify the verbs that describe what students should chronologically represent or demonstrate" (Maki, 2010, p. 91). Analysis of the OP curriculum with reference to the Revised Bloom's Taxonomy Action Verb scale (Appendix G: Revised Bloom's Taxonomy Action Verbs), established that the action verbs used in the original OP curriculum outcomes all fall under the lower cognitive domains of "understanding" and "applying." Therefore, there was a need to investigate how outcomes could be written to reach the higher-level cognitive domains.

Social trends, current literature, and educational developments all pointed to a pressing need to review the 26-year-old curriculum. The OP curriculum needed modification to align more effectively with the needs of OP teachers, the PE curriculum outcomes, and the three domains of learning. It also needed to address ways to develop higher-level cognitive outcomes.

Reflexivity

I highly value OE as a way to connect with the natural world. Participating in outdoor activities allows a person to experience and see things that can only be witnessed in an outdoor environment over prolonged periods of time. It is a way to connect with the others who join you on an adventure in ways that cannot be accomplished in an urban environment. In the outdoors all the participants have to share in a group's successes and failures; everyone must experience the hardships of inclement weather, but also develops bonds of shared experience that cannot be re-created in their ordinary lives or in an urban setting.

I have always felt a deep and passionate connection to nature; as a consequence, most of my most valued experiences have taken place outdoors. Educationally, my background consists of an Honours Bachelor of Outdoor Recreation, Parks, and Tourism; a Bachelor of Science; a Bachelor of Arts; and a Bachelor of Education. When I was in high school in New Brunswick, I took part in an OP class, and was fortunate enough to have been mentored by my OP teacher.

Professionally, I have been teaching at the high school level since 2006, specializing in outdoor education, and have continually sought opportunities to develop and seek new outdoor and leadership skills, experiences, and certifications. During my summers off and since 2000, I have worked as an adventure guide. This job consists largely of leading sea kayaking tours along the Bay of Fundy Coast, training and coaching new staff, as well as leading groups into terrestrial caves. My further experiences include being the leader/co-leader on multi-day sea

kayaking expeditions around the Nova Scotia coastline since 2008. Certifications I have earned to support my passion include Red Cross Wilderness Remote First Responder, Paddle Canada level four Sea Kayaking Skill, Level 1 and Level 2 Instructor, and I received the British Canoe Union Sea Kayak 4-star leader award. Prior to being a sea kayaking guide and instructor, I had been a Red Cross certified lifeguard for 12 years.

Recreationally, I have pursued numerous outdoor experiences, including top-rope rock climbing since 2000; ice climbing since 2008; flat and white water canoeing, as well as flat and white water kayaking since 1996; mountain biking since 1985; hiking and backpacking over the past 15 years in Canada, the United States of America, New Zealand, England, China, and Tanzania.

Throughout my time participating in outdoor activities, I have observed how these experiences have positively affected myself and my students. Many of these students have commented, years later, on how much they enjoyed going out into the wilderness, and have remarked that it was one of their more memorable experiences in high school. All of these experiences have led to my interest in examining the benefits of outdoor education programs in further detail.

It is important to note that I analyzed the research findings from the point of view that OE is invaluable and that it has power to reshape a person's perspective on life. The aim of the study was for participants to present personal thoughts, values, and beliefs related to their individual OP programs and not for them to simply validate my presumptions of OE. It is, however, impossible to set aside experiences and values; therefore, my personal beliefs are important in that they bring relevance to this study. One of my initial research goals was to determine whether my beliefs and values were similar to those of the participants of this study, and so it would have

been counterproductive to eliminate my influence. As a way of facilitating this aspect of my research during its quantitative phase, I introduced myself to the participants as an OP teacher and a Masters student of Memorial University.

My personal experiences, as highlighted above, have reinforced my interest in OE and have sparked a belief in the need to continue the tradition of teaching OE, not least because it seems a valuable way to reconnect today's youth with something other than a screen. In my opinion, participation in OE-type programs provides an excellent way to help youth develop a deeper connection to the outdoors with hopes of fostering them to develop environmental ethics.

Goals

The first goal of this Masters project was to determine the philosophical foundations of the current OP program and to provide theoretical evidence to support the continuation of OP courses in the Province of NB. This goal was met through an in-depth review of the current literature on the value and benefits of participating in OE programs.

As a second goal, I aimed to investigate the state of the high school OP programs in NB. This goal was met using a sequential explanatory mixed-method approach, which involved conducting both quantitative surveys and qualitative interviews.

The last goal of this research was to investigate the curricular frameworks normally used in the development of PE courses to inform any future OP curriculum updates.

Chapter 2: Literature Review

This chapter presents a review of the literature pertaining to using the outdoors as a medium for educating students. It begins with a foundational timeline of definitions, descriptions, and beliefs about OE. To present deeper insight into the benefits and values of this type of education, the review then examines the many strands of OE: experiential education, adventure and wilderness-based adventure programs, and wilderness therapy. The OP program aims to be all-encompassing, incorporating components and values of each of the above OE related strands; therefore, there was a need to define and describe each in the context of this study. A third section presents investigation into the literature relevant to motivations, risk, safety, and outcomes in relation to participating in outdoor activities. The review ends with a discussion of outcome-based curricula and the value orientations that are commonly associated with the development of PE curricula.

The purpose of the literature review was to inform the study and to determine which themes should be investigated to make up a comprehensive critical examination of OE. During this review, four major themes emerged and became the focus of this project: curriculum content, safety and standards, teacher training and certification, and curriculum development. The literature often referred to the outcomes and goals of OE programs, ideas which developed into the theme of "curriculum content." A second theme of "safety standards" emerged in the literature's many references to the importance of understanding and mitigating risk. The third theme, "teacher certification and training for OE programs," relates to the previous two in that without proper training in the technical skills and standards required to facilitate activities safely, liability concerns may prevent an OE program from reaching the goals set forth in the curriculum documents. The final theme, "curriculum development", relates to the connection between the

OP program and the New Brunswick PE curriculum, as this research was intended to be used to inform the curriculum update process. It therefore became necessary to identify the curriculum frameworks used to develop PE curricula.

Outdoor Education

OE is a multifaceted umbrella term which incorporates many different elements. These elements include but are not limited to outdoor recreation, outdoor/environmental education, adventure programs (such as outdoor pursuits, adventure recreation, adventure therapy, and adventure education) and is based on experiential education practices (Jensen & Guthrie, 2006). One example of this, is how the term OE is often used interchangeably with outdoor recreation (Jensen & Guthrie, 2006). The two terms have become conflated by the misconception that an activity that is recreational and fun cannot also be educational; this false binary precludes the possibility that the fun people have while participating in an outdoor recreational based program may also include an educational benefit. Hurd and Anderson challenged this misconception by broadly defining recreation as: “an activity that people engage in during their free time, that people enjoy, and that people recognize as having socially redeeming values” (2011, para. 7). They went on to reinforce their comprehensive definition by noting that organized recreation programs aim to meet “a variety of physical, psychological, and social needs [which] has led to recreation playing a role as a social instrument for well-being and, in some cases, change” (2011, para. 9). Drawing on this conception of OE, it seems essential that OE programs set difficult and specific goals and structure tasks so that participants can attain these goals. The most effective programs will provide challenging and specific goals, such as problem solving and conflict management, and then structure situations with sufficient preparation and social support for participants to reach these goals. The enjoyment and satisfaction that people gain by stretching

themselves to attain goals does not overshadow the learning that also takes place.

Many other theorists have also seen the value of using outdoor experiences for educational purposes; in fact, the educational value of OE has a rich history and has had many conceptualizations. Donaldson and Donaldson (1958) defined OE as: "education in, for, and about the outdoors" (p. 63). Rhoades (1972) argued that the most compelling reason for using the natural environment is that it requires certain responses, which are of value: cooperation, clear thinking and planning, careful observation, resourcefulness, persistence and adaptability. Lewis (1975) stated that OE "appeals to the use of the senses–audio, visual, taste, touch and smell–for observation and perception" (p. 9). Priest (1986) described six founding components of OE: "a method for learning, it is experiential, it takes place primarily in the outdoors, requires the use of all senses and domains (cognitive, affective, and motoric), is based on interdisciplinary curriculum matter, and deals with relationships involving people and natural resources" (p.13-14). More recently, Gilbertson, Bates, McLaughlin and Ewert (2006) described OE as "education that is conducted in a wilderness-like setting or through nature and physical skills development to promote interpersonal growth or enhance physical skills in outdoor pursuits" (p. 8). Neill (2008) described OE programs, in his study, as involving:

> organised, small group, multi-day expeditions in relatively natural environments with an emphasis on experiential "stress-inoculation" philosophy most commonly to foster participants' personal and social development, but also sometimes includes physical, recreational, environmental, and/or therapeutic goals (p.1).

Wagstaff and Attarian (2009) described OE as "education that focuses on the development of interpersonal and intrapersonal relationships while participating in outdoor activities that include attributes of risk and challenge" (p. 15). Martin (2010) described how OE can make three unique

contributions to student development: “(1) connecting to the natural world, (2) critical perspective on contemporary living and (3) risk management along with outdoor living and travel skills” (p. 8). White (2012) described how using mediated OE learning experiences such as camping, canoeing, and hiking are capable of “encouraging the promotion and fostering of positive aspects of young people’s lives and of healthy ways of interacting and communicating” (p. 13). According to Outdoor Education Australia (2015), OE “provides unique opportunities to develop positive relationships with the environment, others and ourselves through interaction with the natural world. These relationships are essential for the wellbeing and sustainability of individuals, society and our environment” (para. 1). Jostad, Sibthorp, Pohja & Gookin (2015), described how most outdoor adventure education programs “take a small group of individuals...who do not know each other and provide opportunities for them to engage in activities that require support, teamwork, and communication over an extended period of time” (p.17). Becker, Lauterbach, Spengler, & Mess (2017) acknowledged that the term OE term carries different "meanings, understandings and practices within various research areas, countries and cultures” (p.2). However, they also generalized OE as teaching and / or learning and / or experiencing in an outdoor and / or out-of-school environment” (Becker, Lauterbach, Spengler, & Mess, 2017, p.2).

Similarities between these various definitions and descriptions of OE became increasingly obvious as they were juxtaposed with each other. Common features of the definitions include: (a) requiring OE to be based around experiential learning opportunities; (b) using the outdoors as an instrument to foster connections with nature and others; (c) incorporating activities that involve working closely with small groups of people; (d) covering a variety of recreational activities; (e) recognizing OE’s ability to develop personal and social

attributes, and interpersonal and intrapersonal skills. The definition that I believe best fits OE for the purposes of this review is that of Ewert and Sibthorp (2014):

> A variety of teaching and learning activities and experiences usually involving a close interaction with an outdoor natural setting and containing elements of real or perceived danger or risk in which the outcome, although uncertain, can be influenced by the actions of the participants and circumstances. (p.19)

To me this definition aptly integrates the most common features recognized as essential to the field or OE.

Through OE, students engage in various forms of outdoor activities such as hiking, canoeing, cross-country skiing, group relations, and navigation, which carry many potential benefits. Ardahan and Mert's (2013) research described the benefits of participating in outdoor activities as: "(a) learning group dynamics, (b) gaining self-confidence, (c) making individual decisions, (d) learning risk management, (e) taking responsibility of self and others, (f) improving physical and mental fitness, (g) feeling healthy, (h) making friends and socialization" (p. 889). Other benefits, noted by Anderson et al. (1997), include that positive changes occurred in self-concept, self-esteem, trust, group cooperation, skill development, and improved health when people were involved in outdoor adventure programs.

Moote and Wodarski (1997) reported that although results appeared to vary, the majority of studies indicated that participation in a wilderness based adventure programs, a strand of OE, impacted positively on participants' self-esteem and self-concept. Further benefits include that these programs allow students to learn skills and make the necessary judgments to complete a variety of activities safely in the future. In a UK study conducted with 48 secondary school students, White (2012) noted that participants in his study, the school staff, and the teachers all

reported improved interpersonal interactions amongst the participants following involvement in a three part OE program. Furthermore, improvements in the areas of group cohesion, and social interactions were also noted after the completion of the OE program (White, 2012). The findings of these researchers support the perspective that teaching outdoor skills to youth in a formal setting develops young peoples' ability to participate in outdoor recreational activities safely and sustainably throughout their adult lives.

This conclusion was reinforced in the Outdoor Foundation's (2013) annual outdoor participation report, which stated that, "introducing outdoor recreation and physical activities early in life has a lasting effect. Among adults who are current outdoor participants, 75 percent had physical education and 42 percent enjoyed outdoor activities in elementary schools" (p. 5). This is critical to note because the Centers for Disease Control and Prevention (1997) reported that the greatest decline in physical activity happens during adolescence, and that physical activity as a preventive behaviour has gained increased attention for prevention of premature disease, disability, and its contribution to quality of life. Furthermore, deaths related to complications arising from physical inactivity have been ranked as the fourth leading cause of death worldwide (Kohl et al., 2012). According to Valois, Umstattd, Zullig, and Paxton (2008), and Eime, Young, Harvey, Charity and Payne (2013) teenagers' participation in physical activity has been associated with decreased anxiety and depression, improved academic performance, improved parental relationships, increased self-esteem, decreased anger, decreased psychological stress, lower levels of mental health problems, reduced drug use, satisfaction with mandatory gym classes, and increased quality of life/perceived life satisfaction.

Based on the above definition of OE two other terms that may logically fall under the umbrella of OE, are experiential education, and adventure and wilderness based adventure

programs.

Experiential Education. Experiential education (EE) has been an integral part of OE programs for many years. Both Priest (1986) and Neill (2008) have designated learning through experience as a core component of any OE program. Programs that use EE are designed to offer a wide variety of approaches that encourage and facilitate the development of specific life skills in ways that appear innovative and engaging. Through EE, students are placed in both mock and real-life situations that enable them to put the skills they have previously learned into an authentic and relevant context. The goal of this type of learning is to create lasting connections. One of the more referenced definitions of EE is that of Kraft and Sakofs (1988):

> Experiential education is the process of actively engaging students in authentic experience that will have benefits and consequences. Students make discoveries and experiment with knowledge themselves instead of hearing or reading about the experiences of others. Students also reflect on their experiences, thus developing new skills, new attitudes and new theories or ways of thinking. (p. 23)

Sproule, Martindale, Wang, Allison, Nash and Gray (2013) summarized the main goals of experience-based learning by noting its intention to facilitate the development of "important attributes and skills for life (e.g. motivation, problem solving skills, communication and collaboration) by providing students with an insight into themselves, their values, their priorities, their friendships and their relationships with their teachers" (p. 316). Furthermore, Howden (2012) described how EE involves providing a learner with a set of problem-solving tasks in a unique environment. These tasks allow the learner to develop meaning and direction through the process of reflection both during and after the experience. The reflective aspect of EE also was reinforced by the Association for Experiential Education (2016) (AEE), which described

experiential education as a philosophy in which the learner is purposefully engaged in direct experience and focused reflection with the goal of developing skills, knowledge, community involvement and the clarifying of values.

The benefits associated with the use of EE can be found in the work of Allison and Wurdinger (2005), who described how EE is different from traditional teaching in that it allows students to discover what works and what does not—students gain knowledge via a fluid and interactive process. EE aims to be a life-long learning process in which, "students expand and enhance their understanding and application of knowledge in light of new experiences and new relationships in a continuing cycle of experience and knowledge" (Allison & Wurdinger, 2005, p. 387). As described by Allison and Wurdinger, EE can engage learners in multiple ways, which can lead to better retention of the subject matter.

Adventure and wilderness-based Adventure programs. Both adventure and wilderness-based adventure (WBA) programs operate under the umbrella of EE (Moote & Wodarski, 1997) and OE. Ewert (1989) proposed that people are motivated to participate in WBA recreation programs as "there are many benefits, consequences, and expected outcomes from participation in outdoor adventure pursuits that are similar to those realized through outdoor education, environmental education, or outdoor recreation"(p.47). Some of the components for successful life-skills programs appear to be inherent in adventure and wilderness-based learning and counselling approaches. In particular, communication skills, cooperation, decision-making, and problem solving comprise the majority of group activities. Thus, WBA programs, like OE programs, involve a structured sequence of cooperative group activities whose goal is to improve members' interpersonal skills, capacity to trust, self-esteem, sense of self-confidence, mutual support within a group, level of agility and physical

coordination, pleasure in one's physical self and in being with others, and familiarity and identification with the natural world (Rohnke, 1989).

The efficacy of WBA programs has prompted an increase in their use during the past three decades as a method for teaching adolescents about life-skills including communication, group problem-solving, interpersonal skills, and group cooperation. Ewert (1989) described how the use of WBA programs has rapidly grown in the last three decades as a method of therapy or rehabilitation, personal growth, and production of social benefits. Similarly, Anderson, Schleien, McAvoy, Lais, and Seligmann (1997) noted that a substantial research effort has paralleled this growth, investigating a variety of dependent variables, such as enhanced self-concept, improved social attitudes and behaviour, improved physical health, reduced recidivism, changes in locus of control, and longitudinal effects on lifestyle. Project Adventure (2007) described adventure as "a way of doing: it is not just an activity in and of itself" (p. 6). Furthermore, Project Adventure (2007) connected the affective impact of the program to the experiences it offers: Adventure exists when there is engagement through unique and relevant experiences that include challenge, fun, taking risks, and safety. This description aligns with the definition of adventure education forwarded by Prouty, Panicucci, and Collinson (2007), "direct, active, and engaging learning experiences that involve the whole person and have real consequences" (p. 12). Participants in such programs may readily assign meaning and relevance to their experience due to their intense personal impact. As Sibthorp and Cass (2011) note, a benefit of these learning experiences is the "real, raw, authentic and experiential" (p. 112) quality of their interactions. Furthermore, in the work of Russell and Walsh (2011) with young offenders, the use of WBA programs showed significant increases in the participants' self-efficacy and their hope for the future.

Several key factors need to be in place for an adventure-based program to be successful, including: maintaining small group size, providing both physical and mental challenges, developing relationships, and incorporating sufficient program length. Hattie, Marsh, Neill, and Richards (1997) have developed a comprehensive list of the common features of successful adventure programs:

> (a) wilderness or backcountry settings, (b) a small group (usually less than 16), (c) assignment of a variety of mentally and/or physically challenging objectives, such as mastering a river rapid or hiking to a specific point, (d) frequent and intense interactions that usually involve group problem solving and decision making, (e) a nonintrusive, trained leader, and (f) a duration of 2 to 4 weeks. The most striking common denominator of adventure programs is that they involve doing physically active things away from the person's normal environment. The names for these activities are remarkably varied and include adventure education, exploration schemes, mountain centers, survival courses, and wilderness courses . . . . In this article, the generic names adventure programs and adventure education are used to encompass these forms of education. (p. 44)

Research conducted by Russell (2003) also indicated that the longer the duration of an adventure-based education program, the greater the learning and therapeutic effects would be on the participants. Based on their sample of 120 NOLS courses with participants ranging in age from 14 to 62 years of age, Sibthorp, Paisley, and Gookin (2007) explained that when the design of adventure-based recreation programs involved groups of 10 to 15 participants on an extended and isolated expedition, the activity and group size seemed to heighten the role of group dynamics on individuals' learning and development. Sibthorp et al. (2007) also highlighted the necessity of providing challenges for an individual's growth and development: Even though

challenge is a subjective and complex construct, it can be operationalized through the choice of terrain covered. Leaders must take a variety of factors into consideration when determining a program's level of difficulty. For example, environmental challenges such as the weather lie outside of the program's control and can influence the success or failure of an adventure program. Interpersonal dynamics also have an effect on a program's success. Sibthorp et al. (2007) considered the relationships that the participants build with leaders to be critical components of adventure-based recreation programs. Additionally they also emphasized the necessity of developing meaningful relationships, since "the rapport may become a more dire need in terms of mortal safety…due to the real and perceived risk involved in the activities" (Sibthorp et al., 2007, p. 6). In order for a participant to fully participate, they must feel safe in the hands of their leaders.

Wilderness therapy. The last strand of OE examined was that of wilderness therapy (WT). Crisp (1998) defined WT in terms of its location both:

> the combination of environment and community can be encapsulated in the notion of a "therapeutic wilderness milieu," and typically includes two different intervention formats: 1) wilderness base camping--establishing a camp with minimal equipment in an isolated environment, and 2) expeditioning--moving from place to place in a self-sufficient manner using different modes such as back-packing, rafting, canoeing, cross-country skiing, etc. (p. 59).

Based on the above description, WT programs are similar to WBA programs in that they both use the outdoors for educational purposes, the difference is that WT programs use the wilderness only as a medium for developing personal change.

As with other types of OE programs, WT programs have resulted in well-documented benefits. In a study conducted by Cason and Gillis (1994), participation in WT programs, by adolescents, showed positive results in the development of participants' internal locus of control, which is associated with positive outcomes. Somervell and Lambie (2009) outlined four benefits a WT program offers participants: 1) emphasizes the immediateness of the situation, the experiences, and offers real, salient consequences, 2) provides structured and achievable goals with the aims of improving self-efficacy, 3) involves high levels of trust and acceptance as well as increases the amount of quality feedback, and 4) potentially leads to self-reassessment of coping strategies.

Outdoor Education and International Curriculum Connections. The aforementioned literature suggest that OE can prepare students to face the challenges of the twenty-first century learner. By 2010 the development of twenty-first century skills had become a focus of the NB Department of Education (Department of Education and Early Childhood Development, 2010). Another program that recognized the need for twenty-first century skills is the International Baccalaureate (IB) program, an internationally-recognized system offering a global curriculum to a network of 3362 IB world schools in 146 different countries (International Baccalaureate Organization, 2013). Based on this researcher's teaching experiences, the OP 110 course presents a unique situation that has the potential to develop a connection between the province of NB and the IB program. One of the aspects of the IB program that opens possibilities for a program such as the OP course are the IB learner profiles. These are "a set of learning outcomes for the twenty-first century. The attributes of the profile express the values inherent to the IB continuum of international education" (International Baccalaureate, 2009, para.1). The IB learner profiles "represent 10 attributes...[that] can help individuals and groups become responsible

members of local, national and global communities" (International Baccalaureate, 2013, para. 12).

The IB program, like the OP program, presents unique learning opportunities. In the case of the IB program these opportunities come from teaching using the ten learner profiles; for the OP program these opportunities come from the use of the outdoors as a medium as well as the challenging outcomes set for its learners. Through a program, like OP, a student would also be able to develop the ten attributes associated with the IB learner profile. OP students are able become (a) inquirers, as the course requires them to conduct hands-on investigations into the natural environment; (b) knowledgeable, as the program has them explore concepts such as "leave no trace," ethics, and sustainability; (c) thinkers, as the curriculum puts them into elaborate situations where they must apply critical thinking skills and solve problems creatively; (d) communicators, as they must be able to communicate and collaborate with other students; (e) principled, as participation in group activities and co-curricular trips teaches them concepts like fairness, honesty, and responsibility; (f) open-minded, as they must demonstrate willingness to listen to and express differing points of view when working in group contexts; (g) caring, as they must show compassion and respect towards the feelings and needs of the members of their group; (h) risk-takers, as we expose the students to many unfamiliar situations through planned activities; (i) balanced, as we teach our students about life-long activities to continue with their families and into adulthood; (j) reflective, as we conduct debriefing sessions after participation on co-curricular trips and major units of study.

Risk and Motivation

Any activity that a person does–crossing the street, playing in an organized sport, or driving a car–carries a risk when it is taken for granted. Risks are as inherent in the realm of OE,

as they are in every realm of life. The problem with using the word "risk" in many westernized countries is that, "risk is increasingly synonymous with danger, the term evoking fear that narrows thoughts and actions to protective responses" (Niehues, et al., 2013, p. 223). The dictionary definition presented by Merriam Webster flattens the concept of risk to one rigid condition: "the possibility that something bad or unpleasant (such as an injury or a loss) will happen" (n.d., para. 1). To deal effectively with issues of risk, it is essential to distinguish perceived risk from actual risk and to determine positive versus negative risks. Perceived risk is "the subjective belief that there is some probability of suffering a loss in pursuit of a desired outcome" (Pavlou & Gefen, 2004, p. 41). In contrast, actual risk refers to the certainty/actuality of suffering a loss. Negative risks are ones that will, according to Panicucci (2003), lead to destructive behaviours, while positive risks can lead to critical learning and growth opportunities. Panicucci (2003) also indicated the centrality of teaching students the skills necessary to assess risk: such learning "may not only be important, but in some instances can be lifesaving" (p. 14). One of the values of OE and adventure programs is that they allow "individuals opportunities to experience positive risk taking" (Panicucci, 2003, p. 14). Stan and Humberstone (2011) summarized the work of Frey (1991) in their descriptions of risk, in that risk "appears in any social context; however, it may not play an important part for all individuals. Nevertheless, risk permeates each action and interaction that is there is always a risk to health, values, self-concept, ethical stances, identity, quality of life, etc." (p. 214). They go on to state that:

> The Children's Play Council (CPC 2004) has recognized the importance of exposing children to carefully managed risks, as it was believed that such exposure could help children learn how to use their judgment soundly in assessing risks themselves, which would, in turn, build their confidence, resilience and self-belief, these qualities being

> essential for their eventual independence (p. 215).

Exposing youth to minute amounts of risk does have a place; however, the risks must be managed as much as possible to develop confidence and resiliency.

Providing mediated adventure based OE programs is one way that we can introduce children to activities that may involve risk. Mediated adventure based OE learning experiences, according to White (2012), are "organized and facilitated activities that have a high level of perceived risk and require a high level of perseverance and cooperation to go beyond self-imposed limitation and fear to overcome the challenges in a safe and effective manner to promote personal growth" (p. 14). In order for teachers to be able to provide mediated adventure based OE programs, they require an appropriate level of training to be able to recognize and mitigate any potential risks to their students. This training is a worthwhile endeavour in that the risks involved with OE programs form an essential aspect of their impact.

Risk may be integral to human motivation. Numerous studies have been conducted to determine what motivates people to choose to participate in OE programs. Two theories that have been influential are the "risk theory" and the "insight theory." According to Walle (1997),

> in the standard "risk theory" of adventure, North Americans seek risk as a means of personal fulfillment. According to this conventional "risk theory" of adventure, the adventurer is believed to seek risk for its own sake and because of the emotional rewards provided by experiencing it. Researchers tend to link risk taking adventures to what Abraham Maslow (1954) calls "self-actualization" and "peak experiences." As such, outdoor adventures (in which participants pit their developing skills against risks and challenges) create opportunities for individuals to encounter peak experiences, and perhaps achieve self-actualization. Since self-actualizing is an ultimate goal of life

> (according to Maslow's model), the adventurer accepts risk and challenges in order to experience rewards associated with self-actualization and peak experiences (p. 267).

Walle's words reinforce the work completed by Ritchie and Goeldner (1994), who posited that, "once the more basic needs (physiology and safety) have been adequately satisfied, they cease to be important motivators and the "higher" needs predominate" (p. 506). For Walle, risk taking could fulfill a higher need that moves an individual closer to self-actualization.

In contrast, the insight model, according to Walle (1997), "focuses upon the search for 'insight' as a key goal of outdoor adventure. In this model, risk taking is not viewed as an inherent goal of adventure, although it may emerge as an inevitable side effect. Here, self-actualization involves gaining insight through adventurous activities" (p. 269).

The "insight model" can be directly applied to the goals of the OP teachers of NB as the goal of the program is for the students to gain knowledge in new/strange environments and not to intentionally expose them to risk. Walle (1997) provided a comparison table of the two models (Table 1) and used it to illustrate how the two theories can be applied and to whom they are relevant, and to provide the different views of risk. Walle (1997) also goes on to discuss how

> ... adventurous behaviour can be explained in at least two divergent ways. One theory suggests adventure involves pursuing risk as an end in itself, where risk taking is viewed as an inevitable aspect of adventurous behaviour since it allows the individual to "self-actualize" via "peak experiences." In contrast, the insight theory of adventure focuses upon gaining insight as the goal of adventure and considers risk to merely be a side effect, which is often present in adventurous outdoor activities. (p. 270)

Table 1.
A Comparison of Risk Theory and Insight Theory

Issue	Risk Theory	Insight Theory
Status of Theory	The standard, state of the art theory of adventure	A proposed theory which is offered to supplement and/or replace "risk theory"
Activity which the Theory Conveniently Investigates	Outdoor adventures involving risk	Adventure, broadly defined
Adventure Is Viewed Primarily as	Risk taking	A kind of learning experience which occurs in a new/strange environment
Status of Learning/Insight in the Model	A possible side effect of risk taking	Insight is an end in itself: the goal and process of adventure
Significance of Risk	Adventure must be adjusted in terms of acquired skills so risk/danger continues	Danger/risk is a side effect of striving for insight, not the reason for adventuring
Theory Relevant to	Certain outdoor adventures as they have been investigated by contemporary researchers	Numerous, broadly defined adventurous activities

(Walle, 1997, p. 269)

Like Walle, Ewert connected insight with risk taking, proposing further reasons that people are motivated to participate in WBA recreation programs. To Ewert (1989) outdoor adventure programs have traditionally been associated with personal growth and development of the individual or group using a set of expected outcomes. The motivating factors for participation in WBA programs include the elements of risk, the uncertainty of the outcome, and the personal influence that can be applied to successfully reach the outcomes (Ewert, 1989)

According to Walle (1997), researchers "often equate adventure with risk taking and assume that experiencing risk is an inevitable motivation for those involved in adventurous

activities" (p. 265). Walle (1997) echoes Ewert (1989) by stating, "only in outdoor adventure pursuits is there a deliberate inclusion of activities that may contain threats to an individual's health or life" (p. 13). Walle (1997) continues by observing that "experienced adventurers seek out increased levels of risk as their skills improve. Although some risks might be of a social nature, a link to some sort of physical/safety threat can usually be overcome or mitigated through developing skills and acquiring knowledge" (p. 266). The connection of risk to motivation is an integral aspect of the transformative power of adventure education as well as OE.

Safety

By removing all risk from the activities that we allow children to participate in, we potentially influence them to take greater risks in their personal lives. Brussoni, Olsen, Pike, and Sleet (2012) proposed this idea: If "children perceive they are not obtaining challenging and interesting risky play opportunities in public play areas, they may seek these opportunities elsewhere" (para. 24). Furthermore, the impact of removing risk may cause opposite consequences to those that well-intentioned adults anticipate: "children's opportunities for physical play become so barren and lifeless that children may expose themselves to greater risk of injury in their search for excitement in their play" (Stan & Humberstone, 2011, p. 216). This lack of exposure to risk led Niehues et al. (2013) to pose two key questions with regard to the development of children. They asked:

> How do children learn the limits of their abilities if they are offered only activities where there is no risk of failure? Furthermore, if they are never allowed to experience discomfort, how do children develop physical skills, learn to regulate their emotions, extend themselves in social relationships or persevere in the face of cognitive challenges? (p. 224)

Stan and Humberstone (2011) went on to warn that, “providing risk-taking opportunities for children in the outdoors is not synonymous to safety being ignored, but rather it means that parents and teachers need to be aware of the hazards and take all the measures to make sure that the environment is safe” (p. 217). As a benefit of exposing youth to risk, Metsuru (1992) noted that, “children learn to avoid great danger by being exposed to small dangers” (p. 4).

Outcomes

An OE program like OP in NB did not arise in isolation; nor does it develop and operate in a vacuum. Organizations such as the National Outdoor Leadership School (NOLS), based in the United States of America, and Outward Bound have been successfully teaching programs in wilderness environments for years. They are seen as the industry leaders, and hence are good programs to use as models for the OP course. The National Outdoor Leadership School (2013) promotional literature proclaims that:

> positive, ethical leaders change the world. Based on this belief, NOLS has, over the last 46 years, become the leader in wilderness education. Founded in 1965 by legendary mountaineer Paul Petzoldt, NOLS takes students of all ages on remote wilderness expeditions and teaches them technical outdoor skills, leadership, and environmental ethics. What NOLS teaches cannot be learned in a traditional classroom or on a city street. It takes practice to learn outdoor skills and time to develop leadership. The backcountry provides the ideal setting for this unique, experiential education—NOLS classrooms are some of the world’s wildest and most awe-inspiring locations. We believe living in untouched places like our classrooms will teach students responsibility for all that surrounds us. (para. 1)

Similarly, Outward Bound Canada's mission is "to cultivate resilience, leadership, connections and compassion through inspiring and challenging journeys of self-discovery in the natural world" (Outward Bound Canada, 2013, para. 1). Common ideas bind the three programs (OP, NOLS and Outward Bound) together in the sense that they all foster like-minded objectives.

In OE programs, like OP, as with other educational programs, it is important to recognize the learning objectives. Paisley et al. (2008) summarized the six learning objectives of NOLS as being: "communication skills, leadership skills, small group behaviour, judgment in the outdoors, outdoor skills and environmental awareness" (p. 202). Additionally, Paisley et al. (2008) defined the six objectives in more granular terms:

> Communication skills are defined as communicating effectively in a small group setting and include discussing leading, feedback provision and expressing ideas. Leadership involves taking initiative, responsibility and decision making roles. Small group behaviour is defined as being a positive and productive group member. Judgment in the outdoors is the ability to recognize potential hazards and make good decisions in the backcountry. Outdoor skills are competencies for backcountry travel and living. Environmental awareness is defined as a combination of perceived knowledge of environmental stewardship practices and regulations and an appreciation for the environment (p. 202).

The specificity of these definitions makes them actionable. Likewise, Kellert (1998), who studied 450 participants in wilderness based education programs, found common outcomes that would lead to exemplary course objectives: self-confidence, self-esteem, problem solving skills, autonomy and independence, initiative, interpersonal relationships, interest in participation in outdoor activities, and affective and spiritual connection with nature. The Association for

Experiential Education (2002) developed its own conceptual framework when it split the 39 outcomes used in a similar study into four major categories: professional development, therapeutic, cognitive, and personal development. Breaking down broad categories into more widely examined participant variable predictors of growth, Sibthorp et al. (2007) included "age, sex, previous similar experiences, perceptions of empowerment, challenge level, group cohesion, instructor rapport and course duration" in their framework (p. 3).

From a quantitative perspective, Hattie et al. (1997) contended that adventure programs had the greatest immediate effects on most dimensions of leadership, academic, independence, assertiveness, emotional stability, social comparison, time management, and flexibility. Ewert and McAvoy (2000) split the benefits and effects of participation in wilderness areas into three themes: (a) self-systems, referring to an individual's knowledge and personal beliefs including self-esteem, self-concept, and attitudes, (b) therapeutic outcomes, including benefits to a broad range of groups, and (c) group dynamics and development, which includes teamwork, trust, communication, cohesion, conflict resolution, and decision making.

