Outdoor Education and Collaboration: Creating a Localized Adventure Learning Program

by

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BHK, University of British Columbia, 2005
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of the Requirements for the Degree of

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Abstract

By incorporating outdoor learning spaces, schools are uniquely situated to help address the psychological and physiological health concerns that may be attributed to a disconnect with nature in children and youth. Benefits of outdoor learning include three domains: cognitive, psychological, and physical. Classroom teachers report risk, cost, and time constraints as key barriers to using outdoor spaces. Cascades Adventures, a stand-alone website and Google community, uses the small-scale adventure learning framework to help address these concerns. Six guiding principles of the framework were used to build synchronous and asynchronous learning spaces that learners can use to collaborate and share media artifacts of learning. The Fraser River Basin was used to ground the project in a geographical location with water use as the primary problem. Risk management, curriculum design, and technology implementation were key areas of the project design created to alleviate classroom teachers concerns around outdoor space use.
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This Master’s is dedicated to a number of people. First my Mum to whom I am forever grateful for the love and support she showed me. I would not be the person I am today without it; mum you are forever in my thoughts. Second to my loving wife: the uncompromising support you have shown me throughout this process has been amazing. Lisa, you are inspirational and I cannot imagine how difficult it would have been to complete this Master’s without your love and guidance. Finally, to my son Alistair; leaving our world a better place for your generation is an important guide for my life and the inspiration for getting outside, enjoying our natural world and helping protect it forever.
Chapter One: Introduction

“When one man, for whatever reason, has the opportunity to lead an extraordinary life, he has no right to keep it to himself.”

Jacques Cousteau

Connection

There is a great disconnect in society today between humans and nature. This disconnect comes from the increasing ease at which we gain access to the necessities of daily life, connect with others, and spend leisure time. In today’s world we walk to a grocery store and pick up food with little thought about where it came from and how it was produced. ʻĀINA, a Hawaiian term meaning “that which feeds us,” embodies a philosophy of giving before receiving and living a sustainable life where we are understanding of how our living impacts the environment. We need to become more aware of how we live. As human existence becomes more urbanized we loose touch with the natural world. In Canada, the trend since 1851 has been towards an urban existence. According to Statistics Canada, in 1951 there was 68% of the population living in an urban environment and by 2011 that number had jumped to 81%.

A recognized term for this increasing disconnect from nature is known as nature-deficit disorder, a term coined by Richard Louv in his book Last Child in
the Woods (2008). Although this term is not to be considered a formal diagnosis of the state of an individual within psychology practice, it is a term that is meant to explain the growing concern people have with the development of youth in absence of a connection to nature. As children and youth have alternate choices today in order to connect with others in digital ways (Skype, Facetime, Google hangouts, texting, game consoles, Facebook, Twitter), simply going outside and playing with others has become less important. Richard Louv (2008) reflects on the state of our connection to nature in the form of a quote from a grade four student in San Diego, “I like to play indoors better ‘cause that’s where all the electrical outlets are” (p. 10), a quote that exemplifies the growing concern over this disconnect between the outdoors and the youth generation today.

The limited time youth spend on active play away from the school setting is usually structured, supervised time spent in organized sport or other pursuits. Play as earlier generations recall does not exist today within the youth generation as a general rule. When youth in urban centres do engage in unstructured play it is generally within fabricated ‘natural’ settings that seem sterile in comparison to the vacant lot or wooded area at the end of the street known to so many from previous generations.

The process of globalization has resulted in great connections between individuals who are widely distributed globally. The connections between individuals at this global level are not necessarily recognizable to children and youth. Toilet paper in the bathroom is just a convenience and the devastation to
Brazilian rainforests to produce that commodity is not noticed. Great adventures
to the arctic to highlight climate change on a global scale have limited impact on
youth as a result of the grand nature of the problem and youth’s limited
connection to these locations. Local environmental issues impacting daily life
become neglected due to these global issues. Youth feel inconsequential and
incapable of creating real change when issues are discussed at such a global
level. Efforts need to be made to connect youth to their local environment so that
they can recognize the profound impact they have on their local environment and
see that changes in their life choices can have positive effects. Once students
develop solid connections to their environment can we begin to look outwards
and recognize our place in a larger context. The ability to share our local
experiences with a global community is powerful and can inspire others to begin
similar changes in their local settings.

**Adventure**

Adventure is defined by the Merriam-Webster dictionary as an undertaking
usually involving danger and unknown risks. Although risk-seeking behaviour is
present in some outdoor pursuits and is important to a small percentage of
adventure-seeking individuals, the more important motivator is the opportunity to
seek unknown challenges that draw others into the environment. The history of
man provides us with many social as well as educational references to the
inherent need of humans to seek adventure and exploration.
The Alpine Club of Canada was established in 1906. A core component of the Alpine Club of Canada’s existence is to provide guided adventures to individuals. The foundational values of the Alpine Club of Canada include education within alpine environments and the intrinsic value of mountains regions to benefit the human spirit. The desire to be outside and explore was seen by alpinists as more important to the human spirit than pleasure pursuits that kept individuals inside. Montessori (1918) provides a jaded look at the creation of the student desk in the name of science and ponders the idea that the spirit of the child will become as frail and deformed as their bones due to the artificial environment that has been created in the classroom. Montessori understood the need for the student to explore and criticized the artificial world created by schools, explaining that greatness accomplished by individuals was a result of a force within the soul that drove them forward, not the trivial attractions provided within the artificial environment of the classroom.