The American Camp Association (ACA) (2005) conducted research to determine the most common outcomes of organized camping for youth. They then grouped these outcomes into four distinct categories: positive identity, which included self-esteem and independence; social skills, comprised of leadership, friendship skills, social comfort and peer relationships; physical and thinking skills, which involved adventure and exploration and environmental awareness; and positive values and spirituality, which contained values, decisions, and spirituality (ACA, 2005).

On a broader scale, Gillis and Speelman (2008) noted in their meta-analysis of 44 studies that the four most frequent outcomes were self-concept, group dynamics, personality measures, and self-efficacy (p. 126). Bandura (1986) also presented self-efficacy as an integral component

of behaviour change in both the self-efficacy theory and as a key construct of the social cognitive theory, defining self-efficacy beliefs as an individual's belief in their capability to successfully execute a course of action and influence the choices of activity in which they engage. Self-efficacy has been found to be a beneficial outcome of OE programs, by many researchers, although it has sometimes been investigated under other terms. Numerous studies conducted on older adolescents have demonstrated likewise that leisure engagement is related to perceived competence or self-efficacy, self-determination and social support, reduced psychological distress and increased optimism (e.g. Cassidy, 2005; Hutchinson, Bland and Kleiber, 2008; Passmore and French, 2000). As an example, in 2011, the ACA updated their youth outcome battery (YOB) to test for 11 identified common camp and youth development program outcomes. The 11 outcomes on which the ACA's (2011) YOB focused were friendship skills, independence, teamwork, family citizenship, perceived competence, interest in exploration, responsibility, affinity for nature, confidence in problem-solving, camp connectedness, and spiritual well-being.

Perhaps the most comprehensive information came from the meta-study on Outward Bound conducted by Hattie et al. (1997), which analyzed 151 adventure education samples from 96 studies, and identified 40 major outcomes of adventure-based outdoor recreation programming. These were classified into "six major categories including: leadership, self-concept, academic, personality, interpersonal and adventuresomeness" (Hattie et al., 1997, table 9.1). The categories are elaborated below.

Leadership. Through outdoor experiential training program activities, the opportunities to perform leadership roles in outdoor experiential groups can have a positive impact on self-esteem and self-confidence (Levitt, 1994). Richards (1975) argued that leadership needs to be

viewed as the performance of those acts (referring to hard physical work in undesirable conditions, team spirit, and unsophisticated food) that help the group achieve its goals. Thus, any member of a group may at some time be the leader by acting in ways that serve group functions (i.e. building a fire, setting up shelter, cooking food, etc.). Hattie et al. (1997) state that most leadership dimensions generated high effects in their meta-analysis, and it can be concluded that most adventure programs impact leadership.

Self-concept. One of the most important components of many OE programs is the "group process." Ewert, McCormick, and Voight (2001) stated that most outdoor experiential therapy, and adventure therapy programs, a facet of OE, will use group situations as a therapeutic intervention to enhance the learning of specific social skills. Positive changes affecting self-esteem, self-confidence, self-determination, and increased self-efficacy may occur because of group accomplishments, reflection upon personal efforts, and contributions to the group's success (Schleien, McAvoy, Lais, & Rynders, 1993). Hattie et al. (1997) found that the greatest effects of the outdoor adventure program in the self-concept domain were generated by independence, confidence, self-efficacy, and self-understanding. In another study, Vogel (1989) indicated increased levels of self-actualization and increased perceptions of personal change as a result of participation in an outdoor adventure program. Another opportunity for improved self-concept is the act of developing relationships in smaller group settings. Witman (1995) found that the unique challenges presented with group adventure or challenging activities (i.e. initiative tasks, trust activities) allows participants the opportunity to establish relationships and earn the respect of fellow group members.

The idea that OE programs result in student feelings of confidence in personal effectiveness is not universally accepted, however. For example, Ewert (1989) argued that while

perceived competence at an outdoor activity may increase self-efficacy, it does not translate into a feeling of general competence. However, most researchers reached similar conclusions to Doyle (1981), who found that "based on qualitative data" exposure to the outdoors allowed for an intense learning experience not found in the traditional classroom. Ewert (1989) also concluded that, despite methodological weaknesses, an overwhelming amount of evidence supported the claim that survival training did positively enhance an individual's self-concept.

Academic. Outdoor adventure activities such as botany, orienteering, canoeing, kayaking, camp craft, and survival skills provide an array of opportunities to learn about nature and gain greater appreciation of the natural environment. Ewert (1989) extended the discussion about student experiences in nature when he noted that adventure experiences may benefit problem solving. Intellectual challenge lends itself particularly well to an outdoor educational situation, as such experiences often involve identifying the problem, proposing and reviewing solutions, choosing and implementing a solution, and evaluating the outcome. An outdoor EE program contains inherent opportunity for knowledge acquisition and should be considered an important by-product, which may be evidenced by improved school performance, achievement test scores, and creativity (Ewert et al., 2001).

The beneficial effects of OE experiences on academic achievements have been well documented over the past three decades. Through participating in a six week adventure program, Marsh and Richards (1988) found positive effects on academic achievement and self-concept of achievement from 66 students who were among the poorest achieving students in the schools they selected. Further to this positive effect, Hattie et al. (1997) pointed out that exposure to adventure programs enhanced the general problem solving competencies amongst its participants. Likewise, Crisp (1998) states that an individual will extend his or her normal

functioning to greater levels of achievement based on a spontaneous learning process, which is determined by the interaction of the individual with the experience. It is worthwhile to point out that, similar to recidivism, improvements in academic performance are limited to programs where the aim is to improve academic skills (Marsh & Richards, 1988). More recently, in their meta analysis of OE programs, with students ranging in age from 5 to 18, Becker, Lauterbach, Spengler, & Mess (2017) reported improvements in the students academic performance, learning motivation and in their ability to transfer gained knowledge to real life situations.

Interpersonal. OE programs affect the social skills of participants in desirable ways. Given the unique setting of such programs, a common aim has been the development of interpersonal skills, usually by forming small groups and making these groups face a set of increasingly challenging tasks that necessitate group interaction to achieve goals with real consequences. Hattie et al. (1997) observed marked increases in interpersonal skills among group members as a consequence of involvement in adventure programs. When working in small groups, participants are compelled to learn the art of listening and responding to others. When providing opinions toward group resolutions, group members must also accept that others have opinions, which have to be, heard as well (Hattie et al., 1997). Ewert and Sibthorp (2014) described that interpersonal outcomes include "group outcomes such as group cohesion and collective efficacy, and group-dependent outcomes, such as leadership, social competence, and teamwork skills" (p. 137).

Personality. Hattie et al. (1997) stated the effects of participation in OE experiences are high on personality dimensions, including those of assertiveness, reduced aggression, emotional stability, achievement motivation, internal locus of control, maturity, and reduced neurosis (anxiety).

Related to the personality dimension is personal development. Barr et al. (2008) reported that through participation in outdoor education,

> students are able to become: confident and creative individuals…[who]…have a sense of self-worth, self-awareness and personal identity that enables them to manage their emotional, mental, spiritual and physical well-being…are enterprising, show initiative…develop personal values and attributes such as honesty, resilience, empathy and respect for others (p. 9).

Adventuresomeness. This category encompassed such outcomes as challengeness, flexibility, physical fitness, and environmental awareness, all of which are developed by OE programs (Hattie et al., 1997). A broad definition for this outcome refers to excitement or "adrenaline buzz" elicited by an experience combined with the anticipation of facing the level of difficulty that participants face. Hattie et al. (1997) found OE's effects on challenge and flexibility was very high.

Benefits. Two other benefits of OE programs which have been examined are length of the program necessary to elicit positive results and feedback. Carson and Gillis (1994) stated the longer the program, the more beneficial the effects are on the outcomes of self-concept, behavioural assessments by others, locus of control, grades, and school attendance, to name a few. Perhaps these effects are partly determined by the fact that OE programs increase the amount and quality of feedback that is vital to the EE process. Hattie et al. (1997) stated that feedback, alone, is the most powerful single moderator that improves affective outcomes and achievement outcomes. OE programs, by their nature, increase opportunities for giving immediate, direct, and succinct feedback. For instance, participants will find out quickly if their

backpack is too heavy for a long hike, the best way to clean cooking equipment, and the most favorable place to set up sleeping areas.

Another benefit of participation in an OE program is that it can help to develop ecologically literate citizens. Berkowitz, Ford, and Brewer (2005) defined ecological literacy as "the ability to use ecological understanding, thinking and habits of mind for living in, enjoying and/or studying the environment" (p. 228). With respect to OE, Martin (2010) described the ecologically literate person as a person who:

- Is comfortable outdoors;
- Seeks encounters with nature for recreation and health;
- Has the knowledge and skills to safely and enjoyably explore nature while minimizing his or her impact;
- Has a well-developed understanding and sense of place from both personal experience and academic investigation;
- Understands and values systems thinking: inter-relatedness between humans and nature;
- Nourishes community and connections to place;
- Evidences stewardship, a deeply felt concern, even love, for the well-being of the Earth and all living things;
- Maintains sustainable beliefs and practices informed by principles of ecology, critical thought, judgement and action. (p. 8)

Developing ecologically literate students is a common goal of most OE programs. Introductory level OE programs such as OP can be viewed as the beginning point for the nurturing the ecologically literate citizen, because they require that students begin to develop outdoor skills

and talk about environmental awareness while also working on communication skills and small group behaviour. Leadership and judgement in the backcountry are two aspects that an OE teacher needs to develop in the field. These qualities are not always taught to their fullest extent due to teachers spending most time building the basic skills that the students require.

Outcome-based curricula

Since the original OP curriculum was developed, there has been a move away from teacher-centered instruction, which relied on content to direct the learning, toward learner-centered practices, which rely on outcomes to direct learning. Schuh (2004) defined teacher-centered practices as a model in which:

> the development of the instruction and control of the learning process is retained by the teacher. In this framework, there is the assumption that the teacher needs to do things "to" and "for" the learner. In other words, the teacher manipulates the learning situation to obtain the desired outcomes guided by generalized characteristics of the learners. (pp. 834-835).

In accordance with this description, teacher-centered practices often privilege content over skills. Botha (2002) describes a content-based curriculum as one "where memorizing knowledge for examination purposes is emphasized, instead of acquiring skills and focusing on processes. In this regard the teacher remains the key person who can maintain efficiency and effectiveness while facilitating the development tasks related to examinations" (p. 365).

In learner-centred practice models, "learning goals are achieved by active collaboration between the teacher and learners who together determine what learning means and how it can be enhanced within each individual learner by drawing on the learner's own unique talents, capacities, and experiences" (Schuh, 2004, p. 835). To promote the learner-centred model, the

1995 OP curriculum needs an update so it follows current trends and best practices. This means that an updated curriculum would need to be outcome-based. Outcome-based education, according to Botha (2002):

> is a learner-centred approach where the emphasis is not on what the teacher wants to achieve, but rather on what the learner should know, understand, demonstrate (do) and become. Teachers and learners focus on certain predetermined results or outcomes to be achieved by the end of each learning process. These outcomes are determined by relevant real-life needs, and ensure an integration of knowledge, competence, and orientations needed by learners to become thinking, competent and responsible future citizens (p. 364).

The activities and subject matter of OP courses are ideally suited to a learner-centred model, and with this amendment, the benefits students derive from the program will be increased exponentially.

Curriculum development

Looking forward to the creation of an updated curriculum, it is necessary to recognize the need to develop a more learner-centred curriculum model, one that is outcome-based as opposed to the current content-based curriculum. An examination of the current OP curriculum exposes a shortfall that exemplifies the difference between the two models: All action verbs used in the objectives fall under the lower levels of the Revised Bloom's Taxonomy as listed by Anderson and Krathwohl, (2001). The original OP curriculum privileges the understanding and applying levels of cognitive domain at the expense of more complex thinking. With the goal in mind of developing learners who are adept at critical thinking, it is necessary to target outcomes that reach the analyzing, evaluating, and creating cognitive domains. Therefore, there is a need to

develop higher order thinking outcomes for the OP program to better develop critical thinking in students and to model current practices in curriculum writing.

One model for curriculum writing was evidenced in the work of Spady (1994), who made several cogent recommendations as to how to reach the goal of an outcome-based curriculum, as summarized by the Hong Kong University of Science and Technology (2015). Developing an outcome based curriculum,

> means starting with a clear picture of what is important for students to be able to do, then organizing the curriculum, instruction and assessment to make sure this learning ultimately happens. The four basic principles are: a) Clarity of focus, b) Designing down, c) High expectations, d) Expanded opportunities. (Hong Kong University of Science and Technology, 2015, para. 1-5)

Clarity of focus is important as it guides the teachers on what they want students to know, understand, and do (Hong Kong University of Science and Technology, 2015, para. 2). A Designed down curriculum, provides a clear definition of the intended outcomes that students are to achieve by the end of the program (Hong Kong University of Science and Technology, 2015, para. 3). Having high expectations, with challenging standards of performance, which would encourage students to engage deeply in what they are learning (Hong Kong University of Science and Technology, 2015, para. 4). Finally, offering expanded opportunities, which is based on the idea that not all learners can learn the same thing in the same way and in the same time (Hong Kong University of Science and Technology, 2015, para. 5). The benefits of developing an outcome based OE curriculum include allowing teacher to become more flexible in the choice of activities used to reach the goals of the curriculum, and it would also allow teachers to tailor their programs to their local area and expertise.

In the public school systems of NB (Department of Education and Early Childhood Development, 2014), Ontario (Ontario Physical and Health Education Association, 2017) and New Zealand (Zink & Boyes, 2006) OE programs fall under the purview of PE curriculum and safety guidelines, therefore, it is necessary to investigate the factors involved in developing PE curricula. The factors that are commonly used in the development of a PE curriculum include the six different value orientations identified by Ennis and Chen (1993) and the 2001 revised Bloom's Taxonomy of educational goals. The value orientations aim to influence how a teacher administers/implements the curriculum as they are representative of "the teacher's belief systems about what is taught, how it is taught and to what extent the content is learned" (Harris, 2014). Ennis and Chen's (1993) value orientations include disciplinary mastery (DM), learning process (LP), self-actualization (SA), ecological integration (EI), social reconstruction (SREC), and social responsibility (SRESP). Using the DM value orientation, students gain proficiency in the fundamental aspects of playing sports (Ennis & Chen, 1993). The DM value orientation is ranked as the most important value orientation for elementary PE teachers, according to Behets and Vergauwen (2004), as it allows them to teach the young children how to play. The LP value orientation allows students to develop an understanding of the process of learning movement skills and how they can be used to solve problems (Ennis & Chen, 1993). Encouraging students to learn about themselves, to become self-directed, and to become responsible is the goal of the SA value orientation (Ennis & Chen, 1993). Through the EI value orientation, "students learn to search for personal relevance as they integrate and balance their own needs and interests within the larger social and natural environment" (Ennis & Chen, 1993, p. 441). According to the work completed by Behets and Vergauwen (2004), the EI value orientation ranked as the least important of the value orientations amongst high school PE teachers. Using the SREC value

orientation, “students develop an awareness of social issues and learn skills and strategies necessary to change personal or group behaviours to create a better environment for all individuals regardless of race, class, gender, or physical ability” (Ennis & Chen, 1993, p. 442). The last value orientation SRESP focuses on “positive social interactions, teamwork/cooperation, participation, and respect for others” (Ennis & Chen, 1993, p. 440). Of all the value orientations, Behets and Vergauwen (2004) reported that amongst secondary physical education teachers SRESP ranked as the most valuable value orientation to their teaching philosophies. A further breakdown of Ennis and Chen’s (1993) value orientations can be found in Appendix H.

These value orientations offer the curriculum developers an overall picture of the philosophy of teaching and when comparing the original OP curriculum to the value orientations, I believe that they best matched up with the DM value orientation. The course content overview of the original OP curriculum described the compulsory core content to be taught, followed by optional activities that the teacher was required to complete, which is similar to the DM value orientation. In moving forward to an outcome-based curriculum, the DM value orientation may no longer apply, as I believe it is better suited to a content-based curriculum model.

The other tool that is commonly used in the development of curriculum is the 2001 revised Bloom’s Taxonomy of educational goals, which provides a hierarchy of cognitive domains to help in the design of performance tasks. Bloom’s taxonomy represents a hierarchy of action verbs, ranging from remembering, a basic concept level, to understanding, then applying, analyzing, evaluating, and finally creating, the highest concept level (Anderson, Krathwohl, & Bloom, 2001). Writing learning objectives using the action verbs has become one of the best methods to determine how skills and knowledge should be assessed (Adams, 2015). Bloom’s taxonomy also allows teachers to write outcomes/objectives that develop higher-order skills,

which require a greater degree of cognitive processing (Adams, 2015). When the new curricular outcomes are written, the revised Bloom's Taxonomy would need to be consulted in order to allow the outcomes to reach higher concept levels.

Summary

Based on the findings and themes found throughout the literature review, I believe the choice to investigate curriculum content, safety standards, and teacher certification and training was the most effective way to inform the development of an updated curriculum. Furthermore, because one of the end products of this research was to inform the development of an updated OP curriculum, it was important to investigate the literature relating to outcome-based curricula and current curriculum development practices.

Chapter 3: Methodology and Methods

This chapter discusses the methods and logic used in answering the primary research question. I selected the sequential explanatory mixed-method approach, which involved two separate phases. Phase one involved collecting and analysing quantitative data. This data was then used to inform the development of the qualitative interview questions used in phase two.

A mixed-methods approach was chosen, as it is a "methodology for conducting research that involves collecting, analyzing, and integrating (or mixing) quantitative and qualitative research (and data) in a single study" (Bulsara, 2014). The benefits of using a mixed-methods approach, according to Lund (2012), are that researchers are more able to answer complex questions rather than relying on quantitative and qualitative research alone. A mixed-method approach also enables the researcher to simultaneously answer a combination of exploratory and confirmatory questions more effectively than with other methods (Lund, 2012). Given the nature of the data I needed to collect, I deemed the mixed-methods model to be the most appropriate. In my research, the two approaches were used to establish the state of the current OP course content, to investigate the current safety standards, and to determine the outdoor activity certifications and extra training that OP teachers held. Furthermore, as part of the critical analysis the two approatches allowed me to investigate the implementation of Policy 322–the inclusion policy–in the OP program and the proliferation of the Duke of Edinburgh awards program.

Of the multitude of styles for collecting mixed-methods data, I chose to use the sequential explanatory model of mixed-methods. In this model, the initial quantitative research questions address the research question or issue within a community or group. The secondary qualitative data collection is then used to further explore the quantitative results with a small number of the community members, the goal of which is to develop a deeper understanding of the quantitative

results (Bulsara, 2014). The reason I chose the sequential explanatory approach is that the quantitative online survey allowed me to obtain a baseline of information about the many OP programs in NB. The information gathered was then used to develop the qualitative interview questions. The goal of the telephone interviews was to further explain and provide deeper understandings of information gathered in the online survey process.

Survey Population

Unlike prevalent courses such as English or Mathematics, OE type courses are relatively rare in Canadian high school systems. Conducting research of this type carried the potential of having a limited population to survey, as there are very few provinces with semester-long school sponsored OE programs. Unique to the province of NB, OP is offered as a part of the regular curriculum and is open to any high schools that wish to offer the course. As such, there was potential for the OP course to be offered at all of the 49 high schools in NB. Initial contact with NB high school principals of NB determined that only 40 of the 49 schools were offering the OP program.

Internet searches into programs outside of NB established that although there are many OE programs being run across the country, most of those programs are being run out of outdoor centres. These centres did have connections to school boards and curriculum; however, they only offered single- or multi-day programs that did not provide their students with high school course credit, and therefore they did not fall within the scope of this study. It was also found that many of the provinces offer courses containing aspects of OE; however, they were often integrated into regular PE courses, and so do not have the same focus as OP. As of January 2014, 25 OE programs outside of the province of NB had been identified and met the criteria of this study.

Participants

At the outset of this research the potential number of teachers who could have participated in this study was 65. The number of respondents who actually participated in the study was 31. Because of the limited numbers, further statistical analyses, such as linear regressions, t-tests, correlational testing, and normal distribution would not have carried statistical significance; they were therefore not carried out. One reason why only 31 teachers responded may have been the medium of the online survey: Such surveys have been known to generate lower response rates. According to Nulty (2008), "online surveys achieved [response] rates that were much lower than the paper-based ones (on average, 33% compared with 56 %...)" (p. 302).

Of the 28 NB respondents, 82% were male, 14% were female, and four percent preferred not to say. The other three OE teachers, were from elsewhere in Canada , two of whom were male and one was female. For both groups of respondents, the majority were between the ages of 30 and 50. The responses rates from the four Anglophone school districts in NB (North, East, South, and West) varied, four of the respondents were from the North district, seven were from the East, seven were from the South, and ten were from the West. It is important to note that each of the districts does not have the same number high schools and OP programs. The three other respondents were situated in separate Canadian provinces. The responses that these three teachers offered were useful; however, they did not provide a significant enough sample to extrapolate the values of OE teachers from across the country. Their responses did demonstrate that they placed similar values as NB teachers on the same outcomes.

The respondents had a wide range of experience and qualifications. Experientially speaking, the number of years the respondents had been teaching OP varied from 0-2 years all

the way up to 19+ years. From an education standpoint, the degrees held by the respondents included Bachelors, Honours Bachelors, and Masters degrees. Over half of the teachers did not have an outdoor recreation or kinesiology background, which raised the question of whether life experience would be considered an acceptable substitute for certification when teaching this type of course.

During the second phase, the ten participants who had volunteered to further participate in the qualitative interview process were asked questions based on the trends and values identified through the online survey. Table 2 presents the list of chosen pseudonyms and corresponding years of experience for the ten participants from phase two, which are to be used in the discussion chapter.

Table 2.
Participants' Pseudonyms and Experience Levels

Pseudonym	Years of Experience Teaching OP
Emily	3-4 years
Mary	5-6 years
Karl	13-14 years
Andrew	13-14 years
Jacob	9-10 years
Chris	11-12 years
Connor	0-2 years
Codie	7-8 years
Ryan	13-14 years
Justin	0-2 years

Overview of Research Design

The first step in this research involved using the three themes (curriculum content, safety standards, and teacher certification and training) that emerged through the OE literature and the two special interest themes (the Duke of Edinburgh award, and the inclusion policy) to develop the quantitative online survey questions. The two special interest themes, however, were only

included in the surveys sent out to the OP teachers of NB, as they would not apply to other OE teachers in Canada. Next, prior to recruiting participants, approval to conduct research was provided by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) at Memorial University of Newfoundland, approval number 20150118-HK (Appendix A: Ethics Forms). After which, emails were sent to the four school district superintendents of NB, who represent 40 high schools, requesting permission to conduct research in their areas, all of whom allowed research to be conducted. Simultaneously, 20 school board directors of education/superintendents, representing 25 high school OE programs from outside NB, were contacted to see whether research could be conducted in their regions. This list of schools with OE programs had been generated through Internet searches prior to undertaking this phase of the research. Of the 20 school districts outside NB, only six were allowing research to be conducted in their areas at that time, representing eight schools with OE programs.

Pilot Study

Prior to beginning phase one, a pilot study was completed, revisions were made, and the ICEHR of Memorial University was notified. The purpose of the pilot survey was to determine whether the questions developed through the literature review were appropriate. The secondary purpose was to establish how long it would take the respondents to complete the survey. The actual length of time to complete the survey was 15 to 25 minutes. Four respondents completed the pilot survey, each of whom had been chosen at random from the list of OP teachers of NB (one respondent was randomly selected from each of the four NB school districts). The ICEHR was notified of any necessary revisions to the survey following the piloting phase. Based on the feedback received, revisions were made to the survey before it was sent to the remaining participates (Appendix B: Outdoor Educator Pilot Survey).

Phase One: Online Quantitative Survey

The online survey consisted of 31 multiple response and open ended questions, divided into seven sections: demographics, training/experience, OE program, co-curricular trips, outcomes and skills, units of study, and OP extensions. At the end of the survey, each participant was asked whether they would be willing to participate in a follow up interview, if they answered yes, they were asked to include an email address or phone number at which I could contact them.

Data Collection

The quantitative phase of data collection took place between June 2014 and January 2015. In June 2014, the 40 high school principals of NB as well as the 6 high school principals from outside NB were sent an email with a link to an online self-administered web-based survey for their OP/OE teachers (Appendix C: Outdoor Educator New Brunswick Teacher Survey), (Appendix D: Outdoor Educators Across Canada Survey).

Data Analysis

Since there was a low number of participants who completed the online survey, I analyzed the information gathered thereby using descriptive statistics only. Descriptive statistics are used to estimate characteristics of a population, allow data to be displayed in a succinct manner, and allow researchers to check for outliers, out-of-range variables and symmetric distribution (Nick, 2014). The findings chapter presents the quantitative data derived from the online questionnaires. After phase one was completed and the results were analyzed, I developed questions, with the assistance of one of my thesis supervisors, Dr. Antony Card of Memorial University, to be used in phase two. These questions were then submitted to the ICEHR for review (Appendix E: Telephone Interview Questionnaire).

Phase Two: Qualitative semi-structured interviews

Phase two involved conducting voluntary qualitative semi-structured interviews with the teachers who volunteered to participate further; prior to completing the interview, the teachers received the interview consent form and guide via email. The interviews I conducted were semi-structured in that the wording and sequencing of the questions was deliberate; however, most of the questions themselves were open-ended. The telephone interviews consisted of 22 questions divided into five sections: teacher certification, safety standards, course content, the Duke of Edinburgh award, and inclusion. Each interview session began with a brief introduction, after which I obtained the participant's consent to continue. Of the five sections, the majority of the questions focused on OP course content, as those responses could inform an updated curriculum. The teacher certification and safety standards sections sought clarity on potential concerns to which OP teachers had alluded in the online survey. The questions in the Duke of Edinburgh award section were geared toward determining whether the interviewees thought that the program would be of value to their students. Finally, questions related to the inclusion policy of NB aimed to gain a deeper understanding of how the policy currently or potentially affected the program and safety of the teacher and students.

Data Collection

The qualitative phase of data collection took place between March 2015 and April 2015. Ten of the teachers from NB agreed to participate further in phase two, during which I interviewed them using a semi-structured interview guide. A semi-structured interview is one in which "the researcher asks informants a series of predetermined but open-ended questions" (Ayres, 2008, p. 811). The definition of an interview, according to Hulburt (2011), is "a conversation with a purpose, providing an open-ended, subjective account of an area which the

interviewee has considerable insight" (p. 58). The telephone interviews took between 30 and 50 minutes to complete, after which I transcribed them and analyzed them to determine trends and values in the participants' narratives.

Data Analysis

I analyzed the qualitative data using an interpretative phenomenological analysis (IPA) approach, which is typically used in psychology and nursing research (Snelgrove, 2014). IPA applies in this circumstance because it "is rooted in an assumption that subjective data can inform us about people's understandings of their experiences" (Snelgrove, 2014, p. 21). IPA focuses on "small samples, semi-structured interviews, and an inductive (drawing meanings from the data rather than imposing priori constructs from them) and reflexive approach (researchers monitor their responses and critically examine their methods throughout the research)" (Snelgrove, 2014, p. 21), making it an appropriate approach for the study's purposes.

Regarding the trustworthiness of the data, Lincoln and Guba (1985) as well as Erlandson (1993) recommend that there be "prolonged engagement" between the researcher and the participants to gain an acceptable understanding of an organization and to develop trust between the parties. This study achieved prolonged engagement by extending the data collection process over a ten-month period. Furthermore, as an OP teacher myself, I communicated an understanding of the OP program, allowing the participants to trust me with their responses. I also assured the participants that information they provided would be held confidentially. As a way to triangulate data, in accordance with Shenton (2004), the study involved a wide range of informants. Although the study had a NB focus and a low number of respondents, other teachers from outside of the province were able to share their input on the topic.

Chapter 4: Findings

The goal of this chapter is to answer the primary research question, "What is the current state of high school outdoor education in New Brunswick?" Accordingly, this chapter presents the results of the online survey and telephone interviews, both of which allowed respondents to give input on this issue. The findings are presented in relation to the themes identified in the literature review: teacher certification, safety standards, and course content. Finally, the results involving the Duke of Edinburgh award and inclusion in OP are presented. The information gathered from the online questionnaire is presented in a few ways; where appropriate percentages, as well as bar graphs with summary annotations were used to represent the data. A summary of the qualitative data is also presented in conjunction with the online survey results to further answer the primary research question.

Teacher Certification

As seen in Figure 1, the certifications held by the OP teachers varied greatly which represents the diverse backgrounds and experiences of the OP teachers. Of the many certifications held by the OP teachers, only first aid (either standard workplace or wilderness remote first aid) was held by all. This was easily explained as some level of first aid certification had always been required according to the curriculum guide. However, since OP excursions and overnight trips (co-curricular trips) operate primarily in wilderness areas, the interview question became whether the OP teachers feel the minimum certification for first aid should be increased to a wilderness first aid (WFA) course. Furthermore, this led to a question about whether there are any mandatory certifications that the OP teachers should have. Based on the these results, the telephone interviews further investigated the teachers' educational backgrounds, the idea of

mandatory certifications, and the minimum level of first aid certification that an OP teacher should have.

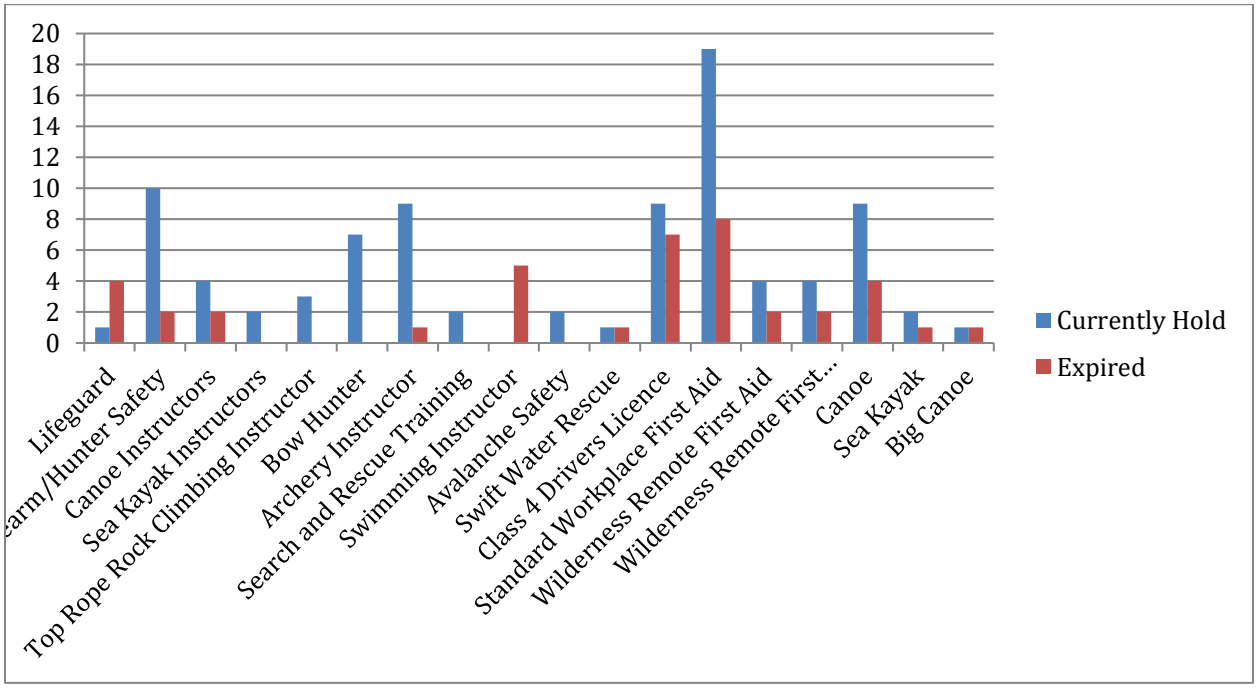

Figure 1. Certifications held by NB OP teachers. This figure shows how many teachers hold specific OE related certifications.

Regarding what type of educational background an OP teacher should have, the interviewees said that in an ideal situation, a potential OP teacher should have either a PE or an OE background. However, the majority of the respondents said that a person with experience in the outdoors through a scouting background, training courses in outdoor activities, or personal experience could make an adequate candidate for the job. The ideal situation, mentioned above, is not always possible, as many of the teachers reported that there are not always enough sections of OP in a given school for a teacher to have a full-time OP course load. Therefore, they recommended having someone who is passionate about the outdoors teach the course.

The original OP curriculum deemed that all teachers must have a first aid instructors' certification before they were able to teach the course. The current reality is that this is not the

case. Every one of the interviewees answered that an OP teacher should carry some form of first aid certification, but that an instructor's level of certification is not necessary. The consensus of the interviewees is that a teacher should seek certifications based around the main activities of each individual program.

When questioned about the recommended level of first aid an OP teacher should have before running an co-curricular trip, the respondents predominantly answered that ideally an OP teacher would carry some form of a WFA certification over a basic or standard first aid. Their rationale was that basic or standard first aid does not cover such topics as evacuating a patient, dealing with an injury for an extended period, or incident management. Jacob elaborated, "the WFA is probably the most important, because one can assume that you're going to be taking trips out in the woods. So I think that's a bare minimum." Ryan further developed Jacob's ideas in saying that, "if you are going to run out-trips you need to be able to deal with situations. Basic first aid in most situations is very basic, and things kind of get talked about very quickly, and you don't talk anything about evacuating, or how to deal with people who are in the woods and how you are going to get them out, or any of those types of things, and that's the situation that we might end up in." The only complication that a respondent reported was determining who would be responsible to cover the cost of the training.

Safety Standards

When investigating safety standards in the OP program it is important to focus on the two areas where the course operates: in, around the school, and on co-curricular trips. In and around the school the teachers have set student/teacher ratios that are provincially mandated through the curriculum document. While on co-curricular trips, the teachers are required to follow a slightly different set of criteria, which are set out in the province's physical education safety guidelines.

The original OP curriculum document stated that, in the classroom setting, “the number of students admitted to this course is limited to a maximum of eighteen” (New Brunswick Department of Education, 1995, p.4). When prompted about their programs, nearly all the 28 NB teachers reported teaching a section of the OP course at least once yearly. The schools with larger populations offered several sections each year, and some of the smaller schools only offered the course once every two years. With regard to the sizes of their classes, the student limit prescribed by the province was not always followed. Only 32.1% of the teachers reported having a class size between 15-19 students. A few of the teachers reported class sizes between 10-14 students (7.1%), whereas most them (57.1%) reported having class sizes between 20-24 students.