**Outdoor Education – A Brief History**

Outdoor education began literally as education out-of-doors, meaning any educational moment that occurred outside the confines of the school building. Generally, this out-of-door education had the experience of the student as the focus. The beginnings of formal outdoor education in the United States can be traced back to 1925 in California. These ‘experimental’ programs consisted of camping trips for school students prepared by both the Los Angeles public school system and the US forest service.
Kurt Hahn, an influential thinker in the experiential education movement, began the Gordonstoun School in Scotland in the 1930’s, which led to the development of Outward Bound. Outward Bound is an educational framework where participants are required to actively participate in the expedition experience instead of being mere passengers in the experience. The design principles of Outward Bound revolve around learning through experiencing challenge and adventure in order that participants learn from success and failure in a supportive environment. The values instilled in participants today are in line with the initial curriculum emphasized by Hahn in 1934; character development, leadership, and a sense of service.

Traditionally, the United Kingdom and the United States of America placed Outdoor Education into two categories; education about the outdoor environment versus education within the outdoors. This distinction is important, as education within the outdoors has evolved into adventure-based educational pursuits while education about the outdoors is associated with environmentalism. Canada, on the other hand, has historically integrated the two concepts, linking education about the outdoors within an adventure education setting (Henderson & Potter, 2011).

In 1977, the Association for Experiential Education was born. The Association for Experiential Education is designed to provide understanding on the impact and value of experiential education as well as providing professional standards and best practices. Although not necessarily required, the Association
for Experiential Education recognizes the importance of challenge and the use of outdoor settings and nature as a key component in achieving challenge within programs.

The term outdoor-education continues to be used today in a variety of ways. It is used synonymously with adventure education, environmental education, and outdoor learning; all of which have very different meanings, but the central focus is the use of the outdoors as a tool for curriculum delivery. Adventure Education tends to focus on the social and emotional development of the individual. Environmental Education is associated with sustainability and the environmental impact people have on nature. Outdoor Learning is as close to the initial definition of learning “out-of-doors” and is focused on the use of outdoor spaces to present traditional curriculum such as Math or English.

While using the outdoors for social and emotional progress of students is an important aspect of Outdoor Education, the linkages to curriculum in order to provide justification for the setting in the eyes of administration and hesitant classroom teachers is equally important. Quay and Seaman (2013) discussed the shift Dewey saw in outdoor education from one focused on student growth to one focused on presenting curriculum, the focus of the majority of outdoor education programs in Canada today. The shift towards curriculum focus was not favourable in the eyes of Dewey, but movement away from student-centric education towards curriculum presentation has continued to be the trend until very recently. In order to convince classroom teachers to consider adding
outdoor learning to their regular practice, solid connections to the traditional curriculum need to be obvious. Additional supporting benefits may also be presented to hesitant classroom teachers that can aid in adoption of outdoor learning in their instruction practices (e.g., social and emotional).

**Adventure Learning**

The need to understand, to go beyond our immediate microcosm of reality seems to be a hardwired into our DNA. To answer the question ‘why?’ defines what we do and how we react to situations emotionally. For many of us, this idea of exploration and adventure has been realized for years through the pages of national geographic and the videography of David Attenborough and Jacques Cousteau. Adventure learning is the present day educational construct that Jacques Cousteau unknowingly began. His videos brought viewers into the largely unknown world of the ocean deep and opened their minds to the depths.

The need to expand our horizons, to seek new knowledge, and to see new places in order to have new experiences seems to be better accomplished in the physical. It can be argued that virtual experiences may allows us a similar level of exploration, but something about the senses that are engaged in a physical experience are missing in a virtual experience and detract from the overall understanding of the situation.

As youth we were constantly exploring. We sought to understand that which is foreign to us, that which is beyond the borders of our current understanding. As we were given more freedoms, we pushed further away from
home base, walking, running, and finally biking further into our environment. As we pushed the boundaries of adventure we began to understand ourselves as much as we understood the fabric of our society. Schools are capable of expanding our students’ existing knowledge through the experiences we have within the building and through the internet, but this is not as enriching as experiences provided to students outside the confines of the four walls of a classroom.

We are social beings and need to develop relationships, acquire knowledge and share this knowledge with others. Look at a group of youth at a bike park trying to navigate a new jump. Some have the naivety to proceed with youthful exuberance, unaware or unwilling to recognize the potential for personal harm. Others have learned that it is more prudent to analyze the situation, learn from other’s mistakes and advice before attempting the new skill. This skill cannot be learned simply by watching a video of others. It is a skill that requires the presence of body and mind at the site in order to engage with the environment, to learn from others and to undertake a process of trial and error. A quote from Confucius exemplifies this notion; “I hear, I know. I see, I remember. I do, I understand.” It is in the doing that humans are able to fully understand a problem and deliver solutions that fit the context of a situation. Each jump is unique; the way the lip throws your rear tire, the wind direction on that day, the surface conditions, etc. Seeing others perform a skill may prepare you, but it is in the doing that you are able to master the skill.
As a recently developed educational framework, adventure learning seeks to provide students with connections to nature using the adventures of experts with climate change as a focus of inquiry (Veletsianos & Kleanthous, 2009). The Adventure learning framework includes nine principles to guide the users, with the core of the framework being connection of individuals through an online space. A central issue (e.g., world clothing production) guides the adventure-based program. The core of the initial framework has been the use of experts in the field providing the curriculum. Personal connection to nature can be lost in this framework as the students may be provided information via the Internet in the form of audiovisual presentations instead of having the learner personally engage with the environment themselves. Recent changes to the framework allows for personal exploration within a nature setting, while maintaining virtual sharing of these adventures with others remain, alleviating the concerns around a disconnect with nature and created positive connections to local place and space.