Through the interview process, the teachers made it clear that increasing the number of students in the class could have negative effects. One such effect was an increase in the need for supervision, as many of the classroom activities take place outside and it may become too hard to keep track of all the students during activities. It was reported that a class size of twenty-five or more is too large. Supervising that many students becomes difficult in forested areas, which raised safety concerns for the well-being of the students. Chris pointed out that having a class size of 29 made the course a “logistical challenge…but it is also a safety concern. With that number of students, it becomes a different course based primarily indoors in a traditional classroom, which is most unfortunate.” To add to the concern, some of the activities that the OP students participate in have some element of risk, and the more students that one teacher must supervise, the less able that teacher is to mitigate the potential risks. The teachers described an OP class as more of a hands-on class than others, with many of the activities requiring one-on-

one or small group instruction. Conducting such a class is difficult with higher ratios than those prescribed in the curriculum, which were put in place for safety purposes.

Moving students outside of the immediate school environment to the varied environments of field trips adds another dimension to safety issues. The success of co-curricular trips requires forethought and planning. Since the data suggested that the majority of the OP programs in NB use co-curricular trips to meet curricular outcomes, one of the questions selected to examine this issue involved the dates teachers select for their trips. More specifically, the question asked how flexible teachers can be after a date has been selected. It was found that most schools allow flexibility with trip dates (73%), leaving 27% of the teachers having to use their originally selected dates unless new paperwork was submitted. Many of respondents reported concerns with this, including problems created by inclement weather and student work schedules. Reasons for their concern included safety of the participants, mainly that if a class is locked into a specific date and there is inclement weather, the trip supervisors may feel a need to go anyway, as this may be their only chance to complete the trip. More specifically, as the majority of teachers require some form of trip participation, there may be pressure to meet this requirement. In the interview process, the respondents were asked what necessary considerations must be considered when deciding whether to proceed with an co-curricular trip on the dates that they had previously selected. Some of the responses addressed the need to ensure that the participants were prepared to undertake the trip, the availability of the appropriate equipment, and the condition of the area where the group was to travel. The one factor all respondents agreed upon and emphasized quite strongly as the most important factor was the weather and the forecast at the time a decision needed to be made.

I found that the OP teachers try to be proactive regarding the safety of their students on co-curricular trips. The most important consideration that the teachers said needed to be taken into account prior to beginning an co-curricular trip is weather. They reported that should the weather not be appropriate for an co-curricular trip, as deemed by the supervising OP teacher, they cancel their trips. The reason they cited for this was concern that bad weather might lead to higher levels of risk and therefore raise safety issues. Another concern they raised about inclement weather was that the teachers did not want to expose their students to such extreme weather that they have a negative experience and never want to return to the wilderness. Justin reported that, "it is safer to err on the side of caution when it comes to the weather, in order to have a safe trip." Connor, however, did note that the weather does not need to be ideal to run an co-curricular trip so long as the trip still challenges the students enough for them to learn from the experience. Connor added that the trips need to be enjoyable experiences so that they leave the participants wanting to continue to do such trips in the future. The considerations teachers said needed to be evaluated as potential hazards that might arise included unfavourable weather (i.e., heavy rains or extreme cold), the water levels in rivers, how wet and cold the participants would be throughout the trip, whether the ability to reach the learning outcomes would be diminished due to the weather.

The teachers were then asked about the teacher/supervisor ratios. After consulting the provincial safety guidelines, it appeared that while most of the OP teachers follow the prescribed teacher-to-student ratio for most of the activities, some fell outside the prescribed guidelines. One of the discrepancies found in stage one, which I further investigated through the telephone interview process, was the minimum number of supervisors on co-curricular trips. Concerning the provincially mandated safety guidelines, the teachers mentioned that, although the guidelines

only required one supervisor per so many students, they always bring a minimum of two supervisors on co-curricular trips. Typically, one male and one female supervisor accompany a group of students. The exception is when there are a large number of students, in which case more supervisors are added.

When the respondents were asked about the number of supervisors necessary for an co-curricular trip, all respondents reported that two leaders/supervisors are the minimum number of supervisors required. One respondent noted that the more challenging the co-curricular program, the more supervisors are needed to supervise the students in a safe manner. Although the student-to-teacher ratios varied amongst the respondents, one respondent noted that so long as the ratios fall either under the provincially mandated safety guideline numbers or, as Codie noted, the industry standard ratios for each activity, then the teachers were following safe practices. Codie made it a point to say that it is more important for an OP teacher to follow the industry safety standards for each activity they are undertaking because industry standards are more widely accepted than the provinces'.

Certainly, the safety of their students was of paramount importance to these teachers. Targeting this issue from the perspective of the participating students, one question asked teachers what criteria they used to select which students are able to participate in co-curricular trips as compared to those who have to complete alternative projects. Some of the teachers reported that the students are told at the beginning of the course that they must participate unless there are extraneous circumstances that prevent them from participating, such as injuries or poor attendance. Others reported that, in the cases where the course does not run every school year because spaces are limited, they use a selection process along with a reference form. Most of the teachers noted that the main criteria they use to determine who is able to participate on an co-

curricular trips is how trustworthy the students have demonstrated they could be as well as their behaviours in class. Teachers noted that students who demonstrate untrustworthy or inappropriate behaviour or a lack of safety consciousness would not be allowed to participate because they would be a potential safety concern for the rest of the group. In some cases, depending on the reason the student was not able to participate, the student was removed from the class. The students who were unable to participate were offered a variety of alternatives to meet course requirements.

Course Content

The essence of the OP course centres on its curriculum and teachings. To that end, much of the online survey and interview questions revolved around course content. For the purposes of this study, the findings related to course content were broken down into five sections: outcomes, skills, activities, topics, co-curricular trips. Transportation, the Duke of Edinburgh award, and the inclusion policy have also been included, as they are related to course content. One key finding through both the online and interview process was that it became very apparent all the participating OP teachers placed a high value on the benefits of their OP programs. Specifically, they ascribed significance to: (a) their ability to teach students a variety of outcomes that cannot typically be taught in a traditional classroom setting, and (b) their satisfaction in sharing their love of nature as they help their students to develop a connection to the natural world.

Outcomes. The respondents were asked to rate the list of OE outcomes that I had generated through the literature review process. Based on the results of the online survey, and seen in Figure 2, I identified the core components as the ones where the highly important rating greatly outweighed the somewhat important rating. In total, the seven core components identified included learning group dynamics, gaining self-confidence, taking responsibility, group

cooperation, trust development, environmental awareness and safety in the outdoors. The secondary components were ones in which the somewhat important rating was near or outweighed highly important. The non-NB teachers who were surveyed also placed a high value on the same seven outcomes; however, they also placed a high value on the outcomes of learning risk management, connecting with nature, environmental stewardship and developing leadership skills which were less valued by the NB teachers.

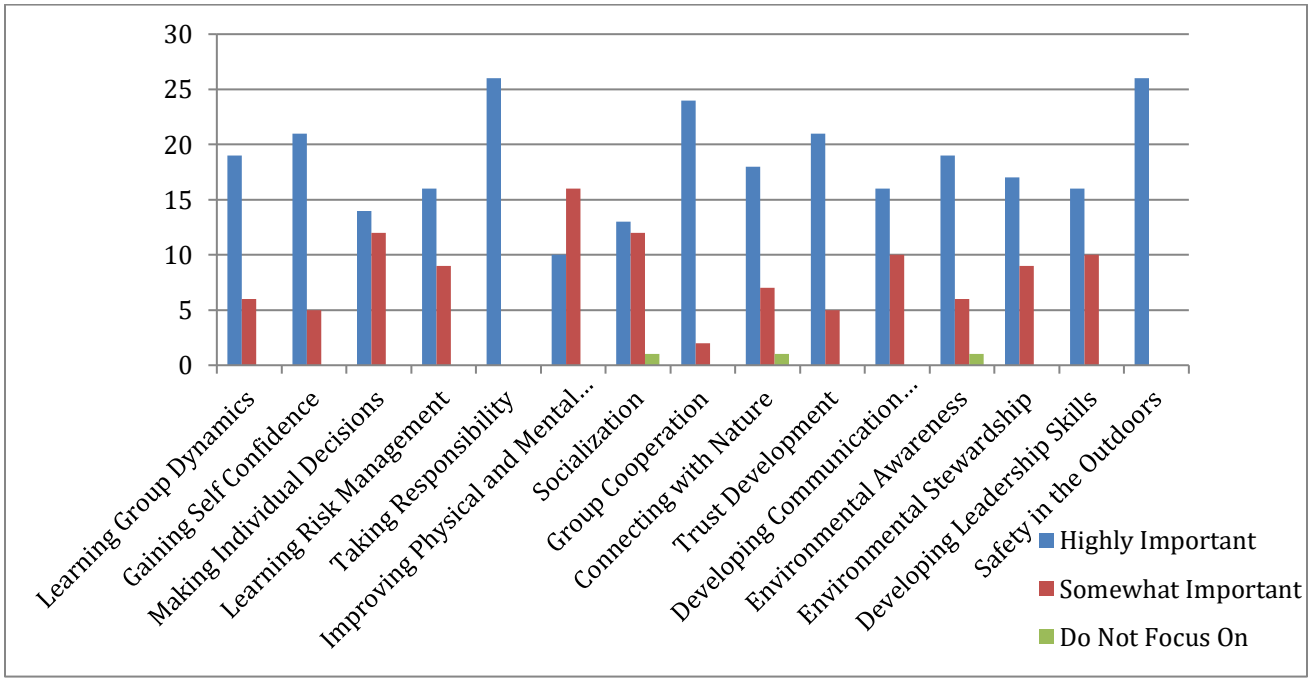

Figure 2. Importance of curricular outcomes to New Brunswick teachers. This figure illustrates the values placed on each of the outcomes investigated.

Because the curricular outcomes are the driving force behind every course, they warranted further investigation through the interview process. The respondents were asked to qualify their top five most important curricular outcomes from the list that was generated through the online survey. When the results for this question were collated, it became evident that four of the core outcomes received the strongest support. The four outcomes, in no specific order, are: gaining self-confidence, taking responsibility, group cooperation, and environmental awareness.

The majority of the respondents also agreed that group dynamics and safety in the outdoors were of equal value with trust development being the least important outcome on the list.

Respondents had a great deal to say about the outcomes they selected as important. Gaining self-confidence was agreed upon as a highly valued outcome; the main reason being how it related to developing resilience. Ryan said the OP course teaches students to say, "I know I can get back up when something goes wrong. When a situation goes [wrong] they stay with it and they find their way out." Andrew described how he wants his "kids to feel like, you know what? I can do this, or I might not be good at everything, but I can have some measure of success at this." These two examples show how gaining self-confidence is an important outcome to their OP classes.

Chris identified another benefit to students when he discussed the importance of teaching students to take responsibility for their own actions. In his opinion, "it doesn't happen anymore…we just blame everybody else, so as class we really work at being responsible." As a way of teaching responsibility, both Chris and Jacob described using the Project Adventure idea of a full value contract as a way to encourage students to be responsible for their actions through creating their own rules. A full value contract is one that:

> aims to create an emotionally and physically safe environment supported by all group members. It asks of the members to: 1) to create safe and respectful behaviour that the group will operate under, 2) commitment to that behaviour by everyone in the group, and 3) to accept the responsibility to maintain that behaviour by all. (Blaisdell, 2011, para. 7)

Although not all teachers use a full value contract, the respondents discussed how they used similar processes for rule setting.

The OP teachers presented environmental awareness as an important outcome with regard to its aim to develop environmental ethics in the students. Chris mentioned his belief that OP fosters awareness: "people that are in the environment are going to become more aware of it." If students are to appreciate their local environment and value its importance, then we must expose them to it. For Mary, the importance of such environmental awareness is that it teaches us "how to care for the Earth so that there is something left to live on." Andrew emphasized a similar perspective: "if you are going to enjoy it you have to protect and preserve the aesthetics of it, so that it actually lasts." Many of the teachers who discussed how important it is to pass this understanding on to their students mentioned that they used the Leave No Trace principles as a way to teach about protecting the environment. Similarly, Jacob said he "spends a fair amount of time teaching students to be good stewards [protectors] of the forest and the importance of understanding and knowing the environment." Furthermore, when it came to environmental awareness Jacob described how he "doesn't want (his students) to just walk through the woods, he wants them to walk…amongst the pine trees and fir trees and oak trees."

OP teachers must facilitate group cooperation skills as a necessary part of the course so that students learn how to work effectively as a team. As an example, when OP teachers take students camping, canoeing, working through initiative games, or simply cooking in the outdoors, they must be able to work in proximity with their group members. Chris exemplified teachers' attitudes toward this aspect of the curriculum, noting that he saw fostering group dynamics as: "very important because we are social beings." He also added that "we don't always get to work with people we like, but learning how to deal with all types of people is a fantastic skill." Justin also highlighted the importance of learning about group dynamics, using an example to illustrate: "If you are sitting at a table and there are eight different people, there

are so many things that each individual person can bring to the group [as well as things that]...can actually hinder the group's [progress]." These benefits and hindrances regularly affect the dynamic of any OP class. Only through teaching students how to deal with different personality types will a class consistently meet success.

Related to, but distinct from, successful class work is another important outcome on which the teachers elaborated: safety in the outdoors. They all expounded on the need to be able to teach and have students participate in the outdoors environment in a safe manner. One key aspect of safety in the outdoors that teachers raised involved having knowledge about the area to be travelled in as well as about the activities being taught. Andrew noted that, "everything else falls apart if you don't know what you are doing [and]...the potential [for] harm or injury...is increased...if you don't have safety." The responses addressed and identified many different forms of safety that fall into five categories. Common areas of concern that teachers described included:

1. Environmental safety: "What are the weather conditions doing and going to be doing?"
2. Group safety: "What are the known hazards in the area to be travelled in?"
3. Personal safety: "Who are the students I am taking out into the woods?"
4. Preparedness: "Am I ready to deal with first aid situations that may arise in the wilderness environment?"
5. Evacuation planning: "If the need for an evacuation arises, how will the situation be managed?"

Safety is always a concern for the OP teachers, and it is apparent through the responses that it is an important outcome.

Skills. Seven core skills became apparent as I investigated the skills that the OP teachers taught: communication, teamwork, safety, judgement, decision-making, leadership, and taking initiative.

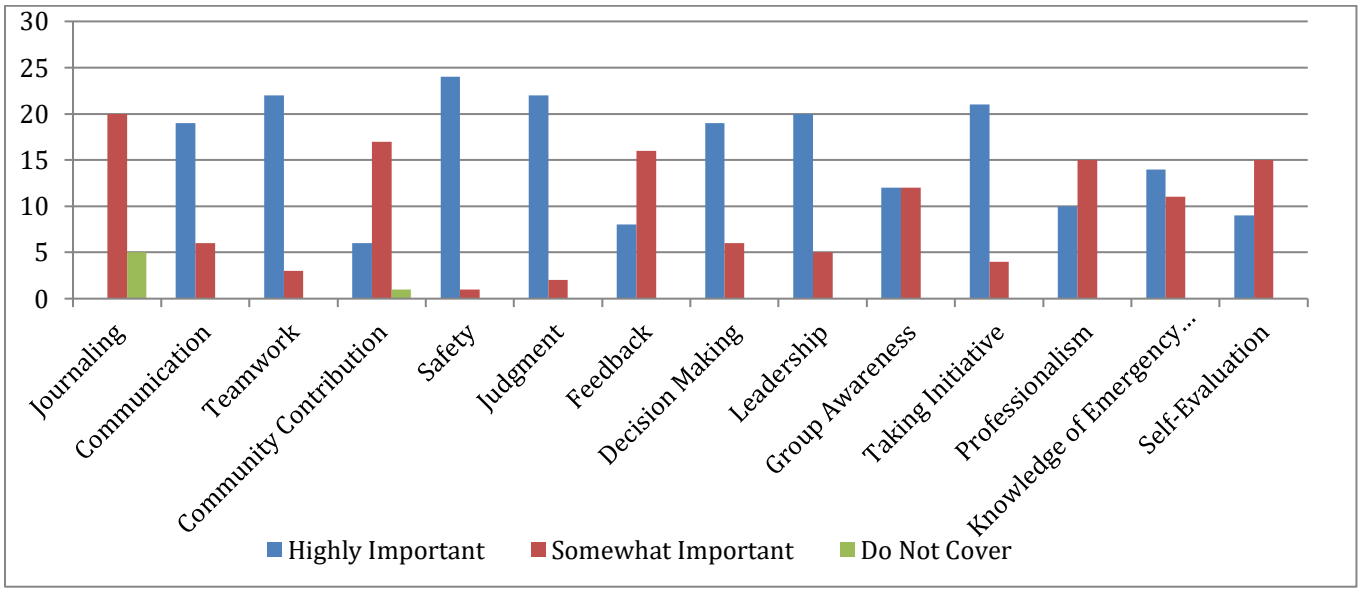

Figure 3. Importance of skills to New Brunswick OP teachers. This figure shows how important each of the investigated skills are to the OP teachers.

Of these seven core skills, teachers unanimously agreed on the importance of communication skills in both the online and the interview processes. Chris described the importance of communication skills in even in a small school, where teachers might assume that the students all know each other when this is not truly the case. From this perspective, teaching communication skills is a way of getting students to spend time together and creating bonds between them. Andrew built another dimension onto the importance of these skills by connecting them with safety: "if you are not communicating what you are doing, then safety is definitely at risk and all that kind of stuff." Through her teaching methods, Mary tries to "get her students to see that there's more to communication than just saying the words. So body language, how you say it, rephrasing it, demonstrating...or communicate it a different way so they will understand what you are trying to get across." Teaching skills in isolation of one another is not often the

case or possible in the OP program and overlap often happens. As an example of this, Jacob mentioned that communication skills and taking initiative tend to be good building block skills. He observed that when he teaches skills like communication and taking initiative, other skills like leadership and good judgment begin to develop. I recognized a similarity to Jacob's perception in Justin's view that all the skills are related: "Within teamwork you are communicating well, you are making judgments, and also decision making."

Of the other six skills--teamwork, decision-making, and judgment skills--each had 80% of the respondents in agreement. Safety and taking initiative each had 60% of the respondents affirming their importance. Mary illustrated a common understanding of the importance of teaching decision-making skills in her example: "If you are lost in the woods you need to continue to make decisions and to figure out what is going on...you can work through the process of you know what you need to do, and that this skill can be applied to all situations in your life, you have to continue to make choices and then deal with them." With regard to teaching judgment skills, Chris describes how it is a skill that has to be taught, for example when his students are planning a trip, they are required to present their plan, including emergency contingencies to show that they are using forethought and thinking about the possible ramifications of an accident. He wants his students to understand that there are several uncontrollable factors and that we can only do our best to make good decisions based on those uncontrollables. Chris also showed that good decision-making skills benefit students long after the initial situation in which they develop: "Once you start to think ahead of your choices...you tend to be more responsible for those choices and make better choices [in the future]." Andrew also qualified the importance of teaching judgment skills when taking students away on co-curricular trips: "If a student were to have a knife, have they shown good judgment and that they

can be at least trustworthy?" If not, he asked, should a teacher take this student on a trip where the students need to be trusted to a certain degree? Karl seemed to recognize this issue when he told me that he teaches his students about the necessity of good judgment skills prior to taking them on co-curricular trips. He tells students that they have to manage their decisions and think about how decisions can have a significant impact on an end outcome.

Codie discussed the benefit of all six skills, seeing them as foundational to future success. He thinks that the ability to be part of a group, to make decisions, to be safe, and to use good judgment are all important skills that go beyond the course and beyond the school. In contrast with Codie's grouping of skills, Jacob discussed skills in terms of the benefits each one might provide his classes based on the students' needs:

> I have three classes and they are all different...so that will dictate [what I teach]. In one of my classes, they need communication skills desperately because they are not communicating at all, [so] that would be a priority for them. Another group is working really well together, but they are so laid back, they need to take initiative and they need to find out who is going to be the leader. They are almost too polite and nobody is decision making, you know that is one they could use. Um, my other class, um, probably judgment. They make poor judgments in terms of safety, so yes safety and judgment there. They need a whole lot of guidance in terms of, "Oh it's not a good idea to [do] this thing."

Both Codie and Jacob emphasised the importance of each of the identified skills both as individual and combined skills sets which the students should learn. Although the non-NB teachers also valued the same seven core skills, they added community contribution, feedback, group awareness, professionalism, and knowledge of emergency planning to the list of skills.

Activities. Of the many outdoor activities that OP teachers could integrate into their courses, I attempted to determine which ones would be considered core activities based on the

teachers valuing and how often they were each used. Five such activities that the OP teachers commonly used moved to the forefront and therefore became the list of core activities: Leave No Trace, navigation, outdoor cooking, hiking, and snowshoeing. Other activities that were deemed important to the OP program but were not considered core activities, as they received a less important rating, include winter camping, survival training, nature study, canoeing, first aid, backpacking, and cross-country skiing.

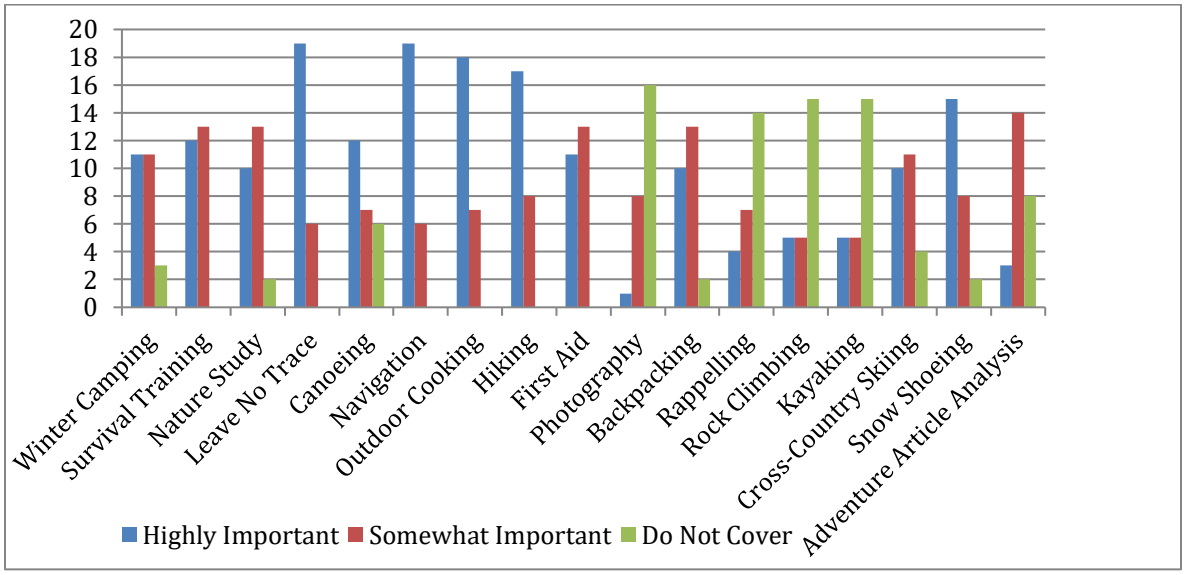

Figure 4. Activities used by OP teachers in New Brunswick. This figure shows which activities the teachers most commonly use.

When I investigated the activities more specifically in the telephone interviews, the only activity that all the teachers identified as one they taught was navigation. In his interview, Andrew offered a cogent reason for teaching navigation. He said that, “if you are going somewhere, I think you need to know where you are going, be familiar with the terrain, and have a general idea of how to get back.” Other New Brunswick teachers clearly agreed that navigation skills needs to be taught. The reasons teachers presented for not conducting other common activities had to do with location, facilities, and individual teachers’ level of experience.

As a follow-up question, I asked the teachers whether any of the "optional activities" listed in the original curriculum should be omitted from an updated curriculum. Almost all the respondents agreed to keep all the activities. No one of them wanted to place limits on what should and should not be taught. Chris's response to the question about removing any of the optional activities was, "no, because our philosophy of the outdoor program is that you should base your [program] on your knowledge and your location…by limiting [the activities, you] automatically might eliminate some people's passions." Considering that his response is representative of New Brunswick teachers' opinions, narrowing down the possible OP activities may become a limiting factor as to how a teacher reaches the goals of the curriculum.

Using initiative games and group debriefing have become a key component in my OP courses, and consequently I wanted to explore how widespread their use was in NB. One reason for my interest is that I thought these games could be used to support or further the development of the group dynamic outcome. Teachers' responses to the questions about initiative games indicated that they perceived them as highly valuable. Emily reported that in her class initiative games are "one of the strongest ways to build teams." Others portrayed them as a way to initiate team bonding amongst the students, to develop teamwork, and to practice communication and problem solving skills. For example, Mary described using initiative games to provoke productive conflict, "in an effort to frustrate [students] so we can get to a point where we can have a meaningful conversation about how to deal with [the frustration], and how to deal with other people who are struggling." For Ryan, the benefit of these activities is also in their ability to initiate a more productive group dynamic: "It goes back to group dynamics and it's a way of building those communication skills, it's an experiential way of saying, 'Now do you see what the problem is in your group dynamics and how can we solve that?'"

Two other significant benefits of this type of game for teachers were that they allow teachers to identify which students show leadership characteristics and that they allow students to function at higher levels of thinking. Jacob suggested that Bloom's taxonomy was a useful framework to apply to the outcome of initiative games, in that a game "gets the kids functioning at a much higher level [of thinking] than simply answering rote questions or giving them instructions...they have to work as a good team...because these things are very difficult to build unless you have a whole group of people working together."

As with initiative games, teachers deemed group debriefing as a highly valuable teaching tool in OP. Chris discussed how, through debriefing, "we clarify [any mistakes] and it helps cement what was being taught." When no debriefing takes place, according to Jacob, "you miss an opportunity to teach the students something." Mary concurred with this conception of the value of debriefing: "You can just do all the exercises but if you don't ever talk about it, then...you can't draw meaning from it and you don't draw the connection to why it is important." To emphasize the value of a debrief, Mary claimed, "It's where the real learning happens."

Topics taught. While the OP program covers many topics, they may not all merit the same level of importance. Teachers implicitly tend to accord more time to those topics they believe hold more value. Accordingly, I tracked results to see which topics the respondents covered for greater lengths of time as a way of determining which ones they assumed had a higher level of importance. These topics included conservation, personal fitness, map and compass, group relations, camping equipment, outdoor cooking, leadership, safety outdoors, survival skills, and trip planning. Based on the teachers' additional comments, many of the OP topics overlap, which means that they get revisited or reinforced many times. These topics can also be assumed to hold value.

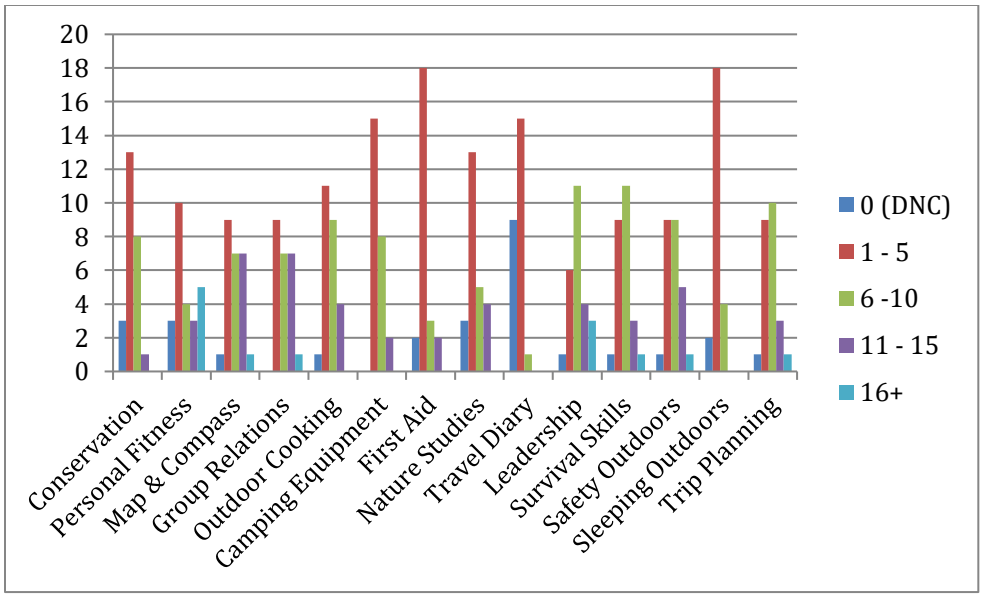

Figure 5. Length of time each topic is covered. This figure is intended to show the number of classes used to teach a topic.

In order to determine the value of activities in relation to topics, I asked the teachers to identify which specific activities they used to cover topics. Of the activities investigated, group debriefing, initiative games, article reviewing, and co-curricular trips were reported to be the most valued activities.

OP teachers also valued skills practicing highly because it allowed them to reinforce or teach students about many of the important OP concepts.

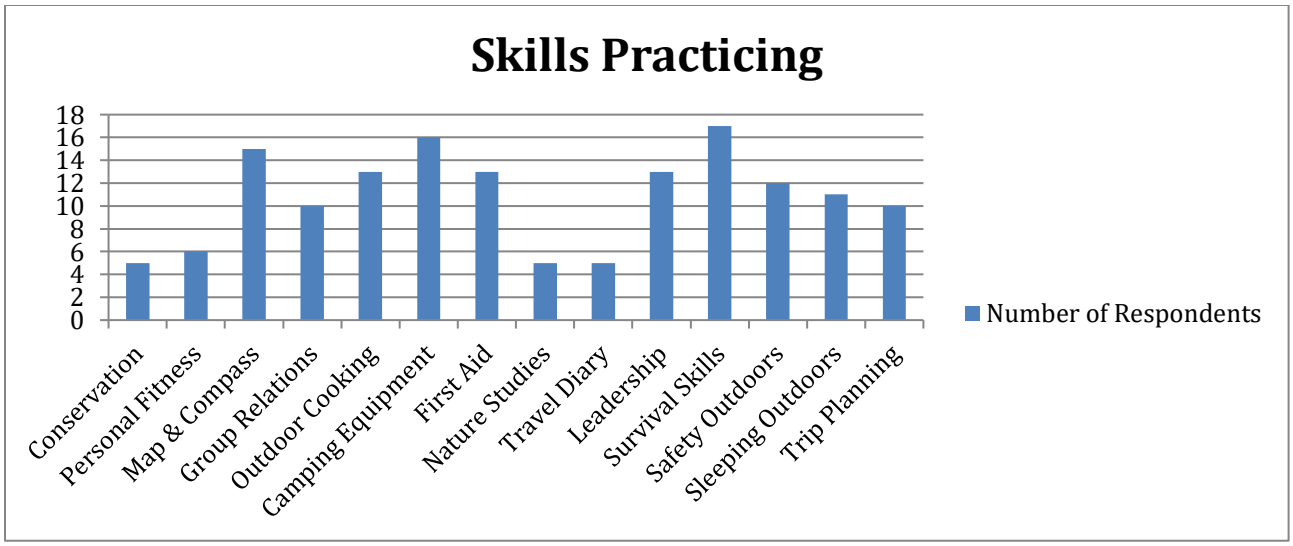

Figure 6. Curricular topics covered through use of skills practicing. This figure shows the number of teachers who use skills practicing to teach each topic.

Group debriefing was another highly valued activity OP teachers used to cover the important OP topics.

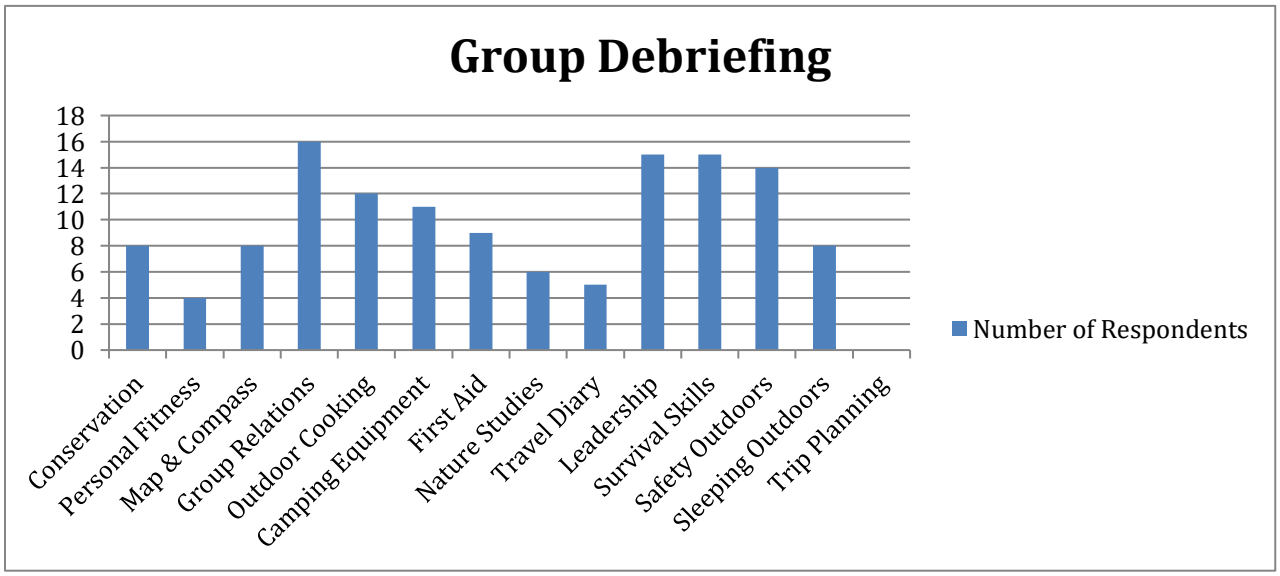

Figure 7. Curricular topics covered through use of Group Debriefing. This figure shows the number of teachers who use group debriefing to teach each topic.

The interviewees were asked to expand on the value of using group debriefing in their programs. Prior to questioning, I described group debriefing as an activity that is used after an event to reinforce learning outcomes or to discuss the events that took place in a safe and constructive manner. Based on that description, all of the interviewees reported that they used group debriefing in their programs and that they all placed a high value on its use. Jacob, for example, said, "I like having the discussions or having the activities that promote the discussions, where students have the revelation instead of being told. They have the revelation of what you are trying to teach or what they need to change. You know, so it is an intrinsic learning instead of somebody else [telling you]. So, that revelation of 'Oh. okay, that's what I needed to do, that's what it's doing to you, that's what has happened in this, [and] that's how I have affected the group."

Interviewees were also provided with a definition of an initiative game to align their understanding: "A type of cooperative game with a clearly defined problem to be solved. The group must use cooperation and physical effort to reach a solution" (Learning for Life, 2007). Initiative games are used in OP as icebreakers and a way to break down the barriers between students to develop effective group dynamics. The results of the online survey showed that initiative games were not as widely used as I had expected. I had presumed that more teachers would use them to foster group relations.

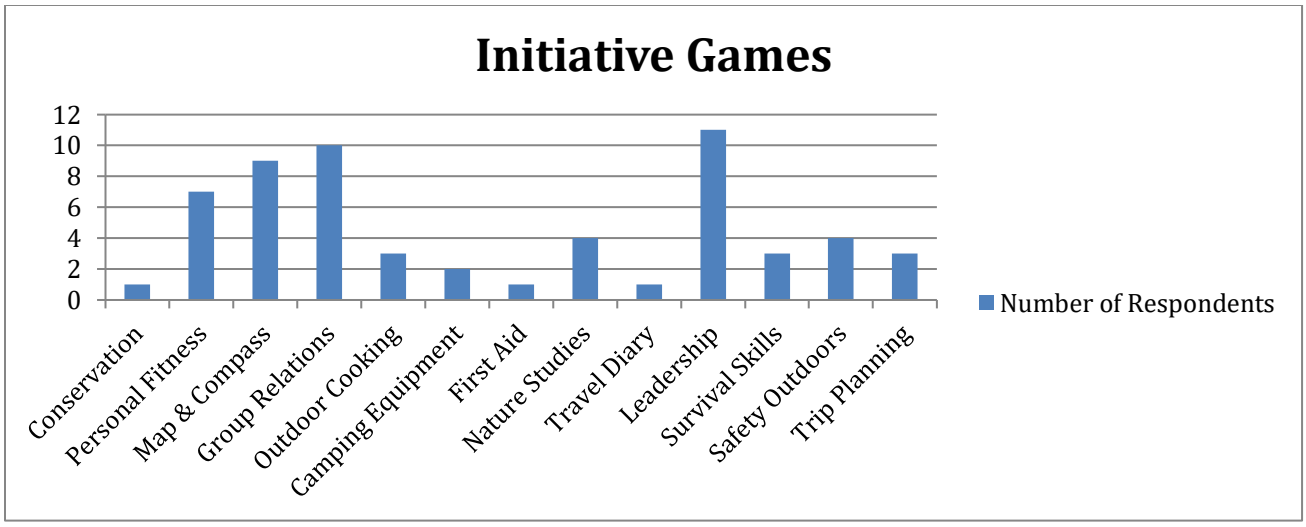

Figure 8. Curricular topics covered through use of initiative games. This figure shows the number of teachers who use group initiative games to cover each topic.

In contrast, the telephone interviews indicated a consistent use of initiative games. All the respondents reported that they did use them in their OP classes. Initiative games are, therefore, seen as highly valuable activities to the OP programs. Mary described the benefits of the way she uses them: "At the beginning of the course [an initiative game] brings a bunch of possibly random students together and helps to break down some of the friendship cliques that may exist because they have to rely on each other quite heavily at some parts of the course, so I want them all to feel comfortable with each other."

Numerous teachers cited the reviewing of articles as a significant activity whose benefits extend to other areas of a student's life, since it involves cross-curricular literacy. Reading articles about outdoor adventure generates knowledge about outdoor issues, creates interest in the subject matter, and builds empathy, since it allows the reader to experience an adventure through the eyes of another person. The teachers who have used this activity indicate that it had been most useful to reinforce the topics of survival skills and safety outdoors as well as trip planning and conservation.

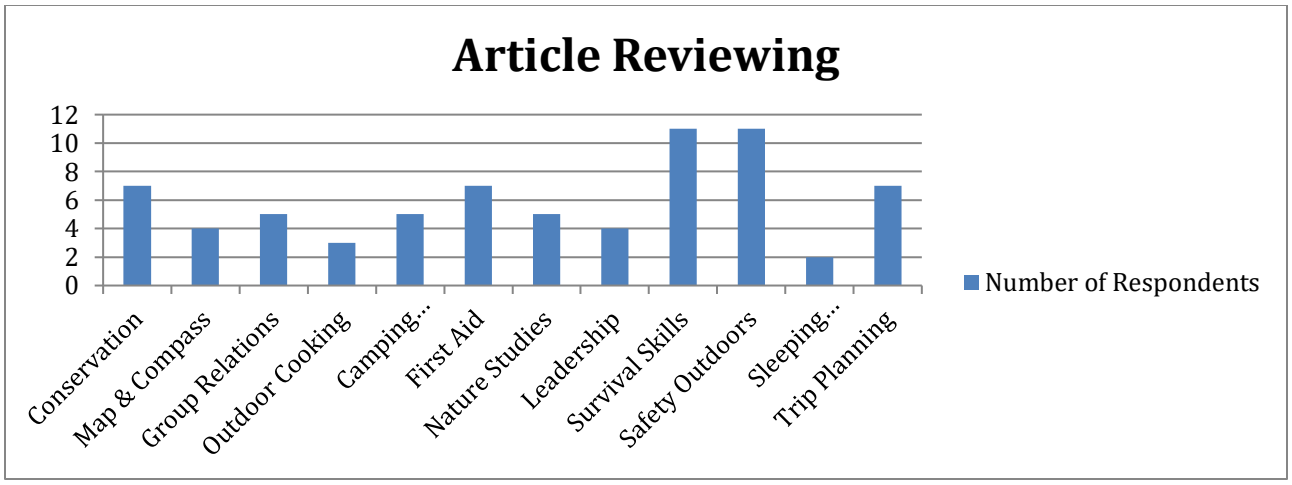

Figure 9. Curricular topics covered by reviewing articles. This figure shows the number of teachers who use article reviewing to teach each topic.

Extra-curricular trips. In the online survey I asked questions regarding extra-curricular trips, based on the conversations had with the OP teachers it was agreed upon that these types of trips where not seen as extra-curricular but as co-curricular trips instead. Therefore, I have updated the term to say co-curricular instead of extra-curricular. Of all the activities respondents mentioned, they deemed co-curricular trips the most highly valued, as trips allow the teachers to reinforce the important concepts taught in class.

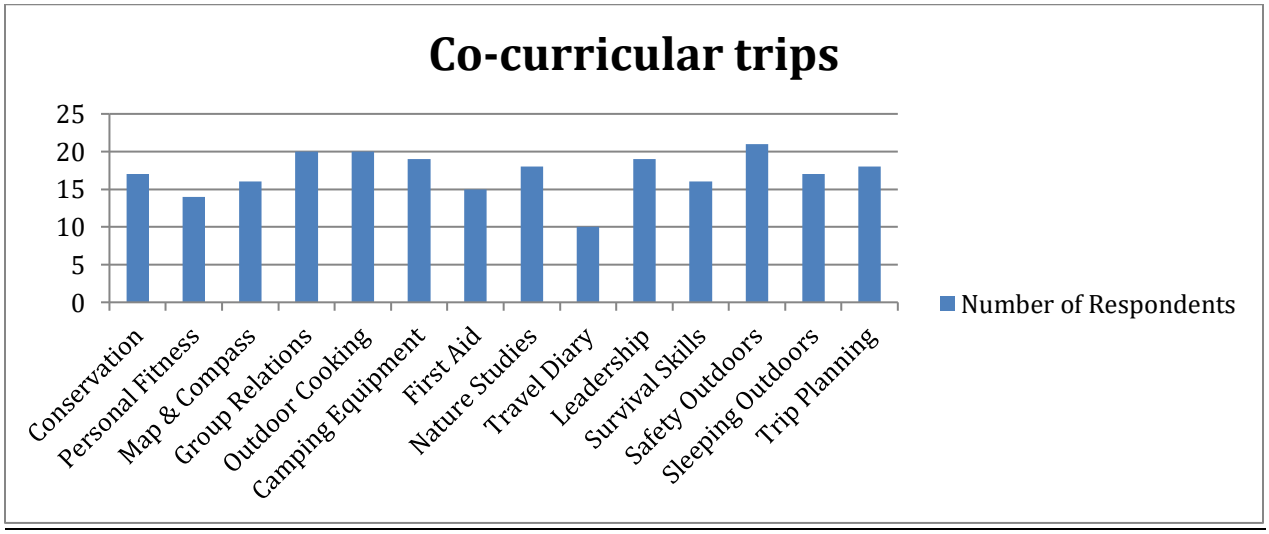

Figure 10. Curricular topics covered through use of co-curricular trips. This figure shows the number of teachers who use co-curricular trips to reinforce each topic.

The online survey indicated that the majority of OP programs (68%) require participation, while another 25% of the teachers allow students to choose to participate or not on their co-curricular trips. Based on the number of programs, which required participation, I perceived that the OP teachers of NB valued co-curricular trips highly. Of all the OP programs, more than half of them (56%) offered students at least one or two opportunities for students to participate. Some of the OP programs (6%) offered eight or more trips per semester for their students.

The interviewees valued trips in particular because the outings allowed them to address many curricular outcomes through the EE opportunities that exposure to the wilderness provided. They reported that the trips allowed students to build confidence and leadership skills, to learn an appreciation for the outdoors, to become familiar with new environments, to use what they had learned in real life situations, to distance themselves from their normal surroundings, to identify risks and weigh options, and to learn about group dynamics. Codie noted that successful co-curricular trips give students a sense of accomplishment in knowing that they had helped to plan the trip and to carry their own equipment. Justin's statement that co-curricular trips are "highly valuable in so many levels, with confidence, with friendship, to see them talking to people [to see] relationships, leadership, testing [their] limits, taking challenges and risks and weighing them out" reflects the opinions of many participants that trips benefit students on multiple levels. Affective benefits to students also figure in Andrew's comparison between a trip and a sporting event: "When you are in class it's like practice and going on an extracurricular trip...is like getting a chance to play the game." Ryan's firm belief that without the use of co-curricular trips a teacher could not achieve the outcomes of the curriculum points to the reason most of the teachers offered strong positive opinions of the value of such trips.

When asked if the same values could be taught in a school setting, almost all of the respondents replied that the necessary values and benefits could not be taught in a school setting. They observed that the amount of available time, typically one hour of class, is not long enough to teach these values. Another limiting factor to teaching the students to value the outdoors in a classroom was that the environment does not allow a teacher to replicate the conditions that are present in wilderness areas. As evidence of these shortcomings, Karl described how on co-curricular trips, a teacher has the students anywhere from three hours to three or more days, lengthy time frames which allow the students to develop an appreciation for the outdoors. The limiting factors of a school setting were most evident in its potential lack of access to the environments needed to undertake many of the activities in a real setting. Karl said that if you "bring a kid out who has carried everything on their back, planned for their trip and had success with it...then [they are able to gain a] sense of accomplishment. I don't think you can speak to that in a classroom or regard it the same way." Karl continued to describe the differences between a school setting and a trip setting as how

> you can't replicate the same conditions, plus they know in 20 minutes [in school] they head to English class versus, when they are out they are out on a...trip they are gone for that duration, they are in for the long haul, and that has ramifications good and bad sometimes, but...you can have them focus on that.

Many of the other teachers also expressed the opinion that the classroom can only be used to practice skills and to discuss the values of the course theoretically. The students are not truly able to learn about such outcomes as group dynamics when they are distracted by their technology and other students, and because they realize that they will not be required to interact with classmates after the class period is over. Chris described the benefits of spending time with

students: “an hour versus 24 hours, [adding in] strenuous hiking, and beautiful landscapes. That just changes group dynamics completely and so this is really where you can stretch the [learning experience].” Clearly, from the perspectives of these teachers, the conditions that exist on a trip cannot be replicated in a school setting.

Considering the important curricular work that took place on co-curricular occasions, teachers needed to find ways for those who did not attend to meet course outcomes. For those students who were not permitted to participate in trips due to trust or behavioural issues or who were unable to participate due to injuries or scheduling, many of the teachers reported that they offer research projects, essays, or a survival-based assignment to complete in order to receive the credit. This project route was chosen for those students as time away became a factor for the teacher as the semester progresses.

Transportation. Typically, the environments and facilities offered on school premises are not adequate for overnight or extended day trips. In order to run co-curricular trips as well as move students to and from various locations, transportation is therefore required. This need for transportation offers challenges to teachers who are trying to run events. Although the topic of transportation was not specifically investigated through the online survey, when teachers replied to the survey question about which resources, they were lacking to run their courses, the majority of the comments revolved around the need for transportation or funds to pay for transportation. The OP teachers defined the main barrier with transporting students as the costs associated with it, saying that without funding these costs have to be passed on to the students. Jacob, for example, related his challenges with transportation: “We couldn’t get school buses… at least not cheaply, not economically anyway, unless we wanted to start charging the kids a lot more money.” Andrew faces similar challenges: “It’s the expense, I mean we can’t have the kids

driving themselves," referring to school district policies that prevent students from driving other students to co-curricular events. The island schools of NB face further challenges in that they must take a ferry off the island to explore other parts of the province, which carries additional expenses.

Several teachers mentioned potential solutions to the transportation issue as well. Ryan discussed the benefits of a school having its own bus: "We used to have a bus, and it was great. It took a little extra work but it took a lot less work then it does now. Plus, you knew who was driving, you knew what the vehicle was like, there was a lot less unknowns." Chris offered a cost-free solution: "we don't face any [issues] because we basically start our trips at the location, it's not at the school." In this case, the students are responsible to arrive at the beginning point of the trip by their own means. The down side of this is that, according to Jones & Shults (2009), "the leading cause of death among youth in the United States –are motor vehicle traffic related" (p. 170). My interpretation of this finding is that a discussion needs to take place between the OP teachers and the school districts in order to see if there is any way to reduce the costs of transporting students to co-curricular activities.

Duke of Edinburgh award. When asked about the Duke of Edinburgh Award, 41% of the teachers reported that students at their school participate in the award program. Codie, who had implemented the Duke of Edinburgh program in his OP class responded, "Yes, I encourage everybody to do the Duke of Ed whether they are in OP or not, and my trips are usually a combination of trips. We do preliminary training for Duke of Ed, but then my OP get my training, but we do combine them on trips." Other teachers facilitate the trips for students who are completing the Duke of Edinburgh award by giving them permission to miss classes. As a barrier to implementing the award in his class, Chris noted that since his OP classes only run in

the winter semester it would not allow enough time for the students to complete the requirements of the program. Other OP programs were just beginning to run the program, or have been running the program in such a way that their students are able to complete the trip portion of the program through their class.

Inclusion

The original curriculum document allowed teachers to use a selection process, choosing students to participate in the outdoor pursuits program from a bank of applicants. At the time of the online survey more than half of all the schools (57%) offering OP continued to use some form of selection process. In September 2013, the Department of Education and Early Childhood Development NB had implemented an inclusionary type system, articulated in its Policy 322, which meant that the way students had been selected to enter an OP program would have to change. Under Policy 322 all students who requested to take the OP program would have to be admitted, assuming that there is spaces available. The document stated that "a key element of sustaining an inclusive education system consists of the removal of barriers to learning as well as ensuring access to learning opportunities for relevant school personnel" (Department of Education and Early Childhood Development, 2013).

The interviewees were asked about their concerns with regards to implementing policy 322 in their classes, whether they had concerns about allowing students with special needs or students with behavioural issues into their programs, and finally what effect the policy may have on the OP program. Most respondents were concerned that due to the inclusion policy they may have to limit the activities they would normally do in order to support one student. Another concern that they raised was that of safety and how the teacher could ensure the safety of students if they are made to take any and all students, especially while on extracurricular trips.

With regard to having students with special needs in the OP program, all of the respondents said that there are very few issues having them in the class, but that it is necessary that the proper support services are provided. The main concerns they raised about the inclusion policy related to students with behavioural issues. Ryan presented examples of the issues teachers mentioned:

> My concerns are that I understand the idea of trying to not limit who can be in a course and have a good experience with things. Putting anybody in there or letting anybody choose who doesn't know what the program entails might be setting them up for failure, it might be setting them up well beyond their comfort zone in to a panic zone...it might be...putting them in a position where they just aren't ready, much in the way that you wouldn't put a child who, I use the example of a kid who needs work with mathematics into an economics class, it might not be just a good fit. Sure, they could be in the room, but what are you setting them up for? Is it really setting them up for success, is it really within, according to Bloom's taxonomy, is it really within that zone where they can pick it up, as opposed to just struggle so much. My other concern is, how does that limit what you can do with your other students?

Most of the other teachers echoed Ryan's concern about what can be done with the other students. Taking on a student with physical challenges gave teachers like Justin apprehensions about that student's mental wellbeing: "I mean I wouldn't want to say no and I wouldn't want that kid to feel worse because they went on this trip and felt as though they were holding the others back." Andrew explained that he uses a park near his school many times throughout the semester, and worried that if he had a student with a mobility issues unconnected to a recent injury how he could logistically get the student to that location, wondering if he would need to

have the student do something different every time his class went to the park so that the learning experience of all the other students in the class would not be affected.

When the respondents discussed allowing students with behavioural issues into the class, their responses were very direct and aligned. They voiced grave concerns about students with behavioural issues, revolving around trust issues, the safety of the other students in the class, and their personal safety while on co-curricular trips. Jacob, for example, explained his concern with not being able to select students himself: "I mean if a kid has a behavioural issue, am I going to trust [that student] with matches, a rope, a [hatchet], a knife and then go to sleep in a tent twenty feet away? I don't think so." Ryan defined the safety issue in terms of a student's impact on class culture: "If you are going to throw someone into the class who is going to bring a negative culture that is not safe, then it isn't an appropriate fit until they have dealt with that themselves." He distinguished the sorts of issues that inclusion could raise in an OP class from those of other classes, saying that in OP,

> the risk is different because, in a regular typical classroom, [the students] are not dealing with equipment that is potentially dangerous. You cannot hold a kid's head under water if you're not in a pool. You cannot poke somebody with a stick if theres not sticks. You cannot put a rope around another kid's neck if there are no ropes.

For students who have shown a history of untrustworthiness or behavioural issues special considerations need to be made prior to allowing them entering OP so that they do not increase the potential risks to the other students.

Summary

The research involved in this project generated a comprehensive view of the current state of OP in New Brunswick. According to the OP/OE teachers, an OP teacher should be passionate

about the outdoors. Having a background in OE or PE is not a necessaryily a prerequisite to teaching the OP program; however, this was commonly the case. The participating teachers recommended that, in an ideal situation an OP teacher who wanted to run field trips would have a wilderness first aid certification because it more directly applies to the environments where the trips take place. In lieu of WFA certification, a standard/basic level of first aid is a requirement. Regarding activity-based certifications, the data suggests that teachers should seek out certifications that are directly related to their specific programs, as each teaching location has its own opportunities and teachers have their own areas of expertise. In the event that teachers wanted to complete an activity outside of their ability and comfort levels, they should actively seek outside organizations or people who are qualified to lead these activities.

The participants insistence on quality first aid certification was not surprising, considering that the teachers were unanimous in expressing that safety was one of their main concerns, not only the safety of the students, but their own safety as well. As an adjunct to this issue, teachers raised the importance of having the appropriate number of students in a class. They described how exceeding the number of students as prescribed in the curriculum was a safety hazard because it would make supervising students outdoors more difficult. Their concerns about safety involved class composition as well as numbers, as they wondered about the effect of inclusion on the student make up of their classes. Specifically, they were worried about potentially losing the ability to select the students who could enter an OP class as a result of policy 322. Their main concerns were not due to students' intellectual or ability levels, but to the kinds of safety issues caused by students who are known to show inappropriate behaviours in school. Teachers described how, with the proper support, students with disabilities could add value to their programs; however, having too many students with behavioural or trust issues

could lead to a potentially unsafe learning environment. These types of issues could initiate unnecessary and inappropriate actions, leading to potential injury for both the other students and supervisors on a trip.

In order to provide a deeper look into course content of the OP program, I divided the investigation into three distinct areas of interest: the outcomes, the skills, and the activities used to reach the goals of the program, each of which would help to inform the development of a future curriculum. The OP teachers narrowed down a list of fifteen commonly-taught OE outcomes to the seven they valued most. They placed a strong value on the outcomes of gaining self-confidence, taking responsibility, group cooperation, environmental awareness, group dynamics, safety in the outdoors, and trust development. From the fourteen skills initially investigated, a short list of seven important skills was generated, and only that of communication skills was unanimously taught. The other five skills that I found to be highly valued by the OP teachers included teamwork, judgment, safety, decision-making, and taking initiative. Seventeen activities were listed in the original OP curriculum, of which the attempt was made to determine which of these activities were significant to the individual OP programs. The five activities which I found to be highly valued included Leave No Trace, navigation, outdoor cooking, hiking and snowshoeing, and of these when further investigated only navigation was commonly taught by all the interviewees.

Finally, under the scope of course content the teachers also discussed a list of eight activities that could be used to teach/reinforce the outcomes and concepts that they taught in class. Of the initial list, five were deemed highly valuable: skills practicing, because it encompassed all the skills necessary to participate in any outdoor activity; group debriefing, for its ability to reinforce key concepts after an activity had ended; initiative games, as they open the

door to such outcomes as communication and teamwork; and reviewing articles, not only for its value to school-wide literacy outcomes, but also to reinforce topics such as survival skills and the importance of trip planning. The final activity, co-curricular tripping, was the most valued of all the activities for its ability to reinforce the main concepts through direct experiences.

Chapter 5: Discussion

This study's investigation into the current state of OE came at an opportune time, as the province of New Brunswick was about to update its OE curriculum, and these findings informed that update. I originally undertook this study to ensure that any OP curriculum review in NB would be representative of the current needs, wants, and goals of those who are currently teaching the subject, and not just those of an appointed focus group. According to Gray, Scott, and Auld (2014), five stages are necessary to developing a new/updated curriculum, including planning, research, consultation, document production, and professional development for schools and teachers (p. 74). My research aimed to inform the planning, research, and consultation stages during the updating of the OP curriculum. Outdoor education holds a significant place in my heart and I wanted to see it continue to be developed in NB.

This chapter presents a discussion of the state of OP as I found it in NB in relation to the discourse currently taking place in the literature about outdoor education. My observations on this broader conversation will be followed by a general discussion, including recommendations for future research. My assumption in this study is that the respondents were able to understand the language and terms used in the online and subsequent interview questions. I also assumed that they answered the questionnaire truthfully and accurately.

Teacher Certification

As I noted in my findings, I concluded that the ideal OP teacher candidate would carry either a PE or an OE educational background, even though most OP teachers in NB did not fall into accordance with this ideal situation. Similar to my findings, Lugg and Martin (2001), Polley & Pickett (2003) and Martin (2008), all whom conducted studies in Australia, found that the outdoor educators there also carried a wide range of qualifications, with most of them having a

PE degree. The later study by Martin (2008) noted that the Victorian Institute of Teaching expressed the preference for their OE teachers to carry a minimum one-year specialist OE training certificate. Aside from having a PE or OE background, I found that it is essential that the OP teacher be someone who is passionate about the outdoors. Medina (2001) also found, in her study of 203 outdoor educators and leaders, that 95.6% of them reported personal experiences as part of their training background. This result is mirrored in the findings of Zink and Boyes (2006), who found that for OE in New Zealand little had changed in the last 150 years, "in that programs seem to still largely be provided by enthusiastic teachers" (p. 19).

The ability of a teacher to run certain activities, be they canoeing, rock climbing, rappelling, or others that demand a modicum of competence, is dependent on their experience levels and certifications. I found that since each program had access to different environments, and each teacher had different backgrounds and passions, the OP teachers should aim to attain formal certifications in those areas that are relevant to their own programs. Another key point I reported was that should a teacher wants to do an activity in an area where they do not have certification, that the teacher is responsible to find someone who is certified to lead the group. This finding was also noted by Lugg and Martin (2001), where the OE teachers also reported employing "activity specific instructors for particular programmes in which they have insufficient expertise" (p.47). The teachers I spoke to felt that it would not be possible or practical to require all of the OP teachers to carry a set list of certifications.

The one certification that all OP teachers carried was some form of first aid. Similarly, Medina (2001) found that "first aid training was the most common type of certification" held by the participants of her study. I further investigated, in stage two of this research, the level of first aid training that an OP teacher should have prior to engaging in co-curricular activities. Nearly

all the teachers recommended that an OP teacher should carry a minimum of a WFA certification over that of a basic or standard first aid. The reasons they provided included that in the areas where co-curricular trips run, which are typically in wilderness or rural areas, access to emergency medical services is not as immediate as it is in urban areas. Standard/workplace first aid does not cover some of the potential situations that may arise in a wilderness situation, such as incident management, long-term patient care, and management of environmental threats.

Based on these findings, I would recommend that in an updated curriculum a minimum level of WFA should be attained by the teacher, or a supervisor on that trip, prior to taking students on co-curricular trips, and that ideally this training should be subsidized by the school/district.

Safety Standards

The need for safety in the OP program is of utmost importance to the OP teacher. Unlike risk management during the 1950s to 70s, where the "levels of OE safety were frequently left to individual practitioners, generally well-meaning outdoor enthusiasts with a paucity of formal training" (Potter & Dyment, 2016, p. 152), the OP teachers now have strict safety guidelines administered by province of NB Department of Education and Early Childhood Development. One key factor in the safety of the students is the number of students which can be admitted into an OP class, numbers which were set in order to respect the supervision ratios outlined in the NB PE guidelines (F. Harris, personal communication, March 17, 2016). The original OP curriculum states that, "The number of students admitted to this course is limited to a maximum of eighteen" (New Brunswick Department of Education, 1995, p. 4). In contrast to a regular classroom setting where the students are sitting at desks for much of the class, OP students spend the majority of their time moving about outdoors and in forested areas. Lam (2005), for one, asserts that

adequate staff ratios must be present to ensure safety in OE related activities due to the presence of "small dangers" provided by the OE facilitator. Furthermore, on co-curricular trips/activities, which fall outside the normal operating hours of a school, there are even smaller ratios required for appropriate supervision than those mandated for the general classroom by the NB PE guidelines. For those teachers who have class sizes beyond the prescribed limits, there is a need for them to advocate for lower numbers, requesting of their administrators to implement the provincially mandated class size numbers, just as teachers more consistently do province-wide for a woodworking or automotive class. It is important for administrators to recognize the need for appropriate student ratios as there is the potential for liability issues to arise should an accident happen if the student ratios fall outside of the (sport specific) industry standards.

OP Curriculum

The original OP curriculum, as a content-based document, prescribed a set list of objectives, activities, and topics that students needed to complete to attain the requirements of the program. Some flexibility was allowed based on the teachers' certifications and background. Numerous years later, conceptions of effective education have shifted, including a move to a more student-centred skills-based model, necessitating corresponding changes in the way curriculum is presented in the classroom (Attard, Di Loio, Geven, & Santa, 2010).

As with any major shift in educational practice, I believe that the best way successfully to implement an updated OP curriculum is to ensure that the teachers, both new and seasoned, feel as if they have been a part of the consultation process prior to its creation. This idea is not a new one, as one of the well-documented factors for the successful implementation of a new curriculum is how ideologically aligned the new curriculum is to the values and practices of a teacher (Dilkes, Cunningham & Gray, 2014; Bee Bee, 2008; Chan, 2010; Turley, 2005).

Furthermore, Bee Bee (2008) posited that educational change involves both time and commitment on behalf of the teachers, and so it is necessary for them to feel ownership in the change. From a Canadian perspective, a report by the Alberta Teacher's Association (ATA) (2014) strongly recommended that teachers take a leading role in curriculum designs, arguing that the "teachers possess the relevant professional preparation and practical expertise to do this work" (para. 4).

To keep the curriculum relevant, it had become necessary to develop an updated curriculum, one based on the current values and opinions OP teachers hold, as well as on current in curriculum development. Further to this recommendation, higher order outcomes need to be addressed to better facilitate the learning needs of the students.

As a way of delving into curricular issues, I broke down the course content findings into the sub-headings of outcomes, skills, activities, and co-curricular trips. Based on the findings of this research, I concluded that in an updated outcome based curriculum there would be no way to prescribe which topics must be taught; instead, the teachers would be allowed to select topics related to the four new outcomes based on their own experiences and expertise. For my goal of disseminating the findings of this thesis, I organized all of the past outcomes, skills, and activities into the following four outcomes: ecological literacy, technical skill development, well-being, and group dynamics. My suggested outcomes are mirrored in the work of Dyment, Morse, Shaw & Smith (2013), who reported on the core learning outcomes in Tasmanian OE programs as being "personal development, social and interpersonal development, skills and technical knowledge and the environment" (p. 85).

My first proposed outcome, ecological literacy, which according to Orr (2005) incorporates developing a basic understanding of ecology, human ecology, and concepts of

sustainability. Ecological literacy in OP would encompass outcomes such as environmental ethics, environmental awareness, and safety in the outdoors. The second proposed outcome of technical skills, which according to Warren & Loeffler (2006) are often referred to as "hard skills," involve manipulating equipment to accomplish a physical task such as rolling a kayak, navigating using a map and compass, or setting up a rope anchor. In the OP program this outcome would not limit the teacher to a set list of activities, but would instead open the door to a variety of outdoor educational activities. The third proposed outcome of well-being refers to "happiness, life satisfaction, and positive affect" (Diener, 2009, p. 11). Well-being could encompass outcomes such as therapeutic effects, taking responsibility, spirituality, self-esteem, self-concept, self-efficacy, autonomy and independence, emotional stability, and self-confidence. The final outcome of group dynamics represents "the influential actions, processes, and changes that occur within and between groups over time" (Forsyth, 2009, p. 780). Group dynamic skills in the past have also been called *soft* or *inter/intrapersonal skills* which are defined as "personal attributes that enable someone to interact effectively and harmoniously with other people" (Oxford University Press, 2016). The group dynamics outcome would encompass previous outcomes such as trust development, cooperation, communication, teamwork, judgment skills, taking initiative, and safety, all of which were highly valued by the OP teachers. Using these four outcomes, I believe, would allow an OP teacher to build a strong and effective program.

Co-curricular activities. In order to fully reach the goals of the four proposed outcomes, teachers need to use co-curricular trips. As evidenced by the findings of this report, OP teachers placed a high value on the ability of these trips to meet the goals of the curriculum, which in my opinion cannot fully be met in the school setting alone. Outcomes such as group dynamics, group cooperation, and environmental awareness cannot be fully realised in a one-hour session when

there are few to no long-term consequences for creating disruptions in the classroom. Similar to this conclusion, McKeown (2014) found that OE encouraged students to become engaged with activities that could only be theoretically discussed in a classroom environment. Furthermore, McKeown (2014) concluded that "participants were more socially inclusive as a result of the shared experience of participation in the OE program" (p. 37).

Therefore, based on values expressed by the OP teachers, I recommend that the use of co-curricular trips be made mandatory in order to successfully complete the program. However, it needs to be stated that participation on co-curricular trips remains dependent on several factors and is not guaranteed. One exception to mandated participation could be students with behavioural issues, which I will discuss later in conjunction with issues about inclusion.

Inclusion. With respect to the previously described concerns for students with special needs who enter into the OP program, the goals of the curriculum may need to be modified to suit/match their ability levels. This modification level needs to be left up to the teacher and education support services teacher to make judgement calls as to what is an appropriate modified goal, or modified co-curricular trip. Furthermore, for these students their parents should be brought into the discussion early on in the course regarding what level of participation is appropriate.

For students with behavioural issues, their ability to participate on co-curricular trips must depend solely on themselves, their behaviours, attitudes, and the relationship they develop with their teachers, rather than being decided by someone who is not connected to the course. The OP teacher must be concerned with the well-being and safety of the entire group, not just the individual, throughout the duration of an co-curricular trip. Therefore, a teacher should have a right to refuse participation to a student they deem to be a safety concern. This practice is

supported by the very definition of inclusive education as put forth in policy 322, which states "inclusive education [is] the pairing of philosophy and pedagogical practices that allows each student to feel respected, confident and safe so he or she can participate with peers in the common learning environment" (Department of Education and Early Childhood Development, 2013, p. 2). Therefore, in accordance to the definition of inclusive education a teacher should continue to have the right to refuse participation to a student who they deem to be a potential safety concern to the other students or themselves.

Proposed Value Orientation

OE curricula have in many instances been tied to the PE program (Potter & Dyment, 2016), as is seen in the case of NB. As I have noted earlier, when PE curriculums are written, a common tool that developers use are the different value orientations provided by Ennis and Chen (1993). After examining the findings of this study, I believe that a combination of two of the value orientations, would better suit the current and future needs and values of the OE teachers. I propose combining parts of both the ecological integration and social responsibility value orientations into one OE-specific value orientation. My rationale is as follows: Through the ecological integration value orientation, "students learn to search for personal relevance as they integrate and balance their own needs and interests within the larger social and natural environment. They use knowledge both to respond to changes in their lives and to determine their own future" (Ennis & Chen, 1993, p. 441). This value orientation matches well with the current OP program for the following four reasons:

Two of the outcomes OP teachers deemed highly valuable were those of environmental awareness and taking responsibility. As an example, one of the messages that my students hear both in and out of school is the need to be environmentally responsible, be it through

participating in recycling programs, discussions about global warming, talking about climate change, conversations about protection acts in parks or LNT principles.

Ecological integration value orientation connects to the personal search for knowledge that is meaningful and interesting. This attitude toward learning is accomplished by having students participate in a variety of experiences where they learn to identify experiences that are useful and/or enjoyable (Ennis & Chen, 1993). If we as a society want to become more environmentally aware and to develop sustainable practices, there is no better way than to expose young people to wilderness environments. Through OE programs students are exposed to a variety of activities in a safe and controlled manner with the goal of developing a connection and respect for the natural environment. As a result of participating in these activities the students may in turn develop a meaningful connection to nature, learning directly of the importance of conservation and the need for sustainable development.

The OP program matches up with the ecological integration value orientation in its integration of individuals' needs with the natural and social environment through having students participate in tasks that integrate individual and group goals, as well as learning to apply knowledge and skill to solve personal and social problems (Ennis & Chen, 1993). This component matches up very well with the outcomes of developing group cooperation, learning about group dynamics, developing teamwork skills, and developing communication skills, all of which the OP teachers considered highly valued.

Ecological integration value orientation also, perceivably matches up with the OP program in the creation of opportunities in which to participate in the future. This aspect is accomplished by having students begin to identify, and learn how to participate in, activities that they consider relevant by having students acquire skills of critical questioning, decision making,

and problem solving to project, modify, and extend skills and knowledge in preparation for changing lifestyles (Ennis & Chen, 1993). This last component corresponds well with the outcomes of gaining self-confidence, decision making, judgment, taking initiative and safety outcomes all identified by the OP teachers. These were found to be best reached through the use of co-curricular trips.