It is the localized adventure learning concept that Veletsianos, Miller, Bradley, Eitel, Eitel, and Hougham (2012) have identified that aligns best with the intentions of this Master's project. This project focuses on the development of online spaces to support classroom teachers introduction to outdoor learning. The adventure learning framework implemented in this Master’s project will also allow teachers and students to virtually connect around a central place, the Fraser River, and a focus on curriculum-linked historical uses of the Fraser River
watershed. Scientific discovery curriculum can also be easily linked to the Fraser River for many schools that are in geographic proximity to this important provincial body of water.

This project has chosen the following adventure online learning spaces for the purpose of decreasing costs to participants, providing access to curriculum-linked resources that allow for local implementation in outdoor spaces, and allowing for online connections to others.

1. Interactive mapping technology
   

2. Website hosting for curriculum designs (www.cascadesadventures.com)

3. Online communication channels via Twitter (www.twitter.com/cascadesADV), Instagram (www.instagram.com/cascadesadventures), and Google Communities
   

Initial adventure learning (Adventure Learning 1.0) resources were collected and presented by experts in the field. The areas travelled to by these expert adventurers were not easily explored by many (e.g., Arctic Circle).

Adventure learning 2.0 (Localized Adventure Learning) has begun to use lower cost technology (iPod, Wordpress, etc.) and web 2.0 tools and we no longer need to rely on experts to be the sole content delivery model. As students and classroom teachers, we can become the experts and easily share our knowledge.
of place and space with others. The ‘expert’ knowledge that is necessary now is an understanding of the adventure learning framework, an awareness of how to help individuals connect and master essential skills, and a mastery of the technology that might be used in outdoor spaces.

In the next chapter, we identify and describe literature associated concerns around the inactivity of children and youth today, a summary of barriers to use - and benefits of - outdoor education, and an extensive review of the adventure learning framework.

Once the adventure learning framework has been shown to benefit outdoor learning experiences through peer-reviewed literature, the Master’s project will be presented. Documentation will include:

1. A website designed with helpful resources for classroom teachers. Including information such as risk management techniques associated with outdoor learning, curriculum links (e.g., social studies), and tech support.
2. A forum for sharing local outdoor adventures with other classroom teachers (Google community).
3. An interactive map to link local adventure education videos to geographic locations.
Chapter Two: Literature Review and Theoretical Framework

“Let your walks now be a little more adventurous.”

Henry David Thoreau

Learning “Out-of-Doors”

Learning “out-of-doors” is a blanket statement that today encompasses many educational terms. Although not an exhaustive list, terms such as adventure education, outdoor education, outdoor learning, adventure learning, wilderness education, wilderness learning, and environmental education are all used to describe various ways individuals engage with the “out-of-doors” within structured, curriculum-based, instruction. These terms all have slightly different meanings to the users, but are often used synonymously, both in the research literature and by practicing instructors, leading to confusion regarding the pedagogical intent of the process being discussed (Thorburn & Allison, 2010). Adventure education and adventure learning are both grounded in the concept of adventure. The term adventure is used in a number of contexts in society today including adventure travel, adventure sports and adventure therapy. Adventure is broadly accepted to be about uncertainty of outcome (Beedie & Hudson, 2003). Concepts of conflict and survival within adventure learning (Veletsianos & Doering, 2010) as well as risk-taking in adventure education (Henrickson, Doering, & Miller, 2013) echo the definition of uncertainty. Risk presents excitement in the learning environment for students. Before a discussion around
the teaching and learning effectiveness of adventure learning in particular is presented it is important to understand the reasoning behind why using outdoor education in general within schools is important. To that end, this review of literature will present a summary of youth activity levels leading to a specific discussion on outdoor activity followed by sections on barriers to outdoor education, benefits of outdoor education, and an exhaustive discussion of adventure learning as a framework to implement outdoor education within an collaborative online community space.

**Student Activity Levels**

There is growing awareness with society that youth are leading increasingly sedentary lifestyles. Play, as described by baby boomers reflecting on their childhood, is becoming increasingly absent in the current generation. The children and youth today are less active than previous generations and this is now epidemic in proportion. The Physical Activity Levels of Canadian Children and Youth (CANPLAY) showed a significant drop in the average daily steps for both boys and girls between studies in 2005 and 2014 (Canadian Fitness and Lifestyle Institute, 2014). A 2012 survey conducted by the David Suzuki Foundation found that 70% of respondents spent an hour or less a day outdoors. Active Healthy Kids Canada (2014) report card on physical activity generated an overall grade of D- for the activity levels of Canadian youth as compared to an overall grade of B to New Zealand youth. Activity for youth within the societal structures of Canada are becoming more dependent upon structured, organized,
and facility based sport rather than a focus on unstructured play. As noted in the Active Healthy Kids Canada report (2014), New Zealand, a global leader in youth activity, has initiated a campaign around adventurous and unstructured play.