The second value orientation, that of social responsibility, involves having "students learn social rules and norms for personal conduct that lead to appropriate social interactions of cooperation, teamwork, group participation, and respect for others" (Ennis & Chen, 1993, p. 443). This value orientation matches well with the OP program as positive social interactions, cooperation/teamwork, participation and respect for others are all outcomes valued by the OP teachers.

Because the OP program in NB's outcomes bridge both value orientations, it seems logical that a combination of the two value orientations is a necessary and workable alternative to the older model of OP. I propose that a new value orientation be hypothesized to be more consistent with values and goals of OE teachers as compared to those of PE teachers, for whom the original value orientations are designed. My proposed value orientation, named *Ecological Responsibility Value Orientation,* combines and modifies the work presented by Jewett and Bain (1985) and Wentzel (1991).

Table 3.

P*roposed Ecological Responsibility Value Orientation*

Ecological Responsibility Value Orientation for Outdoor Education

Ecological responsibility domain sentence: Students learn to search for relevance, learn social rules and norms for personal conduct that lead to appropriate social interactions of cooperation, teamwork, group participation, and respect for others as they integrate their own needs and interests into the larger social and natural environment. They use knowledge both to respond to changes in their lives and to determine their own futures.

The curricular focus is placed on the following major concepts:

A. Cooperation/teamwork
   1. Students are taught that group goals take priority over individual needs.
   2. Students learn the importance of personal skills/knowledge to contribute to group success.

B. Positive social interactions
   1. Students demonstrate sensitivity and respect for group concerns.
   2. Students demonstrate social and interpersonal skills necessary to engage and affiliate with group members.
   3. Students learn social rules and norms necessary to interact with group members.

C. Integration of individuals' needs in the group and in the natural environment
   1. Students participate in tasks that integrate individual and group goals.
   2. Students learn to apply knowledge and skill to solve social and environmental problems.
   3. Students participate in tasks that emphasize the role of both individual and group involvement in setting and reaching of goals in the natural environment.
   4. Students learn to respect the rights of the environment and the others who use it.

D. Creation of opportunities that are meaningful and interesting in which to participate in the future
   1. Students participate in a variety of outdoor experiences and begin to identify and learn how to participate safely in the activities that they consider relevant and/or enjoyable.
   2. Students acquire skills of critical questioning, decision making, and problem solving to project, modify, and extend the skills and knowledge learned through participation in preparation for changing lifestyles.

Scope

Thirty-one teachers were involved in this study, 28 from NB, and three from the other provinces/territories of Canada. In an attempt to boost the response rate, I sent the NB OP teachers three separate reminder emails regarding participation between June 2014 and January 2015. Being a teacher, workloads, co-curricular trips, and volunteering take up much of my time, and I believed that these may also have been factors as to why the remaining 12 NB teachers did not participate. Furthermore, the attainment of a purposive sample of OE teachers from across Canada was not as successful as I had originally hoped. In total, I had identified 25 OE programs from outside of NB, of which I was only allowed to contact eight due to permission constraints. Each of the eight OE program leaders were also sent the three reminder emails regarding participation. One of the obstacles I faced during the recruitment phase was locating outdoor education programs from outside of NB through Internet searches. My search criteria included outdoor education course, outdoor pursuits program, outdoor education curriculum, outdoor pursuit's curriculum, wilderness education, and experiential education. All of these terms are facets of outdoor education programs, however, should a program have a different name, the search may not have found it. Of the school districts that responded, several of those in the province of British Columbia were on strike, which limited their ability to participate. Another obstacle was attaining permission to conduct research, many of the other school districts refused the proposal to conduct research as they had already approved a number of other studies during the year, which therefore limited my sample size.

The following delimitations were put into place in order to increase the feasibility of running the research project. Without these imposed limits, the project would become too large

and unmanageable for a single researcher. With these limits in mind, I acknowledge that the scope of the research may have been affected.

The first delimitation is the focus of the research. I have chosen to limit the focus of the research to the three major and two minor components mentioned previously, as I feel they are the key components to updating the curriculum.

The second delimitation of the research is that the research only targets high school programs. By limiting the research in this manner, I was better able to focus on the population of interest. This limitation was put into place as the OP program in the province of New Brunswick is only available at the high school level.

The third delimitation of the research is one of language. The research was limited to English language programs only. This limitation was put into place as there is the potential for a misinterpretation of the questions and results, should the translation not be accurate.

Recommendations for Future Research

This study investigated the current state of high school OE in the province of NB, Canada. NB is one of the only provinces in Canada that has an OE program as an elective course in the public school system. In the future, a study designed to investigate the state of OE programs at the high school level across all of Canada, North America or other countries may prove beneficial in making full-credit OE courses a part of the regular curriculum across Canada. The proposed Ecological Responsibility value orientation for OE programs would need to be further investigated and analyzed in the future to determine relevance as a value orientation when applied to other OE programs.

Another aspect not considered here which could be investigated are the reasons for the gender gap amongst the OE teachers. As seen in this study 82% percent of the teachers were male. The reasons behind this could be examined.

A comparative study between the goals and outcomes of semester-long OE programs and short-term experiences provided by outdoor centers would also add to the validity of OE as a discipline.

This study did not consider the students' perspectives about the OP program. Research is, therefore, needed to understand students' perceived value of OE, their feelings about the content and goals of the program. Research is also needed to determine the long-term impact and personal benefits of the OP program on former students.

Summary

After conducting this research one of my key learnings was that the views and values I place on OE as an educational medium were shared by all the OP teachers involved. This research showed me that all of the OP teachers, who participated in this study, believe in the potential benefits that can come from working with youth in nature. With all of this being said, I found it surprising that in a country with a rich outdoors history like Canada that OE is not valued as a full credit stand alone high school course.

When it comes to the teachers, a key learning I found was that having a passion for the outdoors is key component to running a positive, safe and successful program. During the interview process my interpretation of the tone, how the OP program was described, and language used, all pointed to the OP teachers being passionate about their work. Being passionate, however, was not seen as enough, the teachers recommended that, in order to run successful and safety oriented programs the teachers need to seek out certifications that are

relevant to their programs inorder to better understand the best practices that go along with the activity.

In the development of the new curriculum an attempt should be made to allow teachers to use a multitude of activities to reach streamlined and broad outcomes. Using broad outcomes, a teacher would be able to reach the goals using their own expertise and knowledge without being confined to a specific set of activities.

On a final note, co-curricular trips should be encouraged as they were described as an excellent way to help reach curriculum outcomes as they allow students use what they have learned in a practical setting. Through this study I have found that the teachers believe the real life experiences that come along with participating on co-curricular trips is unmatched to those attainable in a classroom setting.

In closing, I believe that OE has the potential to deeply enrich the lives of students, not only during the times when they are participating in teacher organized activities, but also into the future as well. The activities the students participate in through classes such as OP carry the potential for future participation, either when the students are older or when they are with their families. It is important that we teach them how to participate in these activities in a safe and environmentally sustainable manner, so that many more generations will have access to nature they way we do now.

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Appendix A: Ethics Approval

MEMORIAL UNIVERSITY

Interdisciplinary Committee on
Ethics in Human Research (ICEHR)

Office of Research Services
St. John's, NL Canada A1C 5S7
Tel: 709 864 2561 Fax: 709 864 4612
www.mun.ca/research

ICEHR Number:	20130118-HK
Approval Period:	May 29, 2014 – May 31, 2015
Funding Source:	N/A
Responsible Faculty:	Dr. Antony Card, School of Human Kinetics and Recreation
Title of Project:	*A Critical Analysis of High School Outdoor Education in New Brunswick*

May 29, 2014

Mr. Shaun Gibbs
School of Human Kinetics and Recreation
Memorial University of Newfoundland

Dear Mr. Gibbs:

Thank you for your email correspondence of May 21, 2014 addressing the issues raised by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) concerning the above-named research project.

The ICEHR has re-examined the proposal with the clarification and revisions submitted, and is satisfied that the concerns raised by the Committee have been adequately addressed. In accordance with the *Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans (TCPS2)*, the project has been granted *full ethics clearance* to May 31, 2015. Please provide ICEHR with a copy of any school board approval letter(s) once received.

If you need to make changes during the course of the project, which may raise ethical concerns, please forward an amendment request form with a description of these changes to icehr@mun.ca for the Committee's consideration.

The *TCPS2* requires that you submit an annual update form to the ICEHR before May 31, 2015. If you plan to continue the project, you need to request renewal of your ethics clearance, and include a brief summary on the progress of your research. When the project no longer requires contact with human participants, is completed and/or terminated, you need to provide the annual update form with a final brief summary, and your file will be closed.

The annual update form and amendment request form are on the ICEHR website at http://www.mun.ca/research/ethics/humans/icehr/applications/.

We wish you success with your research.

Yours sincerely,

Gail Wideman

Gail Wideman, Ph.D.
Vice-Chair, Interdisciplinary Committee on
Ethics in Human Research

GW/th

copy: Supervisor – Dr. Antony Card, School of Human Kinetics and Recreation

Appendix B: Outdoor Educator Pilot Study

Revisions made following the pilot survey include:

1) Question 6 reworded to say, "How many sections of Outdoor Pursuits 110 do you typically teach each semester?"
2) Question 7 ranges of course sizes changed to 10-14, 15-19, 20-24, 25-29, 30-34.
3) Question 8.1 addition of "How much funding would you typically receive each semester?"
4) Question 9 removed <$10 as an answer choice
5) Question 11 reworded to say, "Are your Outdoor Pursuits students required to participate in at least one extra-curricular trip, or do you let the students choose to participate or do you hand pick the students who can go? (Other (please specify))."
6) Question 13 removed as it was redundant.
7) Question 14 removed 1:16+ as an answer choice.
8) Question 15 reworded to say, "How familiar are you with the provincial safety guidelines for outdoor activities? And how often do you consult the safety guidelines prior to going on an extra-curricular trip?"
9) Question 21 reworded to say, "Please indicate approximately how many classes it takes you to teach each topic."
10) Question 23 originally had 16 activities listed as choices, but it made the question too cumbersome; therefore, the list of activities was condensed to eight based on some of the activities having similar attributes.

Outdoor Educator Pilot Teacher Survey

Informed Consent

My name is Shaun Gibbs; I have been teaching Outdoor Pursuits for the past 6 years at Riverview High School. I am also a Masters student at Memorial University and am currently working on my Masters project. As part of my Masters project, I am conducting research under the supervision of Dr. Antony Card and Dr. T. A. Loeffler.

As an outdoor educator in the province of New Brunswick you are being asked to participate in a short survey that will help to report on the current state of the outdoor education in our province. By accepting the terms as laid out below you understand and consent to the information you are providing to be used in the review of the outdoor education program in New Brunswick.

It is entirely up to you to decide whether or not you take part in this research. If you choose not to take part in this research, there will be no negative consequences for you, now or in the future.

Purpose of study:

The main purpose of my project is to analyze and review the outdoor pursuit program in New Brunswick. A secondary purpose is to investigate high-school-level outdoor education programs in Canada, focusing on course content, safety standards and training.

Benefits:

Your input into this project will used to generate a report on the importance and benefits of outdoor education in our province. This report will be presented to the curriculum committee for the upcoming Outdoor Pursuits curriculum review.

What you will do:
You are being asked to complete an online survey. The survey should only take about 15 to 25 minutes of your time.

Withdrawal:
Should you choose to withdraw from the research prior to completing the online survey, there is no need to contact the researcher; you may simply not submit the online survey. After you have submitted the completed online survey, if you then choose to withdraw your data from the research you will have to contact the researcher at shaun.gibbs@nbed.nb.ca and request that any of your data be destroyed. Please note that after the online survey has been completed, the only way to identify your results will be if you have included your email address or a contact phone number with regard to the potential follow up phone interview. Furthermore, you will only have 1 month after you have completed the online survey to withdraw your responses should you choose to

withdraw them.

Confidentiality and Storage of Data:
a. Your identity will remain confidential throughout the entire research process.
b. All data will be kept on a password-protected hard drive in a locked cabinet in the researcher's office. All hard copies of data (consent forms and notes) will also be kept in a locked cabinet in the researcher's office. All information will be kept for a minimum of five years as per Memorial University policies pertaining to data collection and storage. At the end of this five-year period, the data will be erased from the storage device.

Reporting and Sharing of Results:
The final report for this project will be in the form of a thesis, which once published will be publically available at the QEII library at Memorial. The intention is to disseminate the findings of this study in my graduate thesis, peer-reviewed journal article(s) and presentation(s) to the Department of Education and Early Childhood Development, Government of New Brunswick. Direct quotations may be used in all the above; however, aliases will be used and no identifying information will be provided. The data will be reported in aggregate form, so that it will not be possible to identify individuals. Moreover, the consent forms (from the telephone interview, should you take part) will be stored separately from the (materials used), so that it will not be possible to associate a name with any given set of responses. A copy of the aggregated results will be made available to any of the participants or school boards, by contacting Shaun Gibbs, should they request one.

Questions:
You are welcome to ask questions and provide comments at any time during your participation in the review process. If you would like more information about this study, please contact: Shaun Gibbs by email shaun.gibbs@nbed.nb.ca

Consent:
Your agreement on this form means that:
• You have read the information about the research.
• You have been able to ask questions about this study.
• You are satisfied with the answers to all your questions.
• You understand what the study is about and what you will be doing.
• You understand that you are free to withdraw from the study at any time up to the point you submit the survey by leaving the webpage/closing the browser, without having to give a reason, and that doing so will not affect you now or in the future.
• You understand that it is your choice whether any data collected from you up to the point of your withdrawal is to be used in the research or destroyed. (Note that data removal is only possible if you have provided either an email address or a telephone number in the survey).

If you accept the terms of this form, you do not give up your legal rights and do not release the researchers and supervisors from their professional responsibilities.

Your agreement with the terms:
I have read and understood what this study is about and appreciate the risks and benefits. I have had adequate time to think about this and had the opportunity to ask questions and my questions have been answered.

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861.
Answer Choices

- I agree to the terms
- I do not agree to the terms (If selected the survey will be submitted as is)

Demographics

1. Please select your gender, appropriate age range and the school district you teach in.

	Gender	Age Range	School District
	Male	20-24	Anglophone School District North
	Female	25-29	Anglophone School District East
	Prefer not to say	30-34	Anglophone School District South
		35-39	Anglophone School District West
Please select		40-44	
		45-49	
		50-54	
		55-59	
		60+	

Training/Experience

2. How many years have you been teaching Outdoor Pursuits?

- 0-2
- 3-4
- 5-6
- 7-8
- 9-10
- 11-12
- 13-14
- 15-16
- 16-17
- 17-18
- 19+

3. Please check which of the type of degree(s) you currently hold and your major area of study:

- **Bachelor Degree**
- **Honours Bachelor**
- **Masters Degree**
- **PhD**
- **Kinesiology or similar**
- **Outdoor Recreation or similar**
- **Other**

4. Please check whether you currently hold, had but has since expired, or never held the following certifications:

	Currently Hold	Currently Expired	Never Held
National Lifeguard Certification (NLS) / Red Cross Lifeguard Certification	○	○	○
Firearm Safety/Hunter Safety Course	○	○	○
Drivers License	○	○	○
Standard Workplace First Aid	○	○	○
Wilderness Remote First Aid	○	○	○
Wilderness Remote First Responder	○	○	○
Paddle Canada Canoe Certification or Equivalent (Any Level)	○	○	○
Paddle Canada Sea Kayak Certification or Equivalent (Any Level)	○	○	○
Paddle Canada Big Canoe Certification or Equivalent (Any Level)	○	○	○
Paddle Canada Stand Up Paddle Board (SUP) Certification (Any Level)	○	○	○
Paddle Canada Canoe Instructors Certification or Equivalent (Any Level)	○	○	○
Paddle Canada Sea Kayak Instructors Certification or Equivalent (Any Level)	○	○	○
Top Rope Rock Climbing Instructors Certification	○	○	○
Bow Hunter Education Course	○	○	○
Archery Instructors Certification	○	○	○
Search and Rescue Training			
Swimming Instructors Certification	○	○	○
Avalanche Safety Certification			
Swift Water Rescue Certification	○	○	○
Other certifications (please specify)			

5. List any additional certifications or training that you feel would benefit your teaching of Outdoor Pursuits. (that are not listed above)

Your Outdoor Education Program

6. How many sections of Outdoor Pursuits 110 do you typically teach each semester? Each year?

	1	2	3	4	5	6	7	8	9	10
Per Semester	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	○ 8	○ 9	○ 10
Per Year	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	○ 8	○ 9	○ 10

Other (please specify)

7. How many students would there typically be in a section of your outdoor education course? Please select the appropriate range.

- ○ <10
- ○ 10 - 15
- ○ 16 - 20
- ○ 21 - 25
- ○ 26 - 30
- ○ 31+

Other (please specify)

8. Does your course receive funding from the school?

- ○ Yes
- ○ No

9. How much do you typically charge as a course fee?

- ○ Do not Charge
- ○ <$10
- ○ $10 - 20
- ○ $21 - 30
- ○ $31 - 40
- ○ $41 - 50
- ○ $51 – 100
- ○ $101 – 150
- ○ $150+

10. Do you use a selection process for your students to enter OP110 or is the course open to all students?

- ○ Selection Process
- ○ No Selection Process (Open to all students)

Other (please specify)

Extra Curricular Trips

11. Do you require your Outdoor Pursuits students to participate in at least one extra-curricular trip, let the students choose to participate or do you had pick the students who can go?

- ○ Require participation
- ○ Hand Pick students
- ○ Students Choice to Participate
- ○ Do not run extra-curricular trips

Other (please specify)

12. How many extra-curricular trips do you typically run each semester?

	1	2	3	4	5	6	7	8+
Fall Semester	◯ 1	◯ 2	◯ 3	◯ 4	◯ 5	◯ 6	7 ◯	◯ 8+
Winter Semester	◯ 1	◯ 2	◯ 3	◯ 4	◯ 5	◯ 6	◯ 7	◯ 8+

13. Check all the types of out-trips that you normally run during the school year.

- ☐ Hiking Trip (full/half day)
- ☐ Backpacking Trip (Multi-day)
- ☐ Mountaineering Trip
- ☐ Rock Climbing Trip
- ☐ Snow Shoeing Trip
- ☐ Winter Camping Trip
- ☐ Cross-Country Skiing Trip
- ☐ Back Country Skiing Trip
- ☐ Dog Sledding Trip
- ☐ Flat Water Canoeing Trip
- ☐ Flat Water Kayaking Trip
- ☐ Whitewater Canoeing Trip
- ☐ Whitewater Kayaking Trip
- ☐ Whitewater Rafting Trip
- ☐ Sea Kayaking Trip
- ☐ Sailing Trip
- ☐ Caving Trip
- ☐ Horseback Riding Trip
- ☐ Fishing Trip

Other types of trip not listed (please specify)

14. On out-trips what is the typical teacher/supervisor to student ratio? (Teacher:Student) (DNR= Do not Run)

	(Select the Best Answer)
Hiking Trip (full/half day)	DNR
Backpacking Trip (Multi-day)	1:5 or less
Mountaineering Trip	Between 1:6 and 1:10
Rock Climbing Trip	Between 1:11 and 1:15
Snow Shoeing Trip	1:16+
Winter Camping Trip	
Cross-Country Skiing Trip	
Back Country Skiing Trip	
Dog Sledding Trip	
Flat Water Canoeing Trip	
Flat Water Kayaking Trip	
Whitewater Canoeing Trip	
Whitewater Kayaking Trip	
Whitewater Rafting Trip	
Sea Kayaking Trip	

(Select the Best Answer)

Sailing Trip

Caving Trip

Horseback Riding Trip

Fishing Trip

Other types of trip not listed (please specify) and include Ratio

15. Are you familiar with the provincial safety guidelines for outdoor activities? And do you consult the safety guidelines prior to going on an extra-curricular trip?

	Safety Guidelines	**Extra-Curricular Trips**
Safety	I am very familiar with the provincial safety guidelines I am somewhat familiar with the provincial safety guidelines I am somewhat unfamiliar with the provincial safety guidelines I do not know where to find the provincial safety guidelines	I consult the guidelines before every trip I consult the guidelines before most trips I do not consult the guidelines because I am aware of the required standards I have never consulted the guidelines

16. Please select the best answer, which best fills in the blank. I _____ risk management/emergency action plans for my extra-curricular trips.

- Always develop new
- Sometimes develop new
- Have in the past developed (which I still use)
- Only develop, for higher risk trips,
- Have never

17. After a date is chosen for an extra-curricular trip, are you then locked into that date or do you have the flexibility to change the date as you see fit?

- Locked into a specific date
- I have the flexibility to change the date as I see fit

Use this space to describe any concerns you have about trip date selection.

Outcomes and Skills

18. Below is a list of outcomes from the outdoor pursuits curriculum and those commonly associated with experiential education programs. Please rate the outcomes based on their level of importance to your course.

(Weighted Questions HI = 3, SI = 2, DNF = 1)

	Highly Important	Somewhat Important	Do not focus on
Learning Group Dynamics	○	○	○
Gaining Self Confidence	○	○	○
Making Individual Decisions	○	○	○
Learning Risk Management	○	○	○
Taking Responsibility	○	○	○
Improving Physical and Mental Fitness	○	○	○
Socialization	○	○	○
Group Cooperation	○	○	○
Connecting with Nature	○	○	○
Trust Development	○	○	○
Developing Communication Skills	○	○	○
Environmental Awareness	○	○	○
Environmental Stewardship	○	○	○
Developing Leadership Skills	○	○	○
Safety in the Outdoors	○	○	○

Other Outcomes (please specify

19. Below is a list of skills that outdoor educators could focus on. Please rate the skills based on their level of importance to your course.

(Weighted Questions HI = 3, SI = 2, DNF = 1)

	Highly Important	Somewhat Important	Do not cover
Journaling	○	○	○
Communication	○	○	○
Teamwork	○	○	○
Community Contribution	○	○	○

Safety	○	○	○
Judgment	○	○	○
Feedback	○	○	○
Decision Making	○	○	○
Leadership	○	○	○
Environmental Awareness	○	○	○
Group Awareness	○	○	○
Personal Awareness	○	○	○
Taking Initiative	○	○	○
Professionalism	○	○	○
Knowledge of Emergency Planning	○	○	○
Self-Evaluation	○	○	○

20. Below is a list of activities that outdoor educators could do during their course. Please rate the skills based on their level of importance to your course.

(Weighted Questions HI = 3, SI = 2, DNF = 1)

	Highly Important	**Somewhat Important**	**Do not cover**
Winter Camping	○	○	○
Survival	○	○	○
Nature Study	○	○	○
Leave No Trace	○	○	○
Canoeing	○	○	○
Navigation	○	○	○
Sleeping	○	○	○
Outdoor Cooking	○	○	○
Hiking	○	○	○
First Aid	○	○	○
Photography	○	○	○
Backpacking	○	○	○
Rappelling	○	○	○
Rock Climbing	○	○	○
Kayaking	○	○	○
Cross-country Skiing	○	○	○

Snow Shoeing	○	○	○
Public relations			
Safety			

Units of Study

21. Please indicate all of the topics that you cover in your outdoor education program and list the approximately how many hours you teach each topic.

(Topic Choices = I cover this topic, I only cover this topic if I have time, I do not cover this topic)
(In Class Hours Choices = 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31+)

Topics	Hours
Awareness	
Fitness	
Map & Compass	
Group Relations	
Cooking	
Camping Equipment	
First Aid	
Nature Studies	
Travel Diary	
Leadership	
Survival	
Safety	

22. Are there any other topics that you teach that are not in the curriculum? If so please list them below

23. Please indicate all of the topics that you cover through the use of the following activities in your outdoor education program. (A "trip" can mean either a short or a long excursion) (**Select all that apply)**

	Not Applicable in my course	Awareness	Personal Fitness	Map & Compass	Group Relations	Cooking	Camping Equipment	First Aid	Nature Studies	Journaling	Leadership	Survival
Hiking Trips	○	○	○	○	○	○	○	○	○	○	○	○
Cycling	○	○	○	○	○	○	○	○	○	○	○	○
Photography	○	○	○	○	○	○	○	○	○	○	○	○
Cross Country Skiing/snowshoeing trips	○	○	○	○	○	○	○	○	○	○	○	○
Group Debriefing	○	○	○	○	○	○	○	○	○	○	○	○
Orienteering	○	○	○	○	○	○	○	○	○	○	○	○
Rock Climbing/Rappelling trips	○	○	○	○	○	○	○	○	○	○	○	○
Initiative Games	○	○	○	○	○	○	○	○	○	○	○	○
Canoeing/Kayaking trips	○	○	○	○	○	○	○	○	○	○	○	○
Article Reviews	○	○	○	○	○	○	○	○	○	○	○	○
Swimming												
Search and Rescue Practice												
Avalanche Safety activities	○	○	○	○	○	○	○	○	○	○	○	○
Mountain safety activities												
Caving trips	○	○	○	○	○	○	○	○	○	○	○	○
Other (please specify)												

Resources

24. Are there any resources that you are lacking to run the OP 110 course the way you would like to? If so list what they are.

25. What are your preferred resources (books/manuals) that you use in your outdoor pursuits class?

Outdoor Pursuits Extension

26. Please indicate any certifications that your outdoor education students receive upon completion of your course.

- [ ] National Lifeguard Certification (NLS) / Red Cross Lifeguard Certification
- [ ] Firearm Safety/Hunter Safety Course
- [ ] Drivers License
- [ ] Standard Workplace First Aid with CPR
- [ ] Wilderness Remote First Aid
- [ ] Wilderness Remote First Responder
- [ ] Paddle Canada Canoe Certification or equivalent (Any Level)
- [ ] Paddle Canada Sea Kayak Certification or equivalent (Any Level)
- [ ] Paddle Canada Big Canoe Certification or equivalent (Any Level)
- [ ] Paddle Canada Stand Up Paddle Board (SUP) Certification or equivalent (Any Level)
- [ ] Paddle Canada Canoe Instructors Certification or equivalent (Any Level)
- [ ] Paddle Canada Sea Kayak Instructors Certification or equivalent (Any Level)
- [ ] Top Rope Rock Climbing Instructors Certification
- [ ] Bow Hunter Education Course
- [ ] Archery Instructors Certification
- [ ] Avalanche Safety Certification
- [ ] Mountain Safety Certification
- [ ] Search and Rescue Certification
- [ ] Swimming Instructors Certification
- [ ] Swift Water Rescue Certification

Other (please specify)

27. If your students receive any of the certifications listed in the above question, who covers the cost of the certification?

- [ ] The School
- [ ] The Student
- [ ] There is no cost
- [ ] Not applicable

28. Do your students (or students at your school) participate in the Duke of Edinburgh award? If so, at what grades?

(Participation Choices = Yes Students Participate, No students do not participate, do not participate but I am interested in learning more)
(Grade Level Choices = Grade 9, Grade 10, Grade 11, Grade 12)

Bronze Award	Participation (Drop Down)	Grade level (Drop Down)
Silver Award	Participation (Drop Down)	Grade level (Drop Down)
Gold Award	Participation (Drop Down)	Grade level (Drop Down)

29. Would you be interested in teaching a grade 12 level Outdoor Pursuits Class, which would be focused on developing outdoor leadership skills which would have the OP 110 course as a prerequisite.

- Yes
- No
- I already teach a grade 12 OP class

Comments

Thank You

30. Would you be interested in participating in a follow up interview?

- Yes
- No

If yes please enter your email address and contact telephone number here:_____,
_____

31. Use this space to include any extra comments you may like to add.

Thank you for your participation in this survey, your responses will be held in confidence. Please click on the submit survey ico

Appendix C: Outdoor Educator New Brunswick Teacher Survey

Informed Consent

My name is Shaun Gibbs; I have been teaching Outdoor Pursuits for the past 6 years at Riverview High School. I am also a Master's student at Memorial University and am currently working on my Master's project. As part of my Master's project, I am conducting research under the supervision of Dr. Antony Card and Dr. TA Loeffler.

As an outdoor educator in the province of New Brunswick you are being asked to participate in a short survey that will help to report on the current state of the outdoor education in our province. By accepting the terms as laid out below you understand and consent to the information you are providing to be used in the review of the outdoor education program in New Brunswick.

It is entirely up to you to decide whether or not you take part in this research. If you choose not to take part in this research there will be no negative consequences for you, now or in the future.

Purpose of study:

The main purpose of my project is to analyze and review the outdoor pursuit program in New Brunswick. A secondary purpose is to investigate high school level outdoor education programs in Canada focusing on course content, safety standards and training.

Benefits:

Your input into this project will used to generate a report on the importance and benefits of outdoor education in our province. This report will be presented to the curriculum committee for the upcoming Outdoor Pursuits curriculum review.

What you will do:

You are being asked to complete an online survey. The survey should only take about 15 to 25 minutes of your time.

Withdrawal

Should you choose to withdraw from the research, prior to completing the online survey, there is no need to contact the researcher; you may simply not submit the online survey. After you have submitted the completed online survey, if you then choose to withdraw your data from the research you will have to contact the researcher at shaun.gibbs@nbed.nb.ca and request that any of your data be destroyed. Please note that after the online survey has been completed the only way to identify your results will be if you have included your email address or a contact phone number with regards to the potential follow up phone interview. Furthermore, you will only have 1 month after you have completed the online survey to withdraw your responses should you choose to withdraw them.

Confidentiality and Storage of Data:

a. Your identity will remain confidential throughout the entire research process

b. All data will be kept on a password protected hard drive in a locked cabinet in the researcher's office. All hard copies of data (consent forms and notes) will also be kept in a locked cabinet in the researcher's office. All information will be kept for a minimum of five years as per Memorial University policies pertaining to data collection and storage. At the end of this five-year period, the data will be erased from the storage device.

Reporting and Sharing of Results:

The final report for this project will be in the form of a thesis, which once published will be publically available at the QEII library at Memorial. The intention is to disseminate the findings of this study in my graduate thesis, peer-reviewed journal article(s) and presentation(s) to the Department of Education and Early Childhood Development, Government of New Brunswick. Direct quotations may be used in all the above, however, aliases will be used and no identifying information will be provided. The data will be reported in aggregate form, so that it will not be possible to identify individuals. Moreover, the consent forms (from the telephone interview, should you take part) will be stored separately from the (materials used), so that it will not be possible to associate a name with any given set of responses. A copy of the aggregated results will be made available to any of the participants or school boards, by contacting Shaun Gibbs, should they request one.

Questions:

You are welcome to ask questions and provide comments at any time during your participation in the review process. If you would like more information about this study, please contact: Shaun Gibbs by email shaun.gibbs@nbed.nb.ca

Consent:

Your agreement on this form means that:
• You have read the information about the research.
• You have been able to ask questions about this study.
• You are satisfied with the answers to all your questions.
• You understand what the study is about and what you will be doing.
• You understand that you are free to withdraw from the study at any time up to the point you submit the survey by leaving the webpage/closing the browser, without having to give a reason, and that doing so will not affect you now or in the future.
• You understand that it is your choice whether any data collected from you up to the point of your withdrawal is to be used in the research or destroyed. (Note that data removal is only possible if you have provided either an email address or a telephone number in the survey).

If you accept the terms of this form, you do not give up your legal rights and do not release the researchers and supervisors from their professional responsibilities.

Your agreement with the terms:

I have read and understood what this study is about and appreciate the risks and benefits. I have had adequate time to think about this and had the opportunity to ask questions and my questions have been answered.

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861.

Answer Choices

- I agree to the terms
- I do not agree to the terms (If selected the survey will be submitted as is)

Demographics

1. Please select your gender, appropriate age range and the school district you teach in.

	Gender	Age Range	School District
	Male	20-24	Anglophone School District North
	Female	25-29	Anglophone School District East
	Prefer not to say	30-34	Anglophone School District South
		35-39	Anglophone School District West
Please select		40-44	
		45-49	
		50-54	
		55-59	
		60+	

Training/Experience

2. How many years have you been teaching Outdoor Pursuits?

- ○ 0-2
- ○ 3-4
- ○ 5-6
- ○ 7-8
- ○ 9-10
- ○ 11-12
- ○ 13-14
- ○ 15-16
- ○ 16-17
- ○ 17-18
- ○ 19+

3. Please check which of the type of degree(s) you currently hold and your major area of study:

- **Bachelor Degree**
- **Honours Bachelor**
- **Master's Degree**
- **PhD**
- **Kinesiology or similar**
- **Outdoor Recreation or similar**
- **Other**

4. Please check whether you currently hold, had but has since expired, or never held the following certifications:

	Currently Hold	Currently Expired	Never Held
National Lifeguard Certification (NLS) / Red Cross Lifeguard Certification	○	○	○
Firearm Safety/Hunter Safety Course	○	○	○
Drivers License	○	○	○
Standard Workplace First Aid	○	○	○
Wilderness Remote First Aid	○	○	○
Wilderness Remote First Responder	○	○	○
Paddle Canada Canoe Certification or Equivalent (Any Level)	○	○	○
Paddle Canada Sea Kayak Certification or Equivalent (Any Level)	○	○	○
Paddle Canada Big Canoe Certification or Equivalent (Any Level)	○	○	○
Paddle Canada Stand Up Paddle Board (SUP) Certification (Any Level)	○	○	○
Paddle Canada Canoe Instructors Certification or Equivalent (Any Level)	○	○	○
Paddle Canada Sea Kayak Instructors Certification or Equivalent (Any Level)	○	○	○
Top Rope Rock Climbing Instructors Certification	○	○	○
Bow Hunter Education Course	○	○	○
Archery Instructors Certification	○	○	○
Search and Rescue Training			
Swimming Instructors Certification	○	○	○
Avalanche Safety Certification			
Swift Water Rescue Certification	○	○	○
Other certifications (please specify)			

5. List any additional certifications or training that you feel would benefit your teaching of Outdoor Pursuits. (that are not listed above)

Your Outdoor Education Program

6. How many sections of Outdoor Pursuits 110 do you typically teach each semester? Each year?

	1	2	3	4	5	6	7	8	9	10
Per Semester	○	○	○	○	○	○	○	○	○	○
Per Year	○	○	○	○	○	○	○	○	○	○

Other (please specify)

7. How many students would there typically be in a section of your outdoor education course? Please select the appropriate range.