![Figure 1. Percentage of Canadian Children and Youth who participate in unstructured after school play. Adapted from “2012 kids CANPLAY bulletin 4: Active pursuits during the after school period,” by the Canadian Fitness and Lifestyle Institute, 2013, p2. Copyright 2013 by CANPLAY.](image)

The New Zealand campaign resulted in relaxed safety rules within playgrounds and a resulting increase in physical activity coupled with a decrease in bullying and injury. Modified guidelines on activity levels have recently been established. Tremblay et al. (2011) has made a case for an increase to 60 minutes a day of activity and that even activity levels below recommended levels for currently inactive youth demonstrated some health benefits. It is important to establish a culture in schools of encouragement for currently inactive youth to engage in physical activity. Inactive youth lack the skills and motivation to participate in
highly structured sport-based activities so access to unstructured outdoor activity should become a focus for schools. Engaging peers and the home in participating within this unstructured activity model is also important.

![Diagram of relationships between variables affecting behaviour to participate in non-competitive outdoor activities](image)

*Figure 2. Structural model of relationships between variables affecting behaviour to participate in non-competitive outdoor activities. Adapted from “Factors related to rural young adolescents' participation in outdoor, noncompetitive physical activity,” by Christiana, R. W., Davis, M., Wilson, M. G., McCarty, F. A., and Green, G. T., 2014, Research quarterly for exercise and sport (2014), 85(4), p511. Copyright 2014 by SHAPE America.*

Youth participation in non-competitive outdoor activities are motivated by the understanding that participation is self-determined (Christiana, Davis, Wilson, McCarty, & Green, 2014). In other words, the more choice youth have the more likely they are to participate. The study by Christiana et al. (2014) determined that this feeling of autonomy is directly linked to the perceived support youth feel from parents and peers (see Figure 2). There is a significant decline in the activity
levels of youth as age increases and that gender also contributes to activity levels (see Figure 1), suggesting that targeting individuals within these at risk groups (e.g., older youth girls) is of greater importance (Canadian Fitness and Lifestyle Institute, 2014). Motivating groups who are at risk for non-participate in outdoor activities should be a focus for schools. Our society continues to structure time for youth and the time spent on exploration and adventure are declining. It is imperative to focus our energies on creating not only the space for youth to engage in outdoor exploration, but also the time and freedom to seek out nature.

**Barriers to Outdoor Education**

As outdoor activity declines in children and youth it is important to recognize the potential of schools to act as ambassadors of the outdoors. It has already been noted by Christiana et al. (2014) that perceptions of youth relating to parental and peer support are strong indicators of participation in non-competitive outdoor activities. Schools may also play a role in providing an environment conducive to participating in outdoor environments. Both perceived and real barriers to participation in outdoor activities exist within schools. Time constraints, cost, and risk all contribute to a classroom teacher’s level of comfort and use of outdoor environments.

Outdoor education experiences have traditionally been excursion style in nature, are disassociated from school based learning contexts, and lack support within the curriculum which lead to teachers who already lack the inclination to
venture outdoors to justify their continued indoor practices (Thorburn & Allison, 2010). As activity level decline is associated with an increase in age, it is important to recognize a need for increased focus on introducing children of young age to outdoor experiences within an educational context. In a study conducted on pre-service early childhood educators, subjects were presented with images of outdoor setting and these setting were ranked as most and least likely to be used for education purposes by the participants (Ernst & Tornabene, 2012). The sites most frequently chosen for use were playgrounds and pavilions within open wooded settings, while the study found that perceived barriers to use of outdoor settings for education purposes included lack of access (transportation), safety concerns, and lack of supervision (Ernst & Tornabene, 2012).

A study by Zink and Boyes (2006) determined that cost, crowded curriculum, demands on personal time, and safety were seen by teachers as leading barriers to outdoor education while the least negative impact on a teacher incorporating outdoor experiences into school was the motivation of students. A survey of Canadian youth respondents stated that work, chores, and school all impact the time available for outdoor activities and two thirds of respondents claimed access to outdoor or nature programs within their schools (David Suzuki Foundation, 2012). If students already have access to outdoor programs within schools and state that they have decreased time for outdoor activities, an argument can be made to use time in school more effectively to foster
engagement of youth in outdoor settings (curricular use, etc.).

In response to the barriers that teachers feel inhibit outdoor use, Thorburn and Allison (2010) found that access to support materials in the form of a website for teachers to “access information, risk assessment templates, curriculum linking materials, names of local contacts and other relevant information would be merited,” while Zink and Boyes (2006) research suggested that having access to skilled individuals to support outdoor activities was the most emphasized response to negating perceived barriers to participation. Creating activities that are low-risk, have meaningful connections to the curriculum, are free or low cost, and are activities which can be presented by teachers without special training will allow for outdoor experiences to be woven into the content of daily activities within classrooms (Thorburn & Allison, 2010). If classroom teachers feel using the outdoors is too daunting a task it is important to find support mechanisms to help them overcome the barriers to use (risk, time, etc.). Localized Adventure Learning may alleviate the majority of the barriers, real or perceived, teachers are facing in today’s crowded curriculum, diminishing budgets, and concerns of school systems over risk associated with outdoor education.