○ <10
○ 10 - 15
○ 16 - 20
○ 21 - 25

- 26 - 30
- 31+

Other (please specify)

8. Does your course receive funding from the school?

- Yes
- No

9. How much do you typically charge as a course fee?

- Do not Charge
- <$10
- $10 - 20
- $21 - 30
- $31 - 40
- $41 - 50
- $51 – 100
- $101 – 150
- $150+

10. Do you use a selection process for your students to enter OP110 or is the course open to all students?

- Selection Process
- No Selection Process (Open to all students)

Other (please specify)

Extra Curricular Trips

11. Do you require your Outdoor Pursuits students to participate in at least one extra-curricular trip, let the students choose to participate or do you had pick the students who can go?

- Require participation
- Hand Pick students
- Students Choice to Participate
- Do not run extra-curricular trips

Other (please specify)

12. How many extra-curricular trips do you typically run each semester?

	1	2	3	4	5	6	7	8+
Fall Semester	1	2	3	4	5	6	7	8+
Winter Semester	1	2	3	4	5	6	7	8+

13. Check all the types of out-trips that you normally run during the school year.

- Hiking Trip (full/half day)
- Backpacking Trip (Multi-day)
- Mountaineering Trip
- Rock Climbing Trip
- Flat Water Canoeing Trip
- Flat Water Kayaking Trip
- Whitewater Canoeing Trip
- Whitewater Kayaking Trip

- ☐ Snow Shoeing Trip
- ☐ Winter Camping Trip
- ☐ Cross-Country Skiing Trip
- ☐ Back Country Skiing Trip
- ☐ Dog Sledding Trip
- ☐ Whitewater Rafting Trip
- ☐ Sea Kayaking Trip
- ☐ Sailing Trip
- ☐ Caving Trip
- ☐ Horseback Riding Trip
- ☐ Fishing Trip

Other types of trip not listed (please specify)

14. On out-trips what is the typical teacher/supervisor to student ratio? (Teacher:Student) (DNR= Do not Run)

	(Select the Best Answer)
Hiking Trip (full/half day)	DNR
Backpacking Trip (Multi-day)	1:5 or less
Mountaineering Trip	Between 1:6 and 1:10
Rock Climbing Trip	Between 1:11 and 1:15
Snow Shoeing Trip	1:16+
Winter Camping Trip	
Cross-Country Skiing Trip	
Back Country Skiing Trip	
Dog Sledding Trip	
Flat Water Canoeing Trip	
Flat Water Kayaking Trip	
Whitewater Canoeing Trip	
Whitewater Kayaking Trip	
Whitewater Rafting Trip	
Sea Kayaking Trip	
Sailing Trip	
Caving Trip	
Horseback Riding Trip	
Fishing Trip	

Other types of trip not listed (please specify) and include Ratio

15. Are you familiar with the provincial safety guidelines for outdoor activities? And do you consult the safety guidelines prior to going on an extra-curricular trip?

	Safety Guidelines	Extra-Curricular Trips
Safety	○ I am very familiar with the provincial safety guidelines ○ I am somewhat familiar with the provincial safety guidelines ○ I am somewhat unfamiliar with the provincial safety guidelines ○ I do not know where to find the provincial safety guidelines	○ I consult the guidelines before every trip ○ I consult the guidelines before most trips ○ I do not consult the guidelines because I am aware of the required standards ○ I have never consulted the guidelines

16. Please select the best answer, which best fills in the blank. I _____ risk management/emergency action plans for my extra-curricular trips.

○ Always develop new

○ Sometimes develop new

○ Have in the past developed (which I still use)

○ Only develop, for higher risk trips,

○ Have never

17. After a date is chosen for an extra-curricular trip, are you then locked into that date or do you have the flexibility to change the date as you see fit?

○ Locked into a specific date

○ I have the flexibility to change the date as I see fit

Use this space to describe any concerns you have about trip date selection.

Outcomes and Skills

18. Below is a list of outcomes from the outdoor pursuits curriculum and those commonly associated with experiential education programs. Please rate the outcomes based on their level of importance to your course.

(Weighted Questions HI = 3, SI = 2, DNF = 1)

	Highly Important	Somewhat Important	Do not focus on
Learning Group Dynamics	○	○	○
Gaining Self Confidence	○	○	○
Making Individual Decisions	○	○	○
Learning Risk Management	○	○	○
Taking Responsibility	○	○	○
Improving Physical and Mental Fitness	○	○	○
Socialization	○	○	○
Group Cooperation	○	○	○

	Highly Important	Somewhat Important	Do not focus on
Connecting with Nature			
Trust Development			
Developing Communication Skills			
Environmental Awareness			
Environmental Stewardship			
Developing Leadership Skills			
Safety in the Outdoors			

Other Outcomes (please specify

19. Below is a list of skills that outdoor educators could focus on. Please rate the skills based on their level of importance to your course.

(Weighted Questions HI = 3, SI = 2, DNF = 1)

	Highly Important	Somewhat Important	Do not cover
Journaling			
Communication			
Teamwork			
Community Contribution			
Safety			
Judgment			
Feedback			
Decision Making			
Leadership			
Environmental Awareness			
Group Awareness			
Personal Awareness			
Taking Initiative			
Professionalism			
Knowledge of Emergency Planning			
Self-Evaluation			

20. Below is a list of activities that outdoor educators could do during their course. Please rate the skills based on their level of importance to your course.

(Weighted Questions HI = 3, SI = 2, DNF = 1)

	Highly Important	Somewhat Important	Do not cover
Winter Camping	○	○	○
Survival	○	○	○
Nature Study	○	○	○
Leave No Trace	○	○	○
Canoeing	○	○	○
Navigation	○	○	○
Sleeping	○	○	○
Outdoor Cooking	○	○	○
Hiking	○	○	○
First Aid	○	○	○
Photography	○	○	○
Backpacking	○	○	○
Rappelling	○	○	○
Rock Climbing	○	○	○
Kayaking	○	○	○
Cross-country Skiing	○	○	○
Snow Shoeing	○	○	○
Public relations	○	○	○
Safety		○	

Units of Study

21. Please indicate all of the topics that you cover in your outdoor education program and list the approximately how many hours you teach each topic.

(Topic Choices = I cover this topic, I only cover this topic if I have time, I do not cover this topic)
(In Class Hours Choices = 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31+)

Topics	Hours
Awareness	
Fitness	
Map & Compass	
Group Relations	
Cooking	

Topics	Hours
Camping Equipment	
First Aid	
Nature Studies	
Travel Diary	
Leadership	
Survival	
Safety	

22. Are there any other topics that you teach that are not in the curriculum? If so please list them below

23. Please indicate all of the topics that you cover through the use of the following activities in your outdoor education program. (A "trip" can mean either a short or a long excursion) (**Select all that apply)**

	Not Applicable in my course	Awareness	Personal Fitness	Map & Compass	Group Relations	Cooking	Camping Equipment	First Aid	Nature Studies	Journaling	Leadership	Survival
Hiking Trips	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Cycling	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Photography	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Cross Country Skiing/snowshoeing trips	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Group Debriefing	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Orienteering	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Rock Climbing/Rappelling trips	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Initiative Games	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Canoeing/Kayaking trips	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Article Reviews	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Swimming												
Search and Rescue Practice												
Avalanche Safety activities	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Mountain safety activities												
Caving trips	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Other (please specify)												

Resources

24. Are there any resources that you are lacking to run the OP 110 course the way you would like to? If so list what they are.

25. What are your preferred resources (books/manuals) that you use in your outdoor pursuits class?

Outdoor Pursuits Extension

26. Please indicate any certifications that your outdoor education students receive upon completion of your course.

- ☐ National Lifeguard Certification (NLS) / Red Cross Lifeguard Certification
- ☐ Firearm Safety/Hunter Safety Course
- ☐ Drivers License
- ☐ Standard Workplace First Aid with CPR
- ☐ Wilderness Remote First Aid
- ☐ Wilderness Remote First Responder
- ☐ Paddle Canada Canoe Certification or equivalent (Any Level)
- ☐ Paddle Canada Sea Kayak Certification or equivalent (Any Level)
- ☐ Paddle Canada Big Canoe Certification or equivalent (Any Level)
- ☐ Paddle Canada Stand Up Paddle Board (SUP) Certification or equivalent (Any Level)
- ☐ Paddle Canada Canoe Instructors Certification or equivalent (Any Level)
- ☐ Paddle Canada Sea Kayak Instructors Certification or equivalent (Any Level)
- ☐ Top Rope Rock Climbing Instructors Certification
- ☐ Bow Hunter Education Course
- ☐ Archery Instructors Certification
- ☐ Avalanche Safety Certification
- ☐ Mountain Safety Certification
- ☐ Search and Rescue Certification
- ☐ Swimming Instructors Certification
- ☐ Swift Water Rescue Certification

Other (please specify)

27. If your students receive any of the certifications listed in the above question, who covers the cost of the certification?

- ☐ The School
- ☐ The Student

☐ There is no cost

☐ Not applicable

28. Do your students (or students at your school) participate in the Duke of Edinburgh award? If so, at what grades?
(Participation Choices = Yes Students Participate, No students do not participate, do not participate but I am interested in learning more)
(Grade Level Choices = Grade 9, Grade 10, Grade 11, Grade 12)

Bronze Award	Participation (Drop Down)	Grade level (Drop Down)
Silver Award	Participation (Drop Down)	Grade level (Drop Down)
Gold Award	Participation (Drop Down)	Grade level (Drop Down)

29. Would you be interested in teaching a grade 12 level Outdoor Pursuits Class, which would be focused on developing outdoor leadership skills which would have the OP 110 course as a prerequisite.

○ Yes

○ No

○ I already teach a grade 12 OP class

Comments

Thank You

30. Would you be interested in participating in a follow up interview?

○ Yes

○ No

If yes please enter your email address and contact telephone number here:

_____,

_____

31. Use this space to include any extra comments you may like to add.

Thank you for your participation in this survey, your responses will be held in confidence. Please click on the submit survey icon below

Appendix D: Outdoor Educators Across Canada Survey

Outdoor Educators Across Canada Survey

Informed Consent

My name is Shaun Gibbs; I have been teaching Outdoor Pursuits for the past 6 years at Riverview High School. I am also a Master's student at Memorial University and am currently working on my Master's project. As part of my Master's project, I am conducting research under the supervision of Dr. Antony Card and Dr. TA Loeffler.

As an outdoor educator at the high school level you are being asked to participate in a short survey that will help to review the current state of the outdoor education in Canada. By accepting the terms as laid out below you understand and consent to the information you are providing to be used in the review of the outdoor education program in New Brunswick.

It is entirely up to you to decide whether or not you take part in this research. If you choose not to take part in this research there will be no negative consequences for you, now or in the future.

Purpose of study:

The main purpose of my project is to analyze and review the outdoor pursuit program in New Brunswick. A secondary purpose is to investigate high school level outdoor education programs in Canada focusing on course content, safety standards and training.

Benefits:

As an Outdoor Educator it is apparent that you value the outdoors. Your input into this project will help to emphasis the importance and benefits of teaching outdoor education courses and skills to high school level students.

What you will do:

You are being asked to complete an online survey. The survey should only take about 15 to 25 minutes of your time.

Withdrawal

Should you choose to withdraw from the research, prior to completing the online survey, there is no need to contact the researcher; you may simply not submit the online survey. After you have submitted the completed online survey, if you then choose to withdraw your data from the research you will have to contact the researcher at shaun.gibbs@nbed.nb.ca and request that any of your data be destroyed. Please note that after the online survey has been completed the only way to identify your results will be if you have included your email address or a contact phone number with regards to the potential follow up phone interview. Furthermore, you will only have 1 month after you have completed the online survey to withdraw your responses should you choose to withdraw them.

Confidentiality and Storage of Data:

a. Your identity will remain confidential throughout the entire research process
b. All data will be kept on a password protected hard drive in a locked cabinet in the researcher's office. All hard copies of data (consent forms and notes) will also be kept in a locked cabinet in the researcher's office. All information will be kept for a minimum of five years as per Memorial University policies pertaining to data collection and storage. At the end of this five-year period, the data will be erased from the storage device.
Reporting and Sharing of Results:

The final report for this project will be in the form of a thesis, which once published will be publically available at the QEII library at Memorial. The intention is to disseminate the findings of this study in my graduate thesis, peer-reviewed journal article(s) and presentation(s) to the New Brunswick Government to inform the forthcoming revisions to the provincial OE Curriculum. Direct quotations may be used in all the above, however, aliases will be used and no identifying information will be provided. The data will be reported in aggregate form, so that it will not be possible to identify individuals. Moreover, the consent forms (from the telephone interview, should you take part) will be stored separately from the (materials used), so that it will not be possible to associate a name with any given set of responses. A copy of the aggregated results will be made available to any of the participants or school boards, by contacting Shaun Gibbs, should they request one.

Questions:

You are welcome to ask questions and provide comments at any time during your participation in the review process. If you would like more information about this study, please contact: Shaun Gibbs by email shaun.gibbs@nbed.nb.ca

Consent:

Your agreement on this form means that:
• You have read the information about the research.
• You have been able to ask questions about this study.
• You are satisfied with the answers to all your questions.
• You understand what the study is about and what you will be doing.
• You understand that you are free to withdraw from the study at any time up to the point you submit the survey by leaving the webpage/closing the browser, without having to give a reason, and that doing so will not affect you now or in the future.
• You understand that it is your choice whether any data collected from you up to the point of your withdrawal is to be used in the research or destroyed. (Note that data removal is only

possible if you have provided either an email address or a telephone number in the survey).

If you accept the terms of this form, you do not give up your legal rights and do not release the researchers and supervisors from their professional responsibilities.

Your agreement with the terms:

I have read and understood what this study is about and appreciate the risks and benefits. I have had adequate time to think about this and had the opportunity to ask questions and my questions have been answered.

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861.

Answer Choices

- I agree to the terms
- I do not agree to the terms (If selected the survey will be submitted as is)

Demographics

1. Please select your gender, appropriate age range and province/territory where you are located.

	Gender	Age Range	Location
Please select	M/F/ Prefer not to say	20-24, 25-29, 30-34, 35-39, 40-44,45-49, 50-54, 55-60, 60+	NB/NL/PEI/NS/ON/QUE MAN/AB/BC/SASK/NWT/ YK/NUN

Training/Experience

2. How many years have you been teaching an outdoor education program to high school aged students?

- 0-2
- 3-4
- 5-6
- 7-8
- 9-10
- 11-12
- 13-14
- 15-16
- 17-18
- 18-19
- 20+

3. Please check which of the type of degree(s) you currently hold and your major area of study:

Bachelor Degree	
Honours Bachelor	**Kinesiology or similar**
Master's Degree	**Outdoor Recreation or similar**
PhD	**Other**

4. Please check whether you currently hold, had but has since expired, or never held the following certifications:

	Currently Hold	Expired	Never Held
National Lifeguard Certification (NLS) / Red Cross Lifeguard Certification	○	○	○
Firearm Safety/Hunter Safety Course	○	○	○
Drivers License	○	○	○
Standard Workplace First Aid	○	○	○
Wilderness Remote First Aid	○	○	○
Wilderness Remote First Responder	○	○	○
Paddle Canada Canoe Certification or equivalent (Any Level)	○	○	○
Paddle Canada Sea Kayak Certification or equivalent (Any Level)	○	○	○
Paddle Canada Big Canoe Certification or equivalent (Any Level)	○	○	○
Paddle Canada Stand Up Paddle Board (SUP) Certification or equivalent (Any Level)	○	○	○
Paddle Canada Canoe Instructors Certification or equivalent (Any Level)	○	○	○
Paddle Canada Sea Kayak Instructors Certification or equivalent (Any Level)	○	○	○
Top Rope Rock Climbing Instructors Certification	○	○	○
Bow Hunter Education Course	○	○	○
Archery Instructors Certification **Search and Rescue Training**	○	○	○
Swimming Instructors Certification **Avalanche Safety Certification**	○	○	○
Swift Water Rescue Certification	○	○	○

Other certifications (please specify)

Your Outdoor Education Program

5. How many outdoor education courses do you typically teach each year? and how long is the course's length?

	Courses per year	Length of time
Sections	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8	☐ Less than a week long ☐ 1 to 3 weeks ☐ 4 to 6 weeks ☐ 7 to 9 weeks ☐ 10 to 12 weeks ☐ 13 to 15 weeks ☐ Full semester (single credit course) ☐ Full Semester (multi-credit course) ☐ Full year (multi-credit course) (8 month program) ☐ Longer than 8 month program

Other (please specify)

6. How many students would there typically be in a section of your outdoor education course? Please select the appropriate range.

- ◯ <10
- ◯ 10 - 15
- ◯ 16 - 20
- ◯ 21 - 25
- ◯ 26 - 30
- ◯ 31+

Other (please specify)

7. Do you use a selection process for your students to enter outdoor education program or is the course open to all students?

- ◯ Selection Process
- ◯ No Selection Process (Open to all students)

Other (please specify)

Extra-curricular trips

8. Do you require your Outdoor Education students to participate in at least one extra-curricular trip during your course, let the students choose or do you had pick the students who can go?

- ○ Require participation
- ○ Hand Pick students
- ○ Students Choice
- ○ Do not run extra-curricular trips

Other (please specify)

9. How many extra-curricular trips do you typically run each section of your outdoor education course?

	1	2	3	4	5	6	7	8	9	10	>10
Out-trips	○	○	○	○	○	○	○	○	○	○	○

Other (please specify)

10. Check all the types of out-trips that you normally run during the school year.

- ☐ Hiking Trip (full/half day)
- ☐ Backpacking Trip (Multi-day)
- ☐ Mountaineering Trip
- ☐ Rock Climbing Trip
- ☐ Snow Shoeing Trip
- ☐ Winter Camping Trip
- ☐ Cross-Country Skiing Trip
- ☐ Back Country Skiing Trip
- ☐ Dog Sledding Trip
- ☐ Flat Water Canoeing Trip
- ☐ Flat Water Kayaking Trip
- ☐ Whitewater Canoeing Trip
- ☐ Whitewater Kayaking Trip
- ☐ Whitewater Rafting Trip
- ☐ Sea Kayaking Trip
- ☐ Sailing Trip
- ☐ Caving Trip
- ☐ Horseback Riding Trip
- ☐ Fishing Trip

Other types of trip not listed (please specify)

11. On out-trips what is the typical teacher/supervisor to student ratio? (Teacher:Student) (DNR = Do Not Run)

(Select the Best Answer) DNR, 1:5 or less, Between 1:6 and 1:10, Between 1:11 and 1:15, 1:16+

Hiking Trip (full/half day)
Backpacking Trip (Multi-day)
Mountaineering Trip
Rock Climbing Trip
Snow Shoeing Trip
Winter Camping Trip
Cross-Country Skiing Trip
Back Country Skiing Trip
Flat Water Canoeing Trip
Flat Water Kayaking Trip
Whitewater Canoeing Trip
Whitewater Kayaking Trip
Whitewater Rafting Trip
Sea Kayaking Trip
Sailing Trip
Caving Trip
Horseback Riding Trip
Fishing Trip
Dog Sledding Trip
Other types of trip not listed (please specify)

12. Are you familiar with the provincial safety guidelines for outdoor activities? And do you consult the safety guidelines prior to going on an extra-curricular trip?

	Safety Guidelines	**Extra-Curricular Trips**
Safety	○ I am very familiar with the provincial safety guidelines ○ I am somewhat familiar with the provincial safety guidelines ○ I am somewhat unfamiliar with the provincial safety guidelines ○ I do not know where to find the provincial safety guidelines	○ I consult the guidelines before every trip ○ I consult the guidelines before most trips ○ I do not consult the guidelines because I am aware of the required standards ○ I have never consulted the guidelines

13. Please select the best answer, which best fills in the blank. I _____ risk management/emergency action plans for my extra-curricular trips.

○ Always develop new
○ Sometimes develop new

- Have in the past developed (which I still use)
- Only develop, for higher risk trips,
- Have never

14. After a date is chosen for an extra-curricular trip, are you then locked into that date or do you have the flexibility to change the date as you see fit?

- Locked into a specific date
- I have the flexibility to change the date as I see fit

Use this space to describe any concerns you have about trip date selection.

Outcomes and Skills

15. Below is a list of outcomes commonly associated with experiential education programs. Please rate the outcomes based on their level of importance to your course.

(Weighted Questions HI = 3, SI = 2, DNF = 1)

	Highly Important	Somewhat Important	Do not focus on
Learning Group Dynamics			
Gaining Self Confidence			
Making Individual Decisions			
Learning Risk Management			
Taking Responsibility			
Improving Physical and Mental Fitness			
Socialization			
Group Cooperation			
Connecting with nature			
Trust Development			
Developing Communication Skills			
Environmental Awareness			
Environmental Stewardship			
Developing Leadership Skills			
Safety in the Outdoors			

Other Outcomes (please specify

16. Below is a list of skills that outdoor educators could focus on. Please rate the skills based on their level of importance to your course.

(Weighted Questions HI = 3, SI = 2, DNF = 1)

	Highly Important	Somewhat Important	Do not cover
Journaling	○	○	○
Communication	○	○	○
Teamwork	○	○	○
Community Contribution	○	○	○
Safety	○	○	○
Judgment	○	○	○
Feedback	○	○	○
Decision Making	○	○	○
Leadership	○	○	○
Environmental Awareness	○	○	○
Group Awareness	○	○	○
Personal Awareness	○	○	○
Taking Initiative	○	○	○
Professionalism	○	○	○
Knowledge of Emergency Planning	○	○	○
Self-Evaluation	○	○	○

17. Below is a list of activities that outdoor educators could do during their course. Please rate the skills based on their level of importance to your course.

(Weighted Questions HI = 3, SI = 2, DNF = 1)

	Highly Important	Somewhat Important	Do not cover
Winter Camping	○	○	○
Survival	○	○	○
Nature Study	○	○	○
Leave No Trace	○	○	○
Canoeing	○	○	○
Navigation	○	○	○
Sleeping	○	○	○
Outdoor Cooking	○	○	○
Hiking	○	○	○

First Aid	○	○	○
Photography	○	○	○
Backpacking	○	○	○
Rappelling	○	○	○
Rock Climbing	○	○	○
Kayaking	○	○	○
Cross-country Skiing	○	○	○
Snow Shoeing	○	○	○
Public relations	○	○	○
Safety			

Units of Study

18. Please indicate all of the topics that you cover in your outdoor education program and list the approximately how many hours you teach each topic.

(Topic Choices = I cover this topic, I only cover this topic if I have time, I do not cover this topic)
(Hours Choices = 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31+)

Topics	Hours
Awareness	
Fitness	
Map & Compass	
Group Relations	
Cooking	
Sleeping Equipment	
First Aid	
Nature Studies	
Travel Diary	
Leadership	
Survival	
Safety	

19. Are there any other topics that you teach that are not listed above? If so please list them below

20. Please indicate all of the topics that you cover through the use of the following activities in your outdoor education program. (A "trip" can mean either a short or a long excursion) (Select all that apply)

	Not Applicable in my course	Awareness	Personal Fitness	Map & Compass	Group Relations	Cooking	Camping Equipment	First Aid	Nature Studies	Journaling	Leadership	Survival
Hiking Trips	○	○	○	○	○	○	○	○	○	○	○	○
Cycling	○	○	○	○	○	○	○	○	○	○	○	○
Photography	○	○	○	○	○	○	○	○	○	○	○	○
Cross Country Skiing/snowshoeing trips	○	○	○	○	○	○	○	○	○	○	○	○
Group Debriefing	○	○	○	○	○	○	○	○	○	○	○	○
Orienteering	○	○	○	○	○	○	○	○	○	○	○	○
Rock Climbing/Rappelling trips	○	○	○	○	○	○	○	○	○	○	○	○
Initiative Games	○	○	○	○	○	○	○	○	○	○	○	○
Canoeing/Kayaking trips												
Search and Rescue Practice												
Avalanche Safety activities	○	○	○	○	○	○	○	○	○	○	○	○
Mountain safety activities												
Article Reviews	○	○	○	○	○	○	○	○	○	○	○	○
Swimming	○	○	○	○	○	○	○	○	○	○	○	○
Caving trips	○	○	○	○	○	○	○	○	○	○	○	○

Other (please specify)

Resources

21. What are your preferred resources (books/manuals) that you use in your outdoor pursuits class?

Outdoor Education Extension

22. Please indicate any certifications that your outdoor education students receive upon completion of your course.

- ☐ National Lifeguard Certification (NLS) / Red Cross Lifeguard Certification
- ☐ Firearm Safety/Hunter Safety Course
- ☐ Drivers License
- ☐ Standard Workplace First Aid With CPR
- ☐ Wilderness Remote First Aid

- [ ] Wilderness Remote First Responder
- [ ] Paddle Canada Canoe Certification or equivalent (Any Level)
- [ ] Paddle Canada Sea Kayak Certification or equivalent (Any Level)
- [ ] Paddle Canada Big Canoe Certification or equivalent (Any Level)
- [ ] Paddle Canada Stand Up Paddle Board (SUP) Certification or equivalent (Any Level)
- [ ] Paddle Canada Canoe Instructors Certification or equivalent (Any Level)
- [ ] Paddle Canada Sea Kayak Instructors Certification or equivalent (Any Level)
- [ ] Top Rope Rock Climbing Instructors Certification
- [ ] Bow Hunter Education Course
- [ ] Avalanche Safety Certification
- [ ] Mountain Safety Certification
- [ ] Search and Rescue Certification
- [ ] Archery Instructors Certification
- [ ] Swimming Instructors Certification
- [ ] Swift Water Rescue Certification

Other (please specify)

23. Do your students (or students at your school) participate in the Duke of Edinburgh award? If so, at what grades?

(Participation Choices = Yes Students Participate, No students do not participate, do not participate but I am interested in learning more)
(Grade Level Choices = Grade 9, Grade 10, Grade 11, Grade 12)

Bronze Award	Participation (Drop Down)	Grade level (Drop Down)
Silver Award	Participation (Drop Down)	Grade level (Drop Down)
Gold Award	Participation (Drop Down)	Grade level (Drop Down)

24. Would you be interested in participating in a follow up interview?

- ○ Yes
- ○ No

If yes please enter your email address and contact telephone number here:_____,

_____

25. Use this space to include any extra comments you may like to add?
Thank you for completing this survey, your responses will be held in confidence, please click on the submit survey icon below.

Appendix E: Telephone Interview Questionnaire

Interviewer: Hello, my name is Shaun Gibbs from Memorial University. I am calling as you volunteered to take part in a follow up phone interview as part of a research study about Outdoor Education. The interview/survey will take approximately 30 to 60 minutes of your time. Your participation in this survey is completely voluntary. This means you do not have to participate if you don't want to. If you agree to participate, you have the right to only answer the questions you choose to answer. This phone call will also be recorded for review purposes. This interview will consist of questions pertaining to your Outdoor Education experiences. The potential risks of this research are minimal and confidentiality of the information that you share with us will be maintained to the highest level. You have the right to stop participation at any point during the interview if you so choose. If you have questions or concerns regarding this research, you can contact the supervisor Dr. Antony Card at (709) 639-2592 or Memorial University's ICEHR, the committee that works to protect your rights and welfare at (709) 864-2861

"So to start:"

"Did you receive a copy of the informed consent via email for your review?"

[ ] Yes If Yes…… Continue

[ ] No If No…… Before continuing on with this process I will send the copy of the informed consent form and will call you back in a few days.

"Do you agree to the telephone conversation being recorded"

[ ] Yes If Yes….. Continue

[ ] No If No….. "Do still agree to participate in the interview as long as the conversation is not recorded"

[ ] Yes If Yes….. Continue

[ ] No If No…. Thank you for your time

"Do you have any questions with regards to the project?"

[ ]Yes If Yes…… What questions do you have…

[ ] No If No….. Continue

"Do you agree to voluntarily participate in this survey process?"

[ ] Yes If Yes..... Continue

[ ] No If No..... Good-bye.

VERBAL CONSENT DOCUMENTATION FOR PARTICIPATION.

Subject: A Critical Analysis of High School Outdoor Education in New Brunswick

This consent serves as documentation that the required elements of informed consent have been presented to the participant or the participant's legally authorized representative via email.

Verbal consent to participate in this telephone survey has been obtained by the participant's willingness to continue with the telephone survey by providing answers to a series of questions related to Outdoor Education.

_____

Name of Respondent

_____
Researcher's Name (Printed)

_____
Researcher's Signature

_____
Date Contacted

Telephone interview Survey Questions: Name: _____

Teacher Certification

1. What type of educational background do you think that a teacher should have in order to be able to teach an outdoor pursuits class?

2. In your opinion, what are the minimum certifications that should be held by all outdoor pursuits teachers?

3. In your opinion, what level of first aid should a teacher have before running an extra-curricular trip and why?

Safety Standards

4. Do you have any concerns regarding the size of your outdoor pursuits classes? If so what are they?

5. Describe how you decide how many supervisors are needed on an extra-curricular trip?

6. In your opinion how often should an outdoor pursuits teacher review the safety guidelines?

7. Are you aware of the updated 2014 safety guidelines?

8. In your opinion, what are the necessary considerations that you must take when you decide whether or not to proceed with an extra-curricular trip on the dates you have selected?

Course Content

9. In your opinion, what is the value of using extra-curricular trips in your outdoor pursuits program?

10. Are there any limitations to teaching these same values in a school setting? If so what are they?

11. With regards to extra-curricular trips, what criteria do you use to select which students are able to participate in extra-curricular trips or who has to complete an alternative project?

12. What type of alternatives would you offer to those students who have not met your requirements of participating on an extra-curricular trip?

13. In your opinion, which of the following curricular outcomes; are your top 5 most important outcomes and why are they important? There are seven of them Gaining Self Confidence, Group Dynamics, Taking Responsibility, Group Cooperation, Trust Development, Environmental Awareness and Safety in the Outdoors. So which would be your top 5 of that list.

B) Are there any of the other curricular outcomes you feel should be added as highly important?

14. In your opinion, which of the following skills, are your top 5 most important skills and why are they important? The skills are communication, teamwork, safety, judgment, decision making, leadership and taking initiative

15. In your opinion, which of the following activities, are the top 5 most important activities to your program and why? Leave No Trace, Navigation, outdoor cooking, hiking, snow shoeing, winter camping, survival training, nature study, canoeing, first aid, backpacking and cross-country skiing

16. In your opinion should any of the following activities, be removed from the curriculum as optional activities, why or why not? photography, rappelling, rock climbing, kayaking and adventure article analysis do you think any of those should be removed as optional activities?

17. An initiative game "is a type of cooperative game with a clearly defined problem to be solved. The group must use cooperation and physical effort to reach a solution" (Learning for Life, 2007). A) In your program do you use initiative games? B) In your opinion, what is the value in using initiative games in a program such as outdoor pursuits?

18. In your opinion what is the value of using group debriefing in the outdoor pursuits program? (Description: Group Debriefing is an activity that is used after an activity to help reinforce learning outcomes or to discuss the events that took place in an activity in a safe and constructive manner).

19. A swimming unit is incorporated into several of the outdoor pursuits programs across the province. In your opinion what barriers do you have that keep you from offering swimming as a unit?

20. What are some of the barriers to transporting students that you face with your program? B) Can you make any suggestions as to how we could overcome these barriers?

<u>Duke of Edinburgh</u>

21. How familiar are you with the Duke of Edinburgh award? A) Do you think it would be of any value if we informed students of the award at the beginning of the outdoor pursuits course so that they would be able to complete the award simultaneously with the course?

Inclusion

22. In the original OP curriculum document teachers were allowed to use a selection process in order to allow students to participate in the outdoor pursuits program. In 2013 the government of NB has changed to an inclusionary system of education, Policy 322. As a selection process which is no longer allowed according to Policy 322. A) What are your concerns with regards to implementing this policy in to your outdoor pursuits program? B) What are your concerns about allowing students with special needs into your program? C) allowing students with behavioural issues into your program? D) What affect do you think it will have on the outdoor pursuits program?

Appendix F: International Baccalaureate Learner Profile

Inquirers	They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.
Knowledgeable	They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.
Thinkers	They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.
Communicators	They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.
Principled	They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.
Open-minded	They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.
Caring	They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.
Risk-takers	They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.
Balanced	They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.
Reflective	They give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.

(International Baccalaureate, 2009)

Appendix G: Revised Bloom's Taxonomy Action Verbs

Definitions	I. Remembering	II. Understanding	III. Applying	IV. Analyzing	V. Evaluating	VI. Creating
Bloom's Definition	Exhibit memory of previously learned material by recalling facts, terms, basic concepts and answers.	Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.
Verbs	• Choose • Define • Find • How • Label • List • Match • Name • Omit • Recall • Relate • Select • Show • Spell • Tell • What • When • Where • Which • Who • Why	• Classify • Compare • Contrast • Demonstrate • Explain • Extend • Illustrate • Infer • Interpret • Outline • Relate • Rephrase • Show • Summarize • Translate	• Apply • Build • Choose • Construct • Develop • Experiment with • Identify • Interview • Make use of • Model • Organize • Plan • Select • Solve • Utilize	• Analyze • Assume • Categorize • Classify • Compare • Conclusion • Contrast • Discover • Dissect • Distinguish • Divide • Examine • Function • Inference • Inspect • List • Motive • Relationships • Simplify • Survey • Take part in • Test for • Theme	• Agree • Appraise • Assess • Award • Choose • Compare • Conclude • Criteria • Criticize • Decide • Deduct • Defend • Determine • Disprove • Estimate • Evaluate • Explain • Importance • Influence • Interpret • Judge • Justify • Mark • Measure • Opinion • Perceive • Prioritize • Prove • Rate • Recommend • Rule on • Select • Support • Value	• Adapt • Build • Change • Choose • Combine • Compile • Compose • Construct • Create • Delete • Design • Develop • Discuss • Elaborate • Estimate • Formulate • Happen • Imagine • Improve • Invent • Make up • Maximize • Minimize • Modify • Original • Originate • Plan • Predict • Propose • Solution • Solve • Suppose • Test • Theory

Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing, Abridged Edition. Boston, MA: Allyn and Bacon.

Appendix H: Domain Specifications for Value Orientations

1. **Disciplinary Mastery Domain Sentence**: Students gain proficiency in fundamental movement, skill, sport, and fitness activities; a cognitive understanding of rules, strategies, and scientific principles associated with increased performance; and an appreciation of these in an active, healthful lifestyle.