**Benefits of Outdoor Education**

Current research has demonstrated that there is a positive link between outdoor learning environments and higher levels of cognitive function, socio-emotional well-being, and physical health. Students who have participated in outdoor education programming have demonstrated statistically significant
improvement in leadership ability, cooperative teamwork skills, and the ability to cope with changes and that these changes are retained at a high rate within individuals (Harun & Salamuddin, 2014). It has been noted that comparative cognitive studies regarding outdoor education have been challenging to carry out (Dillon et al., 2006), but in the limited number of cases where they have been performed the research has shown improvements in cognitive skill development while students are engaged in outdoor environments in comparison to classroom based learning (Eaton, 1998; Fägerstam, 2012). While the Fägerstam (2012) study did demonstrate statistically significant gains in post-test retention during math exams from students who studied in outdoor settings, the link between cognitive performance and outdoor learning may have been an indirect result of decreased anxiety on the test group rather than direct correlation between the outdoor learning and the cognitive benefits. Research into outdoor learning has also demonstrated children’s ability to attain flow states in learning within outdoor education due to the decreased incidence of teacher interruption, which has been associated with deep learning (Waite, Rogers, & Evans, 2013). A 2009 study conducted by Charles suggested that cognitive flexibility and creativity are enhanced as a result of problem solving in natural versus highly managed settings. Price (2015) noted that attendance, a factor in academic performance in school, was improved in students with social, emotional and behavioural difficulties while in an outdoor learning program as compared to regular school days. Punctuality was also enhanced on days containing the outdoor learning
program (Price, 2015), presenting a case for incorporating traditional
curriculum components into the outdoor learning experience of youth.

While cognitive benefits are certainly an important aspect of outdoor
educational outcomes, there are a number of other beneficial outcomes to
outdoor education. Children and youth within Canada are living with mental
illness; one in five Canadians will experience a form of mental illness in their
lifetime, while over one million youth aged between nine and 19 years of age and
four million within our total population that will have to deal with a mood or
anxiety disorder during this age bracket (Mental Health Commission of Canada,
2012). In a 2011 study that exposed students to an outdoor education
opportunity, results demonstrated a decrease in psychiatric symptoms for boys
that included hyperactivity and conduct problems (Gustafsson, Szczepanski,
Nelson, & Gustafsson, 2012). A study of grade six students was undertaken to
determine whether a five-day intervention of face-to-face interactions without any
screen time at an outdoor education school would improve non-verbal cues and
the results indicated that students showed a significant improvement in their
understanding of facial emotions in comparison to students with similar
demographics (ethnicity, parental education, media use) who did not receive the
intervention (Uhls et al., 2014). Benefits to young children playing in natural
environments have been noted by Fjortoft to include better gross motor skills,
balance, and coordination compared to those using traditional playground
settings (Ernst & Tornabene, 2012). There is a link between students who
become involved in programs that introduce them to nature and an increase in time spent outdoors compared to students that have not been involved in these activities (David Suzuki Foundation, 2012).

**Adventure Learning**

As previously discussed, a number of barriers to outdoor education exist and include lack of curriculum support, cost, and risk (Ernst & Tornabene, 2012; Thorburn & Allison, 2010; Zink & Boyes, 2006), while research into implementation of outdoor education cites access to support materials and skilled individuals as ways to support educators (Thorburn & Allison, 2010; Zink & Boyes, 2006). Adventure learning is one avenue that may allow for the support of educators in their outdoor education endeavors. Adventure learning is a recent educational framework informed by four theoretical constructs; experiential learning, inquiry-based learning, authentic learning, and open-ended learning environments (Veletsianos, 2012). Experiential learning theory involves the integration of past knowledge into a process of holistic learning whereby the learner interacts with, is changed by, and creates knowledge from the environment in which they find themselves (Kolb & Kolb, 2012). Ord and Leather (2011) point out that how a person perceives changes to the environment and resulting change in an individual (knowledge) is a result of immersion within an experience, not the reflection on those experiences. Inquiry-based learning is student focused, active learning process where new knowledge is formed and students utilize inquiry to answer questions through exploration with the aid of a
teacher facilitator (Savery, 2006; Spronken-Smith, 2009; Levy, Thomas, Drago, & Rex, 2013). The facilitation of the learner can range from highly structured activities (novice learners), to student generated questions and research, and the process can range from short term activity to a more long-range inquiry process (Spronken-Smith, 2009). Authentic learning situations provide the learner with authentic activities, expert performance examples, collaboration, time for reflection of the experience, and expression of learner work, while the teacher assumes a role of coach/facilitator and provides authentic assessment of the learning (Herrington, Reeves & Oliver, 2014). Teachers in open-ended learning environments also fill the role of a facilitator, while the focus of the environment is to provide support to the learner so they can explore and experiment, problem solve and think critically about multiple perspectives on a particular topic (Hill & Land, 1998).

An initial definition of the adventure learning framework is presented by Doering (2006) as “a hybrid online educational environment that provides students with opportunities to explore real-world issues through authentic learning experiences within collaborative online learning environments” (p. 200).
Initially, seven principles were devised to guide users (Doering, 2006), while two more principles were added in 2010 to present an adventure learning 2.0 framework as currently used as indicated in Figure 3 and Figure 4.

Figure 3. Adventure Learning 2.0. Adapted from “A review of adventure learning,” by Veletsianos and Kleanthous, 2009, The International Review of Research in Open and Distributed Learning, 10(6), p91. Copyright 2009 by Veletsianos and Kleanthous.

Figure 4. Adventure Learning 2.0. Adapted from “Adventure learning and learner engagement: Frameworks for designers and educators,” by J. Henrickson & A. Doering, 2013, Journal of interactive learning research, 24(4), p399. Copyright 2013 by the Association for the Advancement of Computing in Education.
Traditionally, adventure learning has been presented within an expedition style construct with teams of experts traversing harsh landscapes and presenting media artifacts of the trip (Doering, 2006; Doering & Veletsianos, 2008; Miller, Veletsianos & Doering, 2008; Veletsianos & Doering, 2010). Recent iterations of the adventure learning framework have been used in less epic endeavors, with learning experiences resulting from smaller scale activities that were more local in nature (Henrickson & Doering, 2013; Hill & Mills, 2012; Miller, Hougham, & Eitel, 2013; Veletsianos, 2013). Research on the implementation of the adventure learning framework has delineated into a number of categories: motivation, engagement, narratives, adventure, and collaboration.

Motivation. Improvement in student motivation should be viewed as a positive result of any learning environment. Student motivation has been shown to increase as a result of adventure learning implementation in learning environments (Doering, Scharber, Riedel, & Miller, 2010; Moos & Honkomp, 2011). The self-determination theory is a theory of motivation based on three universal needs (competence, relatedness, and autonomy) and when these needs are met individuals function and grow optimally (Deci & Ryan, 2008). Moos and Honkomp (2011) argue that adventure learning satisfies all three needs within the self-determination theory as follows:

**Autonomy:** encouragement of problem solving via facilitation of independent thought and promotion of student initiative.

**Competence:** mastery and control of environment
**Relatedness:** collaboration within environment satisfies belonging

In the study by Moos and Honkomp (2011), a statistically significant increase in all Motivated Strategies for Learning Questionnaire (MSLQ) intrinsic motivation subclasses were seen, and students showed feelings of success (competence) and that they wanted to learn and go to Africa (intrinsic motivation). Limitations in the research of learner motivation within adventure learning result from a limited body of research as well as the difficulty in separating the novelty factor of adventure learning from the actual learning environment (Moos & Honkomp, 2011). In the Doering et al. (2010) study, 90% of respondents commented that the connection to the sled dogs was what motivated students to use the online space in the adventure learning framework and over 80% of teachers stated that dogs were the common discussion by students outside the classroom.

**Engagement.** Student engagement has also been a key component of the body of adventure learning research. A qualitative study of 110 grade four and five students noted that the ability to share, interact and create something relevant to their lives as well as the variety of components online (photos, video) contributed to both task persistence and focus (cognitive engagement) while 77% of the respondents said that they either learned more or had more fun with this project than others they had completed in school (emotional engagement) (Henrickson & Doering, 2013). Adventure is seen as an important component of the motivation of learners. Adventure immerses learners in the entire experience
and is a key motivator in the student’s use of the online environment outside of class time to see what happens next in the narrative (Henrickson, Doering & Miller, 2013). The multiple learning engagements that are part of Adventure Learning made engagement in the learning possible through multi-media (video, pictures, online games) and participation in chats and the open-ended learning experience (collaboration zones, chats, trail reports, Web 2.0) allowed for students to engage by any means they found interesting (Veletsianos & Doering, 2010).

**Narratives.** Narratives have typically been presented by the expedition team within the adventure learning framework. Students in a 2010 study by Veletsianos and Doering describe the excitement they felt in following the trips by detailing the uncertainty, conflicts, survival, and bravery demonstrated throughout the excursion and were very excited to read the updates that were posted every Monday morning while also expressing a sadness for the experience to end, noting that they wanted to “continue following along.” The fact that the team did not say goodbye at the end did not provide a sense of closure to the students and resulted in a modification of the expedition final trail report in subsequent years to include thanks and farewell messages from the team. The ability to provide narrative to the learning experience provides purpose, continuity and coherence and Veletsianos (2010) describes a research situation where multiple pieces of the experience were tied into a uniform whole via establishment of a sequence and storyline. Narratives can also be provided by students involved in
the adventure learning programming. In a 2013 study by Miller et al., a template was created called the trail report that captured the day’s experiences from the participants perspective which became a useful reflective tool, provided individualization, and acted as a procedural tool as well while also providing teachers with a formative assessment tool and reinforced a culture of inquiry with the students.

**Adventure.** Risk and adventure has been decreasing in the lives of children and youth. The current parent generation spent more time outdoors than current children for many reasons discussed previously. Although as a society we have improved risk assessment and management procedures and practices, the result has been a very risk-adverse population, resulting in limitations of essential learning and development due to a decrease in physical activity (Tremblay et al., 2015). Adventure can provide both cognitive and social benefits to the participant. Adventure appears to help students gain an understanding of the global context with students noting that they understood remote locations and cultures better as a result of the learning experience (Henrickson, Doering & Miller, 2013). Teachers also commented on a desire to be part of the learning community as a result of the adventure aspect of the experience and the perception of the learners’ excitement in the adventure (Henrickson, Doering & Miller, 2013). Veletsianos and Doering (2010) suggest that to create effective long term learning experiences to sustain interest and intrigue, environments designed with intrigue, tension, fun, excitement and interaction need to be
integral aspects of the learning. In other words, designing uncertainty in the outcome (adventure) is important to keep the interest of the learner. The uncertainty involved within outdoor adventure is important. Children and youth who engage in situations involving risk show many benefits, including risk detection and evaluation, increased self-esteem, a decrease in the sensitivity to conflict and better risk-management strategies (Tremblay et al., 2015). A quantitative study of Scottish students aged 10-12 years determined that as a result of an outdoor adventure program, participants showed significant improvements in personal and social development (Scrutton, 2015). Although there may be more structure to the adventure learning format than typical outdoor adventure programs, the inquiry-based and place-based nature of the process allows for more integration of adventure than typical school programming would allow.