   The curricular focus is placed on the following major concepts:

   A. Knowledge Base

      1. Students learn physical skills and activities.
         a. Students learn fundamental movements, skills and sports.
         b. Students learn exercise sequences that contribute to fitness.
      2. Students develop cognitive understandings.
         a. Students understand rules and strategies.
         b. Students learn scientific principles (e.g., biomechanical, physiological).
         c. Students learn movement concepts (e.g., body space, effort, relationships).
      3. Students learn to value and appreciated physical activity.
         a. Students value the importance of skill and knowledge in an active lifestyle.
         b. Students appreciate the role of knowledge as a necessary component of performance.

   B. Competence

      1. Students master criterion-referenced standards.
      2. Students compare their own performance to others using norm-referenced measures.
      3. Student proficiency is based on developmentally or experientially appropriate criteria

   C. The knowledge base is transmitted to each new generation of students.

      1. Students learn skills and knowledge that enable them to participate with others.
      2. Students learn skills and knowledge that enable them to participate in active, healthful lifestyles.

2. **Learning Process Domain Sentence:** Students will learn how to learn movement, and fitness content and how to use information from the body of knowledge to solve related problems. Process skills are integrated across lessons and units in systematic progressions to facilitate the learning of increasingly complex skills.

   The curricular focus is placed on the following major concepts:

   A. Learning how to learn
      1. Students acquire process knowledge associated with learning movement, sport and fitness concepts that is integrated across content (e.g. thinking skills, observation, movement analysis, utilization of feedback).
      2. Students synthesize scientific concepts necessary to explain efficient performance within and across skill, sport and fitness components (e.g., accuracy, velocity).

   B. Applying knowledge
      1. Students use knowledge and skills to solve relevant movement, sport and exercise problems.
      2. Students recognize relationships between familiar situations and new situations.
      3. Students recognize movement and fitness concepts integrated across major knowledge and performance categories (e.g., object manipulation, balance).

   C. Developing systematic learning progressions
      1. Students develop an understanding of content relationships that facilitate the addition of new knowledge to prior knowledge.
      2. Students participate in task planned to introduce increasingly complex skills.

3. **Self-Actualization Domain Sentence:** Students learn to become increasingly self-directed, responsible and independent. They are encouraged to learn about themselves as they grow and develop their own characteristics and abilities.
   The curricular focus is placed on the following major concepts:
   A. Independence

      1. Students learn to be self-directed
      2. Students participate in tasks designed to develop responsibility.
      3. Students learn to work autonomously.

   B. Individuality

      1. Students are encouraged to define their own needs and interests.
      2. Students are placed in situations where they will gain self-knowledge/self-understanding.
      3. Student develop awareness of their own unique capabilities.
      4. Students are encouraged to pursue activities consistent with their personal needs/interests.

   C. Positive student growth

      1. Growth is defined individually (e.g., knowledge, skill/fitness, personal/social development) for each student.
      2. Growth is marked by success in tasks considered to be relevant to the student.
      3. Students participate in program options designed for their own needs
      4. Students design their own programs.

4. **Ecological Integration domain sentence:** Students learn to search for personal relevance as they integrate and balance their own needs and interests within the larger social and natural environment. They use knowledge both to respond to changes in their lives and to determine their own future.

   The curricular focus is placed on the following major concepts:

   A. Personal search for knowledge that is meaningful and interesting

      1. Students participate in a variety of experiences.
      2. Students learn to identify experiences that are useful and/or enjoyable.

   B. Integration of individuals' needs with the natural and social environment

      1. Students participate in tasks that integrate individual and group goals.
      2. Students learn to apply knowledge and skill to solve personal and social problems.

   C. Balance between societal expectations, student needs, and subject matter demands

      1. Curriculum is flexible to respond to diversity within and among students and situations.
      2. Program goals focus on long-term balance, although specific situations may require emphasis on one component over others.

   D. Creation of opportunities in which to participate in the future

      1. Students begin to identify and learn to participate in activities that they consider relevant.
      2. Students acquire skills of critical questioning, decision making, and problem solving to project, modify, and extend skills and knowledge in preparation for changing lifestyles.

5. **Social Reconstruction domain sentence:** Students develop an awareness of social issues and learn skills and strategies necessary to change personal or group behaviours to create a better environment for all individuals regardless of race, class, gender, or physical ability.

   The curricular focus is placed on the following major concepts:

   A. Awareness of social needs/concerns/issues

      1. Students develop sensitivity, empathy, and respect for group concerns.
      2. Students realize the value of group goals in meeting individual needs (working for the greater social good).

   B. Students learn skills necessary to act as a change agent within and for the group.

      1. Students acquire the skills necessary to advocate effectively for self and others.
      2. Students develop insights and strategies to work collectively for social justice (e.g., questioning the dominant viewpoint, negotiation, persuasion).
      3. Students are empowered to make decisions necessary to test alternate solutions and select the best alternative.
      4. Students are empowered to create or implement change.

   C. Students learn skills and strategies necessary to create a better environment/society for all individuals regardless of race, class, gender, or physical ability.

      1. Safe environment: physical safety (i.e., freedom from violence and abuse) and emotional safety (i.e., freedom from derogatory comments)
      2. Equal access to opportunity: knowledge, learning, meaningful activity.

6. **Social Responsibility domain sentence:** Students learn social rules and norms for personal conduct that lead to appropriate social interactions of cooperation, teamwork, group participation, and respect for others.

   The curricular focus is placed on the following major concepts:

   A. Positive social interactions

      1. Students are encouraged to develop sensitivity and respect for group concerns.
      2. Students learn social and interpersonal skills necessary to engage and affiliate.
      3. Students learn social rules and norms necessary to interact with group members.

   B. Cooperation/teamwork

      1. Students are taught that group goals take priority over individual needs.
      2. Students learn the importance of personal skills/knowledge to contribute to group success.

   C. Participation

      1. Students participate in tasks that emphasize the role of individual involvement in reaching group goals.
      2. Students participate in tasks that emphasize the role of group involvement in setting and meeting personal goals.

   D. Respect for others

      1. Students learn to respect the rights of others.
      2. Students learn to acknowledge the role of authority figures in social settings.

Note: Adapted from “Domain specifications and content representativeness of the revised value orientation inventory” (Ennis & Chen, 1993, pp 438-443).

Appendix I: Outdoor Pursuits Curriculum

OUTDOOR PURSUITS 110

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1995

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and Ron McKenzie, former Physical Education Coordinator in the former District 19 now amalgamated within District 6.

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APPENDICES

Rationale

Outdoor Pursuits provides the opportunity to address growing public concern for the conservation and sustain ability of our precious natural resources, while at the same time providing students the opportunity to experience outdoor recreational activities.

Programming which provides a challenge to an individual to discover new personal limits, will be explored while providing an opportunity to develop an ecological awareness of our natural environment.

Students will become directly involved in the planning and organization of activities which will allow them to take on roles of responsibility directly within the learning environment. Further, the student will be drawn directly into an evaluation of the results of such planning to develop their leadership roles.

Students will gain a greater appreciation for the natural environment and its potential to enhance an active living lifestyle. As life expectancy and longevity increase, so too must our connection with healthy living behaviours increase, to assure our ability to enjoy nature and to recreate within nature.

> "Technology has increased comfort, reduced risk, and made many regions easily accessible, but it has also made it possible for thousands of inexperienced and often ill equipped lightweight campers to penetrate the wilderness. The dangers in this tendency are obvious. Without proper preparation, including skill development, planning and provisioning, novice canoeists and backpackers are a danger to themselves and others. A theme running through this book is: *prepare, practice and always err on the side of caution.* Technology has made lightweight camping safer, but not free from danger. In fact, the advantages achieved through technology can provide a false sense of security. Know your equipment, know your skill level and most of all, exercise good judgement."

> "How well today's campers protect the natural environment will determine what parts, if any, of our wilderness areas remain for our children and our children's children to explore during the 21st century. In most designated wilderness areas there is a carry-in and carry-out policy. Campers are expected to leave nothing behind. . . . . .. Instead of wood fires, stoves are required unless campers go fireless. The number of areas where strict regulations are in force is increasing, but the ultimate value of these restrictions will always depend on the goodwill, if

> not good sense, of all canoeists and backpackers. Strict enforcement is not possible, so self-regulation is required. Campers must accept responsibility for policing their own actions. This means teaching (children) by example, and not being afraid to constructively comment on the environmental behaviours of others in your party."
>
> - Michael J. Hatton
> Lightweight Camping: A Four Seasons Resource Book
> (see resource list)

Students will be encouraged to "take only pictures and leave only footsteps". The discovery of a new interesting world of outdoor activity will provide exhilaration for the body, beauty for the soul and solace for the spirit.

This course will provide opportunity for development of both skill and personal environmental ethics. There exists potential for those who complete this course to develop those leadership skills that will help to expose for others the joys of nature which will ultimately impact societal interpretation of the value of the natural environment.

Objectives

In general terms this course is designed to provide students with greater insight, appreciation, concern and knowledge about the outdoor environment and the opportunities that it holds for educational, recreational and economic benefit.

- Students will demonstrate a knowledge of the importance of natural resources.

- Students will demonstrate ongoing appreciation for these resources.

- Students will master the necessary technical skills relevant to the unit activities.

- Students will demonstrate appropriate safety procedures.

- Students will demonstrate outdoor living skills for future leisure pursuits.

- Students will demonstrate the acceptance of responsibility for self and for others as related to program planning and the administration of the plan.

- Students will demonstrate a willingness to accept a leadership role.

- Students will participate in an interaction between peers and with the instructor.

- Students will participate in an evaluative process related to performance, planning, implementation and roles of responsibility involved in out-tripping experiences.

- Students will demonstrate their ability to solve problems related to the course. Examples could include the areas of safety, technical skills and group dynamics.

GUIDELINES FOR IMPLEMENTATION

OUTDOOR PURSUITS 110

This course should be offered under the following criteria:

a) Outdoor Pursuits 110 be an elective course for students with a special interest in outdoor physical activity, healthful living and a respect for the environment.

b) Students be required to apply for admission to the course and applications will be screened by the Outdoor Pursuits teacher and the Guidance staff. Health and Physical Education 110 (HPE 110) is a pre-requisite. The number of students admitted to this course is limited to a maximum of eighteen.

Given the nature of the course as outlined in the previously stated objectives, students will be frequently exposed to situations which demand a high level of initiative, maturity, responsibility and dependability. It may be necessary that a selection process be put in place.

In view of the safety implications of this course, some students may not be accepted to the enrollment.

c) The course be allotted five periods per week, primarily in practical activities. This course does not require continual specific gymnasium time as the instruction and practical skills are performed in the outdoor environment.

d) Additional time outside of regular school hours will be required for some course projects. Students should be made aware of the course requirements before enrolling. Students must also be informed of the evaluation process.

e) Resource people from the school, district and the community could be used to compliment the staff.

f) Instructors must have appropriate certification where such certification is offered by a national body, to instruct an activity within this course.

OUTDOOR PURSUITS 110

COURSE CONTENT
OVERVIEW

Corn pulsory Core	Activities Do any four (4)	Options
Awareness	Hiking	*3 Kayaking
Fitness	Backpacking	*4 Rockclimbing
Map & Compass	Winter Camping	* 4 Rappelling
Group Relations	X -C Skiing	Photography
Cooking Sleeping	Snowshoeing *2	Cycling
Equipment	Canoeing	Caving
*1 First-Aid (CPR)	Orienteering	
Nature Studies		
Travel Diary		
Leadership (PR)		
Survival Evaluation		

* Teacher Requirements

*1 Must have instructors certification.
*2 Minimum requirement Level I (new system - see Appendix A).

*3 Certification is required before this topic may be included in the course.

*4 A great deal of experience is required in the setting up and use of specialized equipment.

PLANNING and EVALUATION

Evaluation is an important part of any activity and is especially important when trying to develop leadership. Students shall be evaluated on the practical application of skills learned in the course. Incorporated in this ongoing process is attention to student planning, student performance and student self-evaluation. This indicates the significance of the evaluation process and the equal importance of planning. The instructor must plan appropriate opportunities for learning and provide the student with the opportunity to benefit from, and begin to accept a role in, the course out-trip planning. The students shall be directly involved in the planning phase which makes provision for the cognitive aspects of problem-solving in controlled cooperative group activities. So too, will the students be involved in an evaluative and reflective analysis of this planning.

Evaluation of skills learned

Demonstrated ability or proficiency in specific skills.

Oral presentations and teaching sessions

This will take the form of individual presentations or being involved in approved group teaching situations. Students may present researched topics to their class peers or may make presentations to other groups. For example, students may assist in the delivery of lessons pertaining to the Lost and Found program for grade 4-6 students.

Participation projects

Out-trip experiences may take the form of 2-3 hour excursions, full day excursions, overnight and/ or weekend formal trips. Teachers will require that students satisfy commitment to and completion of combinations of major and short duration out-trips.

Due to the range of activities that may take advantage of the out-trip, a number of evaluation models will be possible.

This could involve students teaching topics to outside groups like the Boy Scouts or Girl Guides, or group involvement in community projects like planting trees, clean-up campaigns or whatever is of current local interest. Because of local conditions teachers may have to modify this requirement for their own particular situation.

Written tests

These should be kept to a minimum such as for CPR or First-Aid, and knowledge related to safety procedures.

A maximum of 20% of the final course grade will be devoted to participation in out-trip experiences. As a broad guideline, instructors may configure their evaluation model in such a manner as to devote no more than 80% of the final grade to components other than the out-trip commitment. Knowing the demands on students in their family lives, job responsibilities, involvement in school and community athletic and club ventures, there exists concern for the number and duration of the out-trip requirements. Efforts will need to be made to provide students with a number of ways to satisfy the requirements for the remaining portion of the grade.

Students will keep a travel diary. The content of such a travel diary may be personal and will not be part of the evaluation process, however, the responsibility to complete this task will be incorporated into the overall model. The instructor will read the diary and make comments but will not evaluate the content.

COURSE CONTENT

CONSERVATION

> "Whatever befalls the earth, befalls the sons of the earth.
> Man did not weave the web of life; he is merely a strand in
> it. Whatever he does to the web, he does to himself."
>
> Chief Seattle

A conservationist is one who seeks to provide for the existence of the greatest possible diversity and variety of life on earth.

Every person travelling in the out of doors must do everything possible to reduce the impact they have on the area. For example, carrying out garbage, using wood fires sparingly and carefully, if at all, not cutting any boughs, avoiding pollution of water, and not taking any souvenirs, are worthy practices.

Ecology, the study of life systems and the inter-relationships of all their components, should become a repeating theme so that students understand the functioning of various ecosystems and try to learn to fit in as unobtrusively as possible. This should include birdwatching, animal watching, bug watching, becoming familiar with trees and flowers, mosses and lichens, rocks and minerals, the water cycle and cloud formations, winds and weather.

We must be very aware that each one of us makes a difference and that we must develop a harmonious relationship with the world around us. The living systems of nature all around us reveal beauty, order, balance and an ability to repair and rejuvenate. We have much to learn.

Conservation is related to everything we do in an Outdoor Pursuits program and therefore it is a theme that carries through all the other activities. The major areas to be covered here are:

- Eco systems
- Biotic regions
- Food chain
- Water cycle
- Recovery of and repair of the environment

Discussions on the wise use and management of natural resources, environmental issues which might be current in the local area, local clean-up campaigns, tree planting endeavors, etc., are all logical areas to be included.

PERSONAL FITNESS

To be able to take part in all the outdoor activities that go along with this program each individual must have an acceptable level of physical fitness. Improvement may be required prior to inclusion in certain out-trip plans. Fitness was a major component of the course Health and Physical Education **110,** so this term will concentrate on fitness for specific activities.

A fitness test will be administered during the first week of the course to evaluate the physical condition of the students, and again prior to the end of the course. Any areas that the students need or wish to be improved, will be
-0, worked upon on their own time.

Specific activities will necessitate a high degree of fitness. As a result of the completion of HPE 110 students will posses the ability to self appraise their fitness level and may design a personal fitness plan in consultation with the instructor. As they become involved with specific activities they will work on conditioning exercises for specific muscle groups, etc., especially for activities such as cross-country skiing, canoeing and rappelling.

NAVIGATION

The skills of being able to navigate is very important for those involved in outdoor activities as it gives independence and a feeling of self reliance. With proper knowledge of how to use a compass and how to orient and read a map students should be able to choose a destination, and reach it, knowing where they are going, what terrain they are going to cover, how long it will take, and then return without needing the assistance of a search party.

The most important skill in navigating is observation. Use the eyes and ears and make it a habit to make mental notes of landmarks, the lay of the land, where waterways run, etc. Teach students to use the sun, if it is visible, as a direction guide remembering that it is constantly shifting. Remember also to look back often so that you will see what the terrain would look like if you had to retrace your path. Because of strange terrain, fog or darkness, sometimes observation alone is not enough. You must call on other resources, namely your compass and map. Like many other devices the compass must be checked before you set out on your trip before it becomes necessary to depend on it.

The Compass

The compass used should be a baseplate style compass because much of the time it is used as a protractor rather than just a compass.

Compass:
- The parts of a compass
- Why a compass works
- Which end of the needle to "read"
- How to hold a compass
- How to read bearings from a compass
- Directions or points of a compass (N, E, SW, NNE, etc.) - -
- NORTH - True North, Grid North, Magnetic North
- Bearings - The amount of turning from North or 0°
- Using a compass, face toward given bearings
- Read the bearing for a specific landmark

- Declination - The difference between true and magnetic North Maps:

- Types of maps available
- Where to obtain maps - date of map
- Scale - conventional signs - contours - terms used
- Grid references
- How to protect, fold and carry maps
- Factors that may be unreliable on a map - new roads, - logging

- Setting or orienting a map
- Describing directions
- Plotting and reading bearings

Distances:
- Step and pace when walking and jogging
- Differences that terrain makes
- Learning to estimate distance by time taken
- Estimating by sight

Related Areas:
- Going the opposite way, - back azimuth or back bearing
- Detours around natural hazards (aiming off)
- Triangulation
- Orienting maps in the field according to the lay of the land
- Alternate methods of finding directions

Planning an Out-Trip:
- Plan the route
- Estimate the time and possible problem areas
- Plan an escape route
- Check points en route to verify your position
- Who to notify before you leave and what information to leave with them
- There are a number of map and compass games available to help in the teaching of the basics of this section. If you have access to good orienteering maps of an area nearby then you could run orienteering meets for practise of the map and compass use and distance estimation.

SLEEPING

Being well rested and having plenty to eat are two of the major criteria of an enjoyable out-trip.

Site:
- Preferable out of the wind unless its insect season
- Level or close to it (check for roots and rocks)
- No dips or valleys to hold water if it rains
- Not on an animal trail
- Far enough away from a fire so that sparks are not a threat
- In much used areas use existing campsites
- Not under large dead limbs of trees
- If on a beach, be above the high water line

Tent:
- With a floor, fly and no-see-um proof screening
- Openings that zip tightly shut
- Lightweight
- Cross ventilation
- Care, maintenance and storing

Mattress:
- Air mattress
- Closed cell foam sleeping pads - ensolite
- Self inflating mattress - therm-a-rest
- Which is best for you - advantages and disadvantages
- How to carry, how to store
- Special precautions for extreme cold

Sleeping Bags:
- Shapes - rectangular - barrel - mummy
- Materials - nylon - gore-tex - cotton
- Fills - down - polyester - Polar Guard - Hollofil
- Construction - sewn through, V tube baffling, shingled
- Left and right hand sleeping bags
- Baffles around zippers and neck
- Zippers that open from both top and bottom
- Temperature rating - how low the temperature may go and still keep the occupant warm (each individual is different, some sleep warmer than others so make sure you know before you buy a bag and get it for you and the temperature range you'll be in)
- Overbags and liners
- Packing and carrying
- Care and cleaning of sleeping bags
- Storage

Bed Time:
- Change into completely dry clothes
- What you wear is a personal choice usually dictated by how warm your sleeping bag is
- Arrange the clothes you take off so tha t you can find them if you need to get up in the night - Many people put shirts, jackets, etc., neatly and flat under them
- In cold weather put your boots on either side to keep you from rolling off and to keep them from freezing
- Answer the call of nature just before rolling in
- Know where to lay hands on your flashlight
- Beware of elasticized cuffs at wrists or ankles
- Most heat loss is at the head and neck so prepare
- Make sure your breath is going outside the bag
- Make every effort possible to keep the bag dry

COOKING

When on an out-trip most people will burn up to 50% more calories than they would in normal everyday conditions, coupled with the fact that most teenagers have voracious appetites, food becomes a major consideration for each out trip. There must be plenty of it and it must be prepared so that it can be enjoyed. So long as campers are full and rested they can cope with anything. Most out-trips plan two major meals a day, breakfast and supper with trail snacks or light lunch at noon. If you have to unpack and prepare a full meal in the middle of the day it takes a great deal of time and tends to leave the participants a bit lethargic for the afternoon.

Cooking in a camp environment is a major change from using a kitchen range where the temperature can be closely controlled and you have access to written recipes and measuring devices. With practise most students really enjoy the chance to cook outdoors.

Using an open fire:

Stoves:
- Naphtha or white gas
- Propane gas
- Kerosene
- Refueling - lighting - cleaning - transporting fuel

- Using grills, dutch ovens, reflector ovens, spits
- types of fires required for each

- Boiling, baking, broiling, roasting, toasting, etc.
- Judging temperatures and cook times
- Estimating quantities and adjusting recipes
- Significance of carbohydrates, sugars, fats

Canada's Food Guide:
- Milk and milk products
- Meat and alternatives
- Bread and cereals
- Fruit and vegetables

- Foods that are ideal for out tripping
- Canned goods? - if so, what?

Recipes:
- Self rising flour for biscuits, pancakes, pizza, dumplings, cakes, etc. - Meats for out-trips
- Pasta, rice, potatoes
- Soup mixes as base for stews, etc.
- RST - rice, soup and tuna
- Spaghetti - make your own sauce on the trail
- Oatmeal porridge
- Desserts
- Condiments - sugar, salt, margarine, syrup, catsup, etc.

- Planning so a meal is all ready at one time
- One pot meals for cold or wet conditions
- Trail or snack foods
- Beverages
- New food products from the supermarket that lend themselves to out-tripping use

- Food preparation for expeditions - drying - packing
- How foods and changes in diet affect digestion
- Foods that can lessen constipation problems

Fire Lighting:

The campfire for many is the symbol of camping, it has a cheery glow to warm you and cheer you up, cook your food and dry your clothes. It adds a magical feeling to a long evening and seems to dance with the stories that are told. Now, in some heavily used areas, fires are very restricted and you are not allowed to cut any wood.

For many of the out-trips, camp stoves will be used to lessen the impact on the immediate environment, but every person should be able to start a fire under any condition and know what types of wood to use.

- How to select and prepare a location that is safe
- Tinder - what it is, how to make or find
- Which woods burn best, hard woods, softwoods
- Keep the fire small
- Special precautions when the area is very dry
- What to do under wet conditions - candles - fire starters
- Additional requirements when there is snow
- Clean up - pack garbage - leave the site better than before

When going on a hike always be prepared for whatever condition may appear. Emergencies arise at the most inopportune moments and students as the potential leaders must have thought of what might occur and be prepared for first-aid conditions, hypothermia, people falling into water, fatigue, rain and other weather conditions and such. For class discussions it is good to run through "what if" situations, simulations if you wish so that each of the students have thought a bit about any or all of these conditions.

Sanitation:

- Preparing food for safe travelling
- Cleanliness while preparing meals
- Disposing of food rem,nants
- Clean water
- Cleaning dishes properly
- Disposing of dishwater
- Keeping food safe from animal intruders

Other points to take into consideration when planning menus include:
- Personal food preferences (it's no good taking rice pudding or prunes if no one will eat them)
- Individuals diet restrictions: - religion
  - vegetarian
  - medical - diabetes, ulcer, allergy
- Weight and bulk of specific items
- Keepability - which foods to use early in the trip, which will keep - which are affected by moisture, etc. .
- Cost and availability of foods (freeze dried) - How easy to prepare on the trip

Throughout this time have the students watching for containers that would be useful for transporting food products for your portable kitchen. Containers that are seal able and leak proof.

By the time you are finishing this unit the students will probably be showing up with all sorts of products that they have discovered in their search for new ideas. Suggest that they visit health food stores, the different supermarkets, delicatessens, and camping supply stores.

Have them try making their own dehydrator to dry meats, fruit and vegetables and fruit leathers. Make up your own special trail or snack mix with nuts, fruit, seeds or whatever you prefer. Make your own chocolate or chewy bars loaded with energy.

GROUP RELATIONS

"Group harmony is seldom achieved without personal sacrifice."

This unit is primarily class discussion on why group relationships are important in wilderness situations. Discussion focuses on how these relationships are developed and maintained, how each individual must learn to cope with having to give up a bit of individual freedom for the betterment of the group, learning to recognize signs of strain within individuals or a group and steps that can be taken to relieve this.

Learning to "listen" to what others are saying so that we become aware when feelings have been hurt, etc., are important features contributing to group dynamics. Students should become familiar with those qualities to strive for in individuals making up a group going on an expedition.

Discuss case histories of expeditions that may have had relationship problems and how they were resolved or how a crisis brought the group together.

> "Leadership is the quality that transforms good intentions into positive action; it turns a group of individuals into a team."
>
> T. Boone Pickens

> "Things turn out best for the people who make the best of the way things turn out."
>
> Art Linkletter

HIKING

The hike is an excellent activity that will develop cardio-vascular fitness and muscular endurance for the legs and shoulders. As experiences and fitness develop, covering cross-country terrain will pose minimal discomfort. While hiking, purposefully afford time to enjoy the surroundings, to take pictures, to explore places such as waterfalls, underground lakes, caves, old mining areas, national parks, abandoned communities and the like. These experiences should be accounted for in the planning phase. Each time out increase the distance and the load so that students will soon be ready to head out backpacking.

<u>Footwear:</u>

- Types of boots available
    - Which sole?
    - Leather or Gore-tex
    - High cuts or low?
    - Padded and lined?
    - Laces or velcro
    - Full steel shank or not?
    - Do I want steel toes?
    - Insulated or not?
    - How do I keep them?
    - How do I dry them?

Boots are what you depend on when you are hiking. If they don't feel right when you try them on then look for another pair. All boots must be broken in, this takes out much of the initial stiffness and after they have been hot and damp they begin to confirm to the specific shape of your foot. This should be done on short trips or close to home and not on a major hike where you would probably end up with blisters if you head out with new boots.

Socks:
Socks provide padding, insulation, moisture absorption, and skin comfort.
- Two layers for padding
- No seams or patches to cause blisters
- Wool, cotton, nylon or blends
- How many pair?
- How do I dry them?

Gaiters:
Gaiters were originally designed to keep snow from entering the top of boots, many now find them helpful in wet grass so that the top of the socks don't get wet and "wick" the water down into the boot, and also when hiking over sandy or rocky terrain to keep small stones from getting in the top of boots.

Be kind to your feet, don't keep going because of "pride", if you develop a hot spot them stop immediately and treat it with moleskin or molefoam. Check for wrinkled socks, small pebbles in the boots or rough insoles.

NATURE STUDY

"From my boyhood I have observed leaves, trees, and grass, and I have never found two alike. They may have a general likeness, but on examination I have found that they differ slightly. Plants are of different families. . . It is the same with animals. . . It is the same with human beings; there is some place which is best adapted to each. All living creatures and all plants are a benefit to something."

Okute, a Teton Sioux Indian

Nature study should be a part of every out-trip. We must learn to look around us, to see, to hear, to feel, to smell and to touch. We first have to learn to look beyond our feet. One part of nature study is to learn to identify trees, plants, animals and types of rock formations.

Trees:

- Leaves	- simple or compound (how many)
	- shape
	- color
	- size
- Needles	- how many in a cluster
	- shape
	- size
- Bark	- texture - what it looks like, what it feels like
	- color
	- appearance - smooth, rough or stringy

- Shape of the tree
- Size of the tree
- Its overall coloration
- Its habitat

Animals:
- Size
- Color
- Habitat
- Sound
- Reactions

Birds:
- Size
- Color
- Song
- Flight characteristics
- Habitat

Plants:
- Flower
- Habitat
- Size
- Odor
- A use for it

Try to make a point of exposing students to different types of terrain. Emerging forests, mature softwood forests, mature hardwood forests, meadow land, rocky outcrops, wetlands and marshes.

Topics that should be discussed with observation include: producers-consumers - adaptions - food chains - plant succession - competition - territory - de composers - cycles - soil formation.

"What is life? It is the flash of a firefly in the night. It is the breath of a buffalo in the winter time. It is the little shadow which runs across the grass and loses itself in the sunset."

Crowfoot

FIRST-AID

First-aid is like having a life insurance policy, you hope you'll never have to use it, but by having first-aid knowledge you'll be better prepared to handle a troublesome or potentially dangerous situation. Students will take the
Standard St. John Ambulance or Red Cross course with special emphasis placed on conditions that could arise when out-tripping.

Each student will put together their own personal first-aid kit to carry with them on any outing, also the group will put together an out-trip first-aid kit to be carried as part of group equipment on every out-trip. The Basic Life Saver (BLS) course on CPR will be a review component of the course.

It must be impressed upon students that the key to first-aid is prevention, being in good physical condition lessens chances of injury, being smart enough not to take foolish risks, eating properly, being well prepared with clothing and rain suit, and protecting yourself from excess sun. In spite of all this injuries sometimes do occur so go prepared.

Over the next few years (late 1990's) it is anticipated that two fronts of rabies will converge on the borders of New Brunswick. One front of rabies carried
by the Red Fox which has plagued Ontario and South Western Quebec for a number of years is moving towards New Brunswick. Also, the rabies strain carried by Raccoons is converging on New Brunswick through Maine from the south. These fronts are moving at a rate of 80 - 90 kilometers per year. New Brunswick anticipates prevention initiatives over the next few years to address these signs. Instructors and students should be aware of current prevention measures, safety procedures if faced by a rabid animal and procedures for treatment of potential transmission of rabies. Updated information is available through the consultant.

PHOTOGRAPHY

Photographs are mementos of occasions and the people who shared them with us. Most people like to see themselves in photos and most enjoy taking photos.

<u>Cameras:</u>
- Instant, 35mm, SLR, video

<u>Lens:</u>
- Normal, wide angle, telephoto, zoom, macro, auto-focus

Film:
- Speed - ISO - what difference does it make?
- Prints, slides or videotape

- Light readings - how they relate to film speed

- Aperture settings

- How film speed, light meter and aperture inter-relate and which one takes precedence under which condition.

Picture composition - ideas on:
- Shapes, patterns and form
- Do you wish to create balance or imbalance?
- What angle - low, high, off to one side?
- Frame it through some nearby object?
- Well defined or fuzzy?
- Clearly lit or a silhouette?

- Flashes, filters and accessories

- Special effects - time exposures, colors, multi-exposures, etc.

Students especially enjoy preparing their own video tapes, they can be on a topic for class or nature study or landscapes or an out-trip or whatever you agree upon. Videotaping is more economical than using photographic film but both have their benefits so try to include both in the program.

SURVIVAL PSYCHOLOGY

Examining how we react to stress and fear allows us to be better prepared if we ever end up in a problem situation. These problem situations are never planned. When they happen and we are left to face them with the variables of the surroundings and the resources that are available to us the total responsibility for our lives and others lives may depend on these decisions.

The major psychological factors:

- Panic and fear
    - fear of the unknown especially after dark
    - fear of discomfort
    - fear that you may not be able to cope
- Pain as you sit and think about it - it becomes worse
    - keep active
    - keep hoping

- Cold - it becomes easier to "give up"
- Fatigue - recognize that you are burning too much energy
- Thirst - finding or conserving water is important
- Hunger - food ends up being what you think of most
- Loneliness and boredom - keep busy

Some mind sets that help in survival situations:
- "I will make it"
- "I will control my fears"
- "I have the ability to make up my mind and stick to it"

A person must be able to keep their cool, use their imagination and adapt to changing situations. A person must be able to live with themselves, and have enough pride and determination to look after their body so they return from a survival situation having used it as a learning experience.

The more knowledge you have, the more skills you possess and the more you've read about survival psychology, then the more self-reliant and selfconfident you will be. The knowledge, attitudes and skills will contribute significantly to your survival.

To succeed you must have a positive attitude, be able to tolerate discomfort such as insects or continuous rain or cold, be able to combat hopelessness, be able to control fear, pray, and keep thinking "I will succeed".

SURVIVAL

Take care of the brain first, then
it will take care of you.

The greatest problem of all will be mental. Combating the fear of your own weakness, fear of the unknown, and fear of discomfort. Survival is almost totally a head game with all the decisions of life resting upon your knowledge of what the body needs and how you must go about meeting those needs.

Survival means having a strong will to live. Survival begins and ends in ones own thinking process, keeping your head and knowing how to use it with firm discipline.

HYPOTHERMIA (exposure) is the number one killer of outdoor recreationists. It is the rapid, progressive mental and physical collapse accompanying the chilling of the inner core of the human body, and caused by exposure to cold, aggravated by wet, wind and exhaustion.
- Conditions that can lead to hypothermia
- What happens in your body

- Symptoms in you
- Symptoms in others
- Remedies - cures
- Follow up

In survival situations FIRE is a very important factor. It provides warmth, dries clothes, signals for help, cooks food if any is available and does wonders for the individuals morale. Alternate ways of starting fires in survival situations.

Another important factor is SHELTER. This along with the fire give the morale a great boost.

Types of shelters to be considered:
- Tarps or plastic
- Natural shelters
  - caves or overhanging rocks
  - base of large heavily branched evergreen
- Lean-to
- Shelters in the snow

- Methods of signaling
- Finding something to eat
  - edible plants, etc.
  - meats
  - cooking without utensils
- Your action plan
- Finding something to do to keep occupied
- Making survival equipment - augmenting clothing
  - snowshoes
  - traps and snares

It is hoped that no one ends up in a survival situation but everyone should have thought through "what if" situations and be prepared every time out so that if a situation ever does arise they take over and are in control of themselves and the situation.

Personal Hygiene:
A backpacking expedition can be a very traumatic experience for first timers, when they finally realize there is no hot shower, in fact no shower at all, that they have no place to wash their hair, and finally that they have to create their own toilet, and clean up afterwards. Stress that washing or using toilet facilities must be done well away from waterways. Students must be taught to be thoughtful and honorable in this endeavor. The same applies for washing clothes and brushing teeth make sure the soapy residue is not allowed into the waterway and that the evidence is not visible.