**Collaboration.** Collaboration is a central theme in the adventure learning framework. Interaction between peers in outdoor active play leads to learning through children and youth seeking to understand the space and the innate curiosity about the natural environment they find themselves in (Tremblay et al., 2015). Collaboration was a strength identified by one teacher due to collaboration being a well integrated aspect of the adventure learning framework rather than an add on scenario (Veletsianos & Doering, 2010). An adventure learning STEM (science, technology, engineering, and math) integration program aligned with indigenous knowledge constructs by Miller et al. (2013) presented research that
students thrived when the collaborative opportunities were realized between students, teachers, and knowledge keepers. Overall student experience was enriched based on evidenced from improvements in personal projects of students after the collaboration occurred (Miller et al, 2013).

**Creation and implementation of the adventure learning curriculum.**

Curriculum design must be carefully examined in order to provide a scaffolded learning experience in conjunction with inquiry and problem-based pedagogy so that learning becomes participatory and individuals immerse themselves in authentic practice (Veletsianos, 2013). Linking of the curriculum to localized exploration has been shown to be a key part of the success of adventure learning programs (Miller, et al., 2013).

Implementation of the adventure learning framework within individual classrooms differed dramatically. In one study, the percentage of classrooms that integrated adventure learning was highest within the elementary system (90% between grades K-8) and specifically within the social studies content area (34.9%), while most teachers used that adventure learning project as an enrichment opportunity (47.3%) and only 6% of 21 total phone interview respondents used the project as a replacement for their current curriculum (Doering et al., 2010). Teachers use the same online environment in different ways. In a pilot investigation into implementation of the adventure learning program, some teachers used iPads and had students view trail reports
individually while others viewed the content as a group (Miller, et al., 2013).

Another study suggested a benefit of the curriculum design of adventure learning in the form of three levels of integration (experience, explore, expand) was shown to provide flexibility for implementation and is seen as a benefit by teachers (Veletsianos & Doering, 2010).

The use of phenomenological inquiry\(^1\) to assess adventure learning presented researchers with a practical guide to implementing mini-AL (or mini-adventure learning) environments as presented in Figure 5 (Miller, Veletsianos & Doering, 2008).

\begin{itemize}
  \item [1.] Define the issue or problem.
  \item [2.] Identify the geographic location and populations related to the problem.
  \item [3.] Develop curriculum that addresses the issues.
  \item [4.] Explore the locale.
  \item [5.] Share the collected data
  \item [6.] Collaborate with students in the classroom and online.
\end{itemize}

\textbf{Figure 5.} Small Scale Adventure Learning. Adapted from “Curriculum at forty below: A phenomenological inquiry of an educator/explorer’s experience with adventure learning in the arctic,” by C. Miller, G. Veletsianos, and A. Doering, 2008, \textit{Distance Education}, 29(3), p266.

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\(^1\) Phenomenological inquiry is the concept of determining the universal essence of a concept from individual lived experiences, while Moustakas’ bracketing technique attempts to sets aside the experiences of investigators in order to provide a fresh perspective (Creswell, 2007).
Traditional expedition-style adventure learning frameworks are being replaced by smaller scale programs due to the availability of Web 2.0 tools that allows for the implementation of adventure learning. Technology and social media in particular has enabled students to have meaningful interactions between other learners and experts and learners can follow the events of professionals (experts) in real time which allows them to have vicarious experiences via the professional and this connection can heighten the learning experience (Veletsianos, 2013). These small-scale adventure learning programs allow the learner to immerse themselves in the learning environment instead of gazing from the outside, creating more meaning in the learning (Hill & Mills, 2013). In a new enactment of the adventure learning framework entitled AL@, pilot programs were studies to understand how local adventure learning programming could be implemented (Miller, et al., 2013). Technology challenges discussed included the ability to build in collaborative and interactive components and that it was important to recognize what technology the local educational institute supported.

A website host (Wordpress) and other media tools used for the programs were chosen for their low cost and ease of use (photos – Lightroom, video – Handbrake for compression and Vimeo for hosting). Miller et al. (2013) also discussed the importance of incorporating authentic narratives and created a template called the trail report that captured the day’s experiences from the participant’s perspective.