Essentials:
Every time you are on an out-trip you should consider having all of these essentials with you.
- Extra clothing
- Extra food
- Knife
- Matches
- Firestarter
- First-aid kit
- Map
- Compass
- Sunglasses - bright snow conditions or sensitive eyes and sunscreen lotion
- Insect repellent - depending on season or locale
- Flashlight
- Woogie trowel .
- (toilet paper is a consideration which should be discussed .within the context of environmental ethics)

BACKP ACKING

This unit is a continuation from the HIKING unit. Once you decide to stay overnight then you almost must carry your bedroom, your bathroom, your kitchen and your wardrobe with you. Now comes the backpack and the conditioning to carry the extra weight.

Backpacks:
- Materials - canvas - nylon - corduroy - gore-tex
- Daypack - full size pack - expedition pack - alpine pack, convertible travel pack
- Size and volume
- Frames - frameless - internal - external
- Hip belts - what purpose?
- Top loading or back loading
- Pockets and attachments
- Load distribution
- Proper packing
- Care and maintenance

The backpack along with boots and sleeping bag are the three most difficult items to find to fit your personal choice. The backpack is perhaps the most difficult. The shoulder straps and the hip belt must be the same distance apart as your shoulder line is from your waist line, the straps and belt must be well padded and completely adjustable. There should be compression straps so that you are able to carry a light load and have it equally distributed and not all settling to the bottom of your pack. The seams must be strongly sewn as there is a great deal of stress while trying to zip up a very full pack.

Clothing:
How much clothing is enough? How much is too much? The metabolism rate, the amount of body fat and the attitude of each individual is different so it is difficult to define what should be taken. If it's too warm you can always remove layers but if you don't have it with you then you could get very cold. Try to remember that comfort is more important than fashion.

Factors to be considered:

- Materials
  - wool - it's major advantage
  - cotton - good and bad points
  - nylon
  - piles and fleece
  - down for insulation
  - polypropylene, chlorofibre, thermax
- Layers of clothes - the great ad vantage
- Windproof shells for hypothermic conditions
- Rainwear
  - it's going to rain it always has
  - keeping as much as possible as dry as possible
- Choices
  - shirts or t-shirts
  - wool sweater or pile jacket
  - jeans, warm up pants or rain pants
  - longs or shorts
  - parka or anorak
- Head covering
  - essential in rain or cold weather
  - should be used in direct hot sunlight
- Gloves for cool weather, layered mittens for cold conditions

LEADERSHIP

"Leadership is learning to give whether you get anything or not."

"The only limitations you have are those you impose on yourself."
Dr. Leo Buscaglia

Leadership comes naturally to some and not as easy to others, we will try to learn communicative skills that might help in a leadership position. The skills needed for the particular activity are of primary importance. People tend to heed if they perceive that you know what you are talking about. These skills required are covered in other aspects of the course. Our points of concern here will include:

- Communication skills
- Difficulties which might be encountered when working with a peer group
- Learning how to cope with emergency situations
- Maintaining group control

- Learning how to control your doubts
- Analyzing histories of other leadership situations

Students should have the opportunity to teach various topics during the course, ~nd to lead groups on out-trips that they have organized and planned.

"Nature offers the chance to discover in moments of space and silence with all the variables removed, whether we have any non-sodal thoughts and feelings left, other than those supplied by the mass media or by our peer groups."

Harold Drasdo

SELF EVALUATION

Evaluation is an important part of any activity and is especially important when trying to develop leadership. Evaluation will be approached from three viewpoints: self evaluation, group evaluation, and teacher evaluation.

The students will also be asked to write autobiographically on: - My most enjoyable experience
- My worst experience
- The best part of the course
- What I liked least about the program
- What this course did for me

RAPPELLING AND CLIMBING

"At difficult moments you'll catch yourself talking to the mountain, flattering it, cursing it, making promises and threats. .. Just keep in mind, when you remember these moments later on, that your dialogue with nature was just the outward image of an inner dialogue with yourself."

Rene Daumal

Rappelling and climbing can only be incorporated into your program if you have a qualified instructor. This is a very high risk activity but one that the students enjoy immensely, it allows them to learn a great deal about their fears and limitations and overcome them in a very short time.

RAPPELLING

Equipment: -

Ropes
- hawser (twisted)
- kern mantel (sheath and core)
- Webbings - tubular or woven?
- Helmets
- Hardware - carabineers - D's, ovals, locking
- figure 8's
- brake bars
- stitch plates
- pulleys
- Footwear and clothing

Knots:

- Rope
- overhand
- bowline - one hand on self - on someone else
- in center of a rope
- figure 8
- double figure 8
- Webbing
- overhand
- ringbend or water knot

- Seat harness - with webbing
- with rope

- Chest harness - commercial harnesses

- Setting up rappelling and belay lines
- Redundant anchorages
- Check - double check procedure
- Fastening in
- Verbal commands
- Safety and rescue procedures
- Walls - overhangs - obstacles - loose rock - pendulums
- Communications
- Maintenance, care and packing of equipment

CLIMBING

Climbing is very much strength oriented and requires time for students to improve their upper body strength in most cases.

- Balance - three points of contact
- Grips - stances - leverage - chimneys - cantilevers
- Judging holds
- Use of ascenders and etriers
- Technique of climbing, traversing, and using belay lines
- Evaluating climbing faces - type of rock
  - degree of difficulty
- Knowing, learning and expanding your personal limits

"Mountains are the mirror of stone in which we see our true selves."
Gaston Rebuffet

CANOEING

The canoe is a streamline, graceful, lightweight water craft with a number of variations based on length, the shape of the canoe, its beam (width), its depth, and its fullness fore and aft. These determine how it will handle, its stability, how much load it will safely carry, the type of water it is best suited for, and the safety it will afford.

The canoeist will learn that skill and finesse will propel a canoe almost anywhere easier than trying to use muscle only. Travel by canoe allows you to quietly blend in with your surroundings. The canoe can be effectively used as a staging platform for observation.

The Canadian Recreational Canoeing Association (CRCA) has produced a set of standard tests of Achievement in Canoeing. These are the tests we will follow so that students may receive their canoeing certification depending on the level they attain.

The standards cover flatwater, canoe camping, moving water, and coastal water. These are divided into various levels with requirements for each. All aspects of canoeing are covered in this material. The instructor must have CRCA certification.

KAYAKING

Kayaking allows one to venture into conditions that would often swamp an open canoe. Kayaking is usually solo so you have no one to blame but yourself if the kayak doesn't do what you want or doesn't keep up with the group, etc.

Kayaking is a high risk activity and so all participating must strive for a very high standard of competency. The working groups must be small with all participants having already passed their water requirements for flatwater canoeing.

- Choice of craft
  - depending on your weight
  - purpose, lake, river, coastal
  - collapsible or rigid - materials available
- Equipment required
  - paddles - flat or curved
  - spray skirts - rubberized or neoprene - PFD
  - wet suit?
  - floatation for the kayak?
  - helmets
  - lifeline
- Transporting, carrying and entering
- Pool time - beginning rolls
- Basic technique
  - hand posi tions
  - forward paddling
  - stops
  - backward paddling
  - sweep strokes
  - sculling
  - draw strokes
  - rolls - beginners - advanced
  - low brace, high brace
- Rescues
  - X - rescue of another kayak
  - TX - rescue of another kayak
  - person in the water
  - performing AR from your kayak
- Reading currents
- Trip planning
- Sea kayaking the special conditions

CROSS-COUNTRY SKIING

X-C skiing is a lifetime recreational skill, anyone can take part and it is a tremendous fitness builder.

- Equipment
  - what's best for you
  - types of skiis - materials
  - sizes of skiis and poles -lengths and widths and why
  - wax type or waxless - temperatures of waxes and why
  - accessories - boots, clothing, gaiters, and hip pack
- Reading snow conditions - judging or measuring snow temperatures
- Technique
  - the diagonal stride
  - the step turn
  - the kick turn for 180 turns
  - double poling
  - ska ting
- Climbing hills - traversing
  - side stepping
  - the herringbone
  - the use of climbing skins
- Downhill
  - straight running
  - step turns
  - edge turns
- Stopping
  - snowplow
  - stemming
- Falling and getting up
- Breaking trails - bushwhacking - Skiing with a pack
- Trip planning
- Emergencies
  - repair kit
  - ski stretchers
- Conditioning for a trip
- Maintenance of equipment

X-C skiing is considered easier than walking since the feet are just slid along. We usually take a longer stride than we normally would for a step but then we let it glide while we rest momentarily. Once you are into the rhythm of skiing you can cover a great amount of distance in a relatively short time.

SNOWSHOEING

Snowshoes allow one to carry heavy loads over soft snow with both hands free. They are especially useful in getting around heavy woods.

- Types of snowshoes - different styles
- Wood, metal or plastic frames
- Natural or synthetic webbing
- Bindings - material - design
- Footwear - warm - easy on the webbing
- Walking technique
- Emergency repairs
- Practise and conditioning
- How to construct snowshoes

WINTER CAMPING

"No mortal builder's most rare device, could match this winter palace of ice."

The winter is a time of great beauty with everything shimmering under its white mantle. After a vigorous work-out outdoors in the winter time you have a heightened sensation of well being and fitness.

One problem in winter camping is that people tend to be long on enthusiasm and short on planning. Things that aren't done right under summer conditions might be an inconvenience where in the winter they might be tragic, so you must be very well prepared.

Much of the information required has been covered in other units but everything should be reviewed.

- Dangers involved - short daylight hours, frostbite, falling into water or through the ice, hypothermia, and dehydration.

- Additional equipment
  - shovel? toboggan? saw? candle lanterns?
- Clothing and footwear
  - the value of wool
  - functional not fancy
  - layers, insulation, wind shell
- Importance of maintaining even body temperature (don't sweat)
- Importance of interdependence of group in winter conditions
- Choice of campsite
  - a sheltered spot
  - not directly under a tree that may break or drop a heavy snow load
- Winter shelters
  - tents, snow holes or caves, quinzees

- Sleeping
  - completely dry clothes or none when entering sleeping bag
  - two sleeping bags or sleeping bag and blanket
  - keeping the head warm
  - not breathing inside the sleeping bag
  - cold will almost always come from underneath pad and insulating value are very important
- Fire lighting in the winter - dig to the ground or build a platform for the fire
  - carry auxiliary fire starters
  - a campfire for the long dark evening requires a good deal of wood
- Personal hygiene in the winter - keeping clean - using the facilities
- Food
  - lightweight, palatable, nourishing, filling, easy to prepare and one-pot wherever possible and plenty of it
- Menu planning using all of the above criteria
- Evening programs around the campfire
- Moving equipment
  - backpack
  - toboggan or sled
  - snowmobile?
- Travelling
  - skiis
  - snowshoes
  - snowmobiles?
- Possible emergencies
  - snowstorm
  - hypothermia
  - frostbite
  - dehydration

<u>Winter Safety Hints:</u>

- Carry a survival kit
- Keep the group together
- Travel early in the day
- Put everything away before sleep in case of snow
- Mittens are warmer than gloves
- If your feet are cold cover your head
- Carry repairs for whatever means of travel you use

TRAVEL DIARY

This is a journal, a log, or a record, call it what you will. It is a clear account of the events and conditions of the trip. As a trip leader one is expected to keep an account of the happenings, the time, the weather and so forth. In case of incident, accident or injury all events should be recorded.

Each student should keep a journal on each out-trip noting their observations and thoughts, what animals they saw, what meals they ate, what natural edibles they tried, who travelled with them, how people reacted under various conditions, what funny incidents took place, who fell in, etc. It should be a record of the activities of the group.

Carry a small notebook and pen or pencil in a plastic bag (milk bags are great) some place convenient and use it often.

PUBLIC RELATIONS

"I must do something" will always solve more problems than "something must be done".

This unit will be used to heighten the student's awareness of issues of public concern in and around their community. It will deal especially with environmental issues.

An ideal would be to have the classes participate in a community project, a clean-up, a tree planting or whatever happens to be the issue arising at your locale.

This is an important component of both leadership and group relations stressing the idea that each can make a difference. .

Guidelines For Outdoor Tripping Experiences

"Teachers who recognize the benefits of outdoor education experiences as an enhancement of the curriculum must also plan for the safety and well-being of their students when considering out-of-school experiences."

"As the inherent risk of outdoor experiences increases from school site to extended travel so should the level of planning and teacher experience. Attention is directed to six areas. . . which will assist in the planning of safe out-of-school experiences." These considerations include health and safety concerns, equipment, weather, leadership and training, first aid and administration.

Rationale

The guidelines to follow shall provide direction for school boards to develop and or review existing policies for outdoor trips involving students as a result of their involvement in compulsory courses in Physical Education (HPE 110), Outdoor Pursuits, other electives (HPE 120) local option courses or any other activities organized by the school or school board.

The purpose of this initiative is to ensure the integrity of all learning experiences as noted above by assuring that all off-site outdoor excursions conform to a basic policy for the protection of student participants, supervisors and instructors.

The guidelines shall address staff qualifications, supervisor and student qualifications, transportation and shall reflect attention to differing formats of excursions ranging from day outings, to overnight camping or multi-day travel in the outdoor environment.

It is highly recommended, that new instructors should attend a summer institute or inservice session on risk management. This is especially important prior to the incorporation of an out-trip excursion related to overnight camping, canoeing and hiking etc. within the program.

Instructors who wish to offer the elective course, Outdoor Pursuits 110, shall submit a written indication of interest to the principal. This submission shall contain updated qualifications in first-aid training, CPR training, swimming certification and other certificate qualifications. (ie. Canoe CRCA certification, National Coaching Certification Programs such as Cross-country Skiing, etc.) As indicated within the guidelines, student level of proficiency and/or certification should be taken into consideration in the planning of off-site excursions.

Policy Statements for Consideration

Rationale
Properly trained instructors are better able to provide an effective learning experience and thus ensure positive student and parental support of the program. Trained instructors also allow administrators to deal more effectively with out-trip programs.

****

Before granting approval for any excursions involving canoeing, backpacking, hiking, winter camping or other such outdoor activities, the principal shall satisfy her/his need to confirm that preparation, training and staffing for the out-trip conforms to the following guidelines. It should be understood that outdoor activity risk factors increase with time and distance away from the school and therefore training of staff leaders and student preparation are critical and should be strongly considered in extended travel/time or wilderness distance trip planning before the administration approval is granted.

* * * * * * * *

It is expected that teachers shall offer programs within their level of experience and certification.

Staff Qualifications
Section 1:1 The instructor(s) shall confirm to the principal that his/her/their qualifications and/or experience are sufficient and congruent with the aims and objectives of the activity. Specific qualifications for selected activities are outlined in Appendix A or in Section 2 below.

Section 2 Specific Supervisory Qualifications

Section 2:1 All instructors shall have appropriate knowledge in the following areas:

1. First-Aid
2. CPR
3. Map and Compass Skills
4. Knowledge of Emergency Procedures
5. Practical and Theoretical Knowledge of the specific activity 6. Other skills reflected in respective course outlines

Section 2:2 Group Supervision

Normal class instruction and extended classes which begin during the school day and that go beyond the normal time period, will be supervised by the instructor of the course.

It is recommended that each extended out-trip group have two (2) adult supervisors. At least one of the supervisors shall be on the teaching staff of the school involved in the activity.

Any supervisor not on the teaching staff of the school must be approved by the principal. The skills of this supervisor must be considered as assets that compliment the activity and not detract from them. A sample activity approval form is found in Appendix B. Further, Appendix D , an excerpt from the publication "Safety Oriented Guidelines for Outdoor Education" (CAHPER-1986), contains the leadership qualifications for differing out-trips. This resource is currently listed in the Catalogue of Instructional Materials.

Out-trip groups should be limited to not more than eighteen (18) students. Co-educational groups should have co-educational supervision where possible. If outside expertise instructors are utilized to offer instruction during a preparatory phase of the course, these instructors must be members of the supervisory team if the skills developed are central to the success and efficiency of the out-trip.

Section 2:3 Student Qualifications

Only those students registered to the school and the appropriate related course shall be participants in the out-trip.

Students must meet required fitness levels identified by the instructor and must have satisfactory prior skill development to become a participant in the performance of those skills during the activity. Parental approval may be required in accordance with the school district out-trip policies. See Appendix C.

Students must be aware of:

1. The risk potential to the activity
2. Geographical awareness of the activity route
3. Contingency and/or emergency plans and their roles 4. and adhere to policies concerning alcohol! drug, prescriptions and/or firearms

Section 2:4 Transportation

Transportation shall be in accordance with the Provincial Department of Education student transportation policy and/or existing school district policy.

Section 3 Overnight/Multi-day Trips

Section 3:1 Prior to each out-trip, the foreseeable beneficial experiences shall be evaluated for safety, environmental impact, required emergency contingency plans and the degree and level of understanding of skills required as essential for participation. This should be conducted by the instructor and supervisory team.

Section 3:2 At least one of the instructors should be familiar with the seasonal considerations of the area being travelled and should:

(a) pre-trip the route to check the reliability of maps, the location of and accessibility of camping sites, potential hazards, local seasonal problems such as black flies, rapids, fire hazards or the crossing of private land.

(b) equipment must be pre-checked and appropriately packed for travel.

(c) develop a communicated emergency contingency plan.

(d) be aware of health related information for all participants and supervisors.

(e) attain all licenses and/or required permits.

(f) file a complete plan with route, anticipated campsites and alternatives as well as an understanding of the emergency contingency plan to be put in place as required. This shall be filed with the principal prior to departure.

Appendix A

Instructors Qualifications for Day Trips or Overnight Trips:

1. Updated certification in Standard First-Aid or equivalent.

2. CPR (Basic Rescuer) Instructors Certification preferred.

3. Canoeing CRCA Level I (effective 1993-94 as currently revised and applicable. In the "old system", that Level I and II is now considered Basic. The "old" Level III is now considered Level I and is the requirement here). This requirement must be in the appropriate canoe discipline of either canoe camping, coastal canoeing, moving water or flat water canoeing.

4. Appropriate (NCCP) National Coaching Certification Program course as appropriate to course content. e.g. Nordic Level I, should out-trips require cross-country skiing.

5. Participation in a teacher inservice workshop or summer institute experiences where risk management techniques are clearly delineated.

6. Completion of a credit or non-credit university level Outdoor Education course. As this course evolves, qualifications will require successful completion of currently planned certification programs.

Note: A sample list of qualifications is provided as an example of extensive skills required.

Sample Staff Qualification Course

Course Content:

(i) First-Aid
- Treatment of wounds, burns, sprains, breaks, allergic reactions (ie. bites), choking
- Prevention of accidents
- Supplies for camping and hiking first-aid kits
- Hypothermia and hyperthermia

(ii) Camp Craft
- Camp organization
- Firemaking
- Site selection and maintenance
- Menu planning and cooking
- Selection of equipment
- Care and maintenance of equipment
- Hygiene: latrines, water purification, food shortage, etc.
- Toolmanship
- Tents and shelters
- Camping skills for adverse conditions
- Camp activities in leisure time

(iii) Map and Compass Skills
- Map storage
- Using a compass: finding a location, following a bearing
- Reading a map, map marking, use of aerial photographs
- Application of map features to landscape

(iv) Emergency Procedures
- Use of canoe as flotation device
- What to do if lost
- Emergency signals if lost or accident
- Fire prevention
- Canoe over canoe rescue
- Survival techniques: edible plants, etc. (basic knowledge of rather than practice of)
- Re-entry in deep water

(v) Canoeing and canoe tripping (Spring course)
- Philosophy of and attitude toward tripping
- Canoe strokes
- Personnel placement
- Portaging technique
- Packing
- Trip planning and organization: tripping rules, safety procedures
- Selection, care and maintenance of equipment: Canoes, lifejackets or jacket/vests, paddles, etc. (including emergency maintenance)
- Canoe handling in adverse situation
- Complete understanding of District Outdoor Education Policy

(vi) Lifesaving
- Artificial resuscitation
- Basic rules re lifesaving rescue (reach, throw, row, go, tow)
- Buddy system for water safety
- Selection and safety of water front
- Must have had valid lifesaving certification for this part of the course

Appendix B

Outdoor Pursuits Out-Trip Request Form

This form is to be used for requesting approval for all school out-trip excursions. It is to be completed by the teacher in charge and filed with the school principal for approval in advance of the date of departure. Where appropriate, copies should be referred to the district supervisor / coordinator and the office of the superintendent.

Activity_____

Out-trip location_____

Launch or departure site_____

Accommodation site_____

Departure from_____ Date_____ Time_____

Return to_____ Date_____ Time_____

Teacher in charge of the activity_____

Accompanying staff/supervisors_____

Attached is a list of student participants_____ O yes O no

This Out-trip is approved by_____
Signature of Principal

Date of approval_____

Appendix C

Outdoor Pursuits Out-Trip Parental Consent Form

Dear

Your son/ daughter_____has expressed an interest in taking part in an outdoor trip which is being planned for students in our school in relation to (course or activity)
Detailed information regarding this out-trip, including estimated cost per participant (if any) is shown on the attached page.
Students participating in school out-trips are:

(a) subject to the supervision and responsibilities of the teacher(s) in charge.

(b) subject to discipline as provided in the Schools Act and regulations thereunder, in the same manner and to the same extent as if attending regular classes.

It is hoped that he/ she will be able to participate in this out-trip and to benefit from the experience. Please complete the remainder of this form and return it promptly to

_____.

Date _____

_____
Signature of School Principal

Name of Student

Medical Information: Medicare #_____Doctor

Telephone Number of Doctor

Is this student on medication?

Does this student have allergies?

Are there other conditions of which we should be aware, specific to this activity?

_____

_____

I have read the information supplied. I understand and accept the conditions outlined in the above letter and in the attached information sheet.

I permit my son/ daughter to participate in this activity
I require further information
I do not wish my son/ daughter to participate in this activity

_____ _____
Signature of Parent/Guardian Date

_____ _____
Address Telephone (Home and Work)

Appendix D

The following list of supervisor qualifications is an excerpt from the publication "Safety Oriented Guidelines for Outdoor Education (CAHPER, 1986).

Hiking and Backpacking
Day tripping

Experience - Has at least ten days personal and/or leadership hiking and/or backpacking experience over the last five years.

Fitness - The level of cardiovascular and muscular endurance required will vary with the duration and intensity of the hike planned, but they must be well over and above that required to complete the trip. The leader must have sufficient mental and physical energy reserves to deal with any emergencies occurring at or near the end of the day.

Navigation - Has travelled the route previously and/or studied topographical map and route report and talked with reliable others who have been there within the preceding year. While pre-travel of routes is desirable, this is not always feasible or necessary.

- Based on previous experience in the area and/or map reading, can select a safe and appropriate route for the group and the time available. Is aware that maps may be out of date or otherwise in error and is prepared to make route adjustments in the field.

- Must have strong map reading and compass skills if going off-trail and/or in unfamiliar terrain.

Environmental Factors - Is aware of any potential hazardous spots along the route (e.g. -ledge walks, creek crossings, etc.), and is prepared to deal with these. (e.g. - avoidance, making hand rails or giving cautions, etc.)

Emergency Training for:

Physical Injury - Knows the ABC's of basic life support, can deal with interruptions of airways, breathing and circulation. Cardio-pulmonary resuscitation (CPR) skills are highly desirable.

- Can prevent, recognize and treat common hiking related injuries (e.g. blisters, and conditions, e.g. dehydration, sunburn and hypothermia, etc.)

- Knows how to deal with conditions specific to group members (ie. knows how to deal with an epileptic seizure, diabetic reaction or allergies if participants with these conditions are known to be present).

- Knows how to deal with hazards unique to the area (e.g.- poisonous snakes, insects, plants, etc.).

- Knows evacuation routes and location of nearest vehicles, telephone, residents and support services. Has phone numbers of support services.

Lost Participant - Has an understanding of basic search procedures, demarcation of search areas and allocation of priorities. Can assume a leadership role in organizing available people toward finding a lost member without endangering them also.

Group Lost or Stranded - If the possibility of becoming lost or otherwise delayed so as to be caught out overnight, the leader must be prepared to employ his/her available resources to shelter the group, keep them warm and set up a distress signal if necessary.

Overnight Tripping: All of the above plus:
Experience - Has spent a minimum of ten nights camping out (logged in the past five years) in the type of terrain and weather likely to be encountered.

- Has led at least five day trips in similar terrain.

Navigation - Is competent with map and compass and can select appropriate routes on maps.

Environmental Factors - Knows area's prevailing weather pattern and can recognize impending foul weather (e.g. - wind direction and intensity, cloud types, humidity changes, etc.).

Emergency Training for:

Physical Injury - Can recognize and treat exhaustion, dehydration, joint injuries (sprains and dislocations), fractures, various wounds and especially burns and scalds (e.g. - from campfires, campstoves, lanterns, candle, etc.).

Campcraft - The leader must have at least a degree of skill in shelter construction, fire building, cooking, etc., as determined by the type of camping being done (e.g. - tent versus lean-to of bush shelter, gas stove versus open fire, etc.).

- All leaders must be competent in the safe handling and maintenance of knives, axes and saws if these are to be used by staff and/ or participants.

Extended Tripping: All of the above plus:

Experience - Has camped out a minimum of twenty nights (logged in the past five years).

- Has led at least five overnight campouts within the past five years.

Navigation - Must have excellent navigationa1 skills. Is able to follow a compass bearing in darkness, bad weather or thick bush where visibility is limited.

Environmental Factors - Should be familiar with prevailing weather patterns and reasonable, accurate and consistent in predicting weather for the upcoming twelve hour period (seventy-five percent accuracy is desirable). Although environment office and media forecasts can be relied upon to a substantial degree for day or overnight trips, the leader must function as a group weatherman on longer trips where no radios are carried. Weather forecasting skills must be accompanied by appropriate leadership in dealing with the weather as it comes (e.g. - knowing when and how to avoid exposure). Weather observations and predictions should be logged.

Emergency Training for:

Physical Injury - The leader must be a competent first-aider capable of dealing with the tremendous variety of foreseeable accidents and illnesses participants may incur.

- He/she should be capable of assessing the potential consequences of foreseeable injuries and illnesses and judging when to send for help or when to evacuate an injured of ill participant.

Loss of Food Packs - The leader must know how to string food up away from wildlife and should have an emergency contingency plan to deal with the loss of one or more food packs.

Appendix E

Legal Liability and Outdoor Pursuits

Source: Outdoor Pursuits Programming: Legal Liability and Risk Management Glenda Hanna University Of Alberta Press (This resource is listed in the Catalogue of Instructional Materials.)

THE LEGAL LIABILITY OF THE OUTDOOR LEADER;

The test to determine the negligence of an outdoor leader involves five factors:

1. Determination of duty owed by the leader to the participant.
2. A breach of that established duty: the failure to meet a prescribed standard of care.
3. Actual physical or mental injury to the participant.
4. Proof that the leader's negligence was the proximate cause of the injury.
5. Evidence showing that the participant did not voluntarily assume the particular physical and legal risks associated with the injury sustained.

In determining whether the "standard of care" demonstrated by the outdoor leader was adequate, the courts would apply the "reasonable person" test. Did the leader conduct the activity as a reasonably prudent person with the necessary skill and knowledge, and did the leader properly evaluates the likelihood of injury and take appropriate steps to eliminate (reduce) this risk?

The tendency, all too often, is for leaders to gear their program to the average participant, leaving the risk level higher for the less experienced or weaker member of the group. Achieving the ultimate objective of having everyone in the group learning and practicing their skills while at optimum level of arousal (challenged but not to the point of being too anxious to learn or perform) is the mark of a sensitive and seasoned leader.

In dealing with child participants, the standard of care of *the careful parent* is still the model recognized by Commonwealth courts.

In brief then, an outdoor leader facing tort (negligence/liability) charges, would be evaluated largely on the basis of the foresight exercised in predicting the likelihood of a student being injured, in the activity being pursued, and in the manner he or she was directing it.

DUTIES OF THE OUTDOOR LEADER (AS SEEN BY THE LAW)

1. Outdoor Leader Qualifications

Instructors should have recognized experience and qualifications and should only lead/teach in their areas of competency, and at a level well below their own level of ability.

2. Risk Management

The leader has a duty to assess the real risk inherent to participation in a given activity, with an identifiable group, using certain equipment in an environment on the proposed route. Weather, chance of illness or accident and other environmental factors are all to be considered.

3. Participant Capability Assessment

It is the outdoor leader's duty to assess the individual abilities, and to know and appreciate the consequences of participation of each individual in his/her care.

> When an outdoor leader encourages a participant to perform a given task (such as paddling down a potentially dangerous set of rapids) by intentionally understating the risk and lulling the individual into a false sense of competence, the leader may be liable...

4. Navigation and Guidance

Leaders must be able to make necessary route choices, both before and during each day's travel.

5. Supervision

This refers to the general duty to oversee the participants from the time the outdoor leader assumes responsibility for them until the program is complete. Specific supervision is necessary when new skills are being attempted or when inherently dangerous activities may result in injury. The leader may instill the value of self-determined exploration, tempered with safety measures. There is a fine line between adventure and misadventure.

6. Instruction

One of the major duties is to ensure that safe and proper techniques are being taught.

7. Provision of Safety Measures

The leader must establish rules, frequently check and analyze equipment, maintain adequate supplies and plan and prepare for emergencies.

Source: Outdoor Pursuits Programming: Legal Liability and Risk "Management Glenda Hanna University of Alberta Press

Currently listed in the Catalogue of Instructional Materials.

APPENDIX F

CONSENT FORMS

The standard practice in most school settings is a PARENT PERMISSION FORM (consent form). It should be detailed and specific, however, and signed in advance of the outing. Neither the parents' nor the participant's signature releases the board or agency's legal responsibility to the participant should the leader be found negligent.

Consent forms should...

- be strongly worded.
- be brought to the attention of the participant.
- be a signed document if there is any hope of it standing up in court.
- be on a separate form (not on a registration form).
- be used frequently (not once a year, or in a "blanket" format.
- specifically list the most common foreseeable dangers and injuries that may occur.
- identify the title of the activity.

(see Appendix C)

Outdoor Pursuits Suggested Reading and Resource List

Outdoor Pursuits Programming: Legal Liability and Risk Management
- Glenda Hanna, University of Alberta Press
  Catalogue order #630010

Safety Oriented Guidelines for Outdoor Education
- CAHPERD (currently listed) Catalogue order #070210

Lightweight Camping: A Four Seasons Source Book.
- Thompson Educational Publishing
  Catalogue # (to be listed in the next issue-- order by title)

The Complete Walker: The Joys and Techniques of Hiking and Backpacking
- Colin Fletcher (Random House) Catalogue order #630110

A Hiking Guide to New Brunswick by Goose Lane
- Canterbury Tales Books and Gifts
  18 King Street Saint John, N.B. E2L IG2

New Brunswick Maps
- N.B. Geographical Information Corporation
  Frederick Square
  P.O. Box 6000
  Fredericton, N.B. E3B 5Hl

Lost and Found: An Outdoor Survival Program for Children (grades 4-6) Available through the consultant Department of Education or New Brunswick
Outdoor Recreation Council or the Recreation Branch, Department Municipalities, Culture and Housing. The program consists of a short booklet for teachers and poster for children. This resource is free and may be used by students enrolled in Outdoor Pursuits to assist grade 4-6 students and teachers.

Documents available from Alberta/Manitoba Resource Centres
contact our Instructional Resources Branch for mailing addresses (506-453-2319) - Alberta
Earthwalks: Earth Magic/Snow Walks
Earthkeepers: Four Keys
Canoeing
Orienteering I
Personal Equipment - Outdoor Pursuits Core Program
Shelters - Outdoor Pursuits Core Program
Safety Oriented Guidelines For Outdoor Education
Orienteering 11
Fires and Stoves
Navigation - Outdoor Pursuits Core Program
Nutrition - Outdoor Pursuits Core Program
Trip Planning
Canoe Tripping

- Manitoba Resource Centre as above contact Instructional Resources for addresses (506-453-2319)
Outdoor Education Resource Catalogue
Beyond the Classroom - A Guide to Outdoor Education

Basic Skills Series, Orienteering Level 1 (order through CAHPERD)
- 1600 James Naismith Drive
Gloucester, Ontario
K1B 5N4

Great Canadian Camp Ideas
- Canadian Camping Association
1806 Avenue Road, Suite 2 Toronto,
Ontario
M5M 321
Tel: 416-256-0904
Fax: 416-781-7875
or
- N.B. Camping Association Regent
Station
4-403 Regent Street Fredericton,
N.B.
E3B 3X6
Tel: 506-459-1929

Trees, (a booklet to assist in tree identification and growth characteristics) -
Department of Natural Resources and Energy
. 506-453-3711

Tourism Directorate
This source can provide promotional catalogues, brochure, etc., outlining provincial programs and services as well as listings of additional tourism sources of information.
- N.B. Department of Economic Development and Tourism
  p.a. Box 12345
  Fredericton, N.B.
  E3B 5C3
  Tel: 453-8757
  Fax: 453-7127

Available resources:
- New Brunswick Tourist Map
- Outdoor Adventure Guide
- Value Vacation Guide - Get Away and Stay
- Aim and Angle Guide
- New Friends New Values New Adventures Activity Guide - Snow Frolic

Maxwell MacMillan Canada -1-800-465-2288
- Fax: 1-800-263-7733
Distributor of Kendall/Hunt Outdoor Pursuits
(a) Cowstails and Cobras II (currently listed--Catalogue order #020260)
(b) Silver Bullets: A Guide to Initiatives Problems, Adventure Games and Trust Activities (currently listed-- Catalogue order #020290)
(c) The Bottomless Bag (currently listed Catalogue order #020270)
(d) Bottomless Baggie - Author - Karl Rohnke
(currently listed- Catalogue order #020280)

The Upper Saint John River Valley Bicycle Tour Map and Guide, available from Tourism Inquiry Services at 1-800-561-0123

Know Trespassing
- Public Legal Education and Information Service of N.B.
  p.~. Box 6000
  Fredericton, N.B.
  E3B 5Hl
  506-453-5369

Boy Scout Handbook and Field Guide
- #3229 10th Edition
  Boy Scouts of America
  Irving ,Texas, USA

- EXPLORE (Magazine -Canadian) Suite
  420-301
  14th Street,
  Calgary, Alberta TIN 9Z9 subscriptions
  are $22.42 for 6 issues

- Backpacker Magazine p.a. Box
  7564
  Red Oak, Indiana
  USA 51591-2564
  9 issues for $19.97 US funds

- Outside Magazine
  P.O.. Box 1993
  Riverton, New Jersey
  USA 08077-9293
  12 issues for $14.97 US funds

- Working Out of Doors With Young People
  ISBN 1-85202-002-4
  Bell and Bain L TD
  Glasgow, Scotland
  (currently being pursued for eventual listing)

THE TRAILSIDE VIDEO SERIES--being pursued for eventual listing in the AV Catalogue