While traditional adventure learning programs are typically situated inside
classrooms, emerging uses of the adventure learning framework has students moving into outdoor spaces. It is important that educators discuss the purpose for the outdoor learning so that the experience does not become a reiteration of the traditional learning environment of the school, but is transformed into an authentic learning experience (Waite, Rogers, & Evans, 2013). It is also important that connections to the curriculum are made and even activities presented before excursions in order to support and provide more meaning to the outdoor activity (Dillon, et al., 2006). A journey to engage in physical locations can promote further interactions with individuals involved in distance education and location can be very important to students (Hill & Mills, 2013). Students come to “own” their learning experiences as evidenced by intimate knowledge of the geographical place and people associated with the adventure learning program (Veletsianos & Doering, 2010). The use of mini-AL programs that situate the learning within localized spaces can take advantage of student ownership over location in such a way that students gain an appreciation for place (Veletsianos & Doering, 2010). A goal of any adventure learning environment is to generate critical thinking within the learner in order to engage them in an issue and inspire them to find local and global solutions to that issue and the adventure learning environment www.we-explore.com is available for user-driven adventure learning implementation (Henrickson, Doering & Millar, 2013).

Screen time in the form of online activity has been linked to a decrease in the amount time children and youth spend outdoors. As the current generation
has increased sedentary pursuits, health concerns have arisen regarding their
current and future physical and mental health. Schools find themselves in a
situation to help children and youth reconnect with outdoor spaces, but there are
some barriers that exist in the school setting (cost, time, risk) that may contribute
to classroom teachers adopting outdoor learning environments into their teaching
practices. Adventure Learning 2.0 is a framework that can create curriculum links
so that we can harness online environments in order to create meaningful
connections to outdoor spaces within our classrooms. The Thorburn and Allison
study (2010) determined that teachers require materials to support
implementation of outdoor learning in the form of curriculum links and templates
for risk assessment. The following chapter outlines a localized adventure learning
project that provides links for current curriculum to be implemented in outdoor
spaces as well as providing classroom teachers with tutorials for implementation
components of the adventure learning framework. Sections of the website
component of the project will also provide classroom teachers with practical risk
assessment guidelines in order to present a safety package to parents and
school administration.
Chapter Three: Small-Scale Adventure Learning Project

“One day’s exposure to mountains is better than cartloads of books. See how willingly Nature poses herself upon photographers’ plates. No earthly chemicals are so sensitive as those of the human soul.”

John Muir

Connecting With Nature

Youth and adolescents are becoming less engaged in the outdoors. The term “Nature-deficit-disorder” was coined in an attempt to explain the resulting conditions seen within individuals suffering from lack of interaction with nature (Louv, 2008). Education settings are an avenue to increase the time youth can be outside. Time constraints, fear of increased risk, and cost are all documented reasons why classroom teachers are not utilizing outdoor spaces in their current practices. As a result, the research focus for this project sought to determine a way of presenting the outdoors to students in a way that focused both on the outdoors, adventure, and technological interaction, while providing support for educators that minimized the fears associated with using the outdoors as a learning resource. Adventure learning is a framework utilizing technology to engage individuals in connecting both with nature and other persons via various online sources (web 2.0 utilities, synchronous web chats, non-synchronous
communities, video, etc.). The Master’s project that is highlighted here has been created using the adventure learning framework. The traditional adventure learning framework has nine principles guiding the design. The traditional adventure learning framework was based on nine guiding principles, but the focus was on experts in the field presenting material for engagement of classroom learners via extraordinary expeditions (the North Pole as example) and physical interaction with the outdoors was not central. More recently small-scale adventure learning utilizing six guiding principles as the design for the framework has allowed everyday classroom instructors to engage with outdoor spaces that are local in scope.

**Six Guiding Principles of Small-scale Adventure Learning**

**Define the issue or problem.** Water use and access have great impact on the world’s population. Although blessed with easy access to water in Canada, the recognition by children and youth regarding how local use of water, both historically and currently, along with the impacts humans can have on water ways is an important issue. Providing opportunities to investigate this issue in a localized setting is a unique perk schools situated close to the Fraser River Watershed have. The issue of connecting human action to watersheds was a logical fit for the adventure learning project developed.

**Identify the geographic location and populations related to the problem.** The identification of the geographic location, the Fraser River watershed, was an easy determination to make (Figure 6). The populations
related to the problem have less concrete borders. Primary population are those that live in geographic proximity to the Fraser River itself. School populations with easy access to the Fraser River were defined as those buildings that can access the river via a short (less than 30 minutes) walk. Secondary populations would be those that are impacted by economic activity. Secondary populations were not a focus of the adventure learning design in this project. Utilizing Google maps, a virtual fly-over of the river was performed to assess the communities that landed in the proximity zone. Searches of the school district websites associated with these communities provided school locations within the communities. Schools were then added to a customized Google map. Elementary schools and secondary schools were created on different layers for clarification and ease of use.
Figure 6. Home page.
http://www.cascadesadventures.com

**Develop curriculum that addresses the issues.** Social studies curriculum was designed around understanding the importance of the Fraser River watershed in the history of the province from an Aboriginal as well as European immigrant perspective (Figure 7). The use of the Fraser River as a teaching resource for science exploration (Figure 8) has also been addressed in the curriculum development. Economic impact was less of a focus of the curriculum design. Four sample adventures were created in order to demonstrate the capability of the adventure learning framework.
Social Studies Adventures

First Peoples of the Fraser River Basin

The Fraser River Basin is the traditional ground of many First Nations groups. Although diversity existed between these groups (language for instance), traditional land use and food were very similar. Use the information below to explore the traditional use of the Salmon, a very important cultural and economic part of First Nations of the Fraser River Basin.

- Salmon Fishing
- Yale First Nations
- Teacher Support Documents

Take a journey back in time

The Fraser River has many historical uses. Travel back in time as a prospector travelling from the mouth of the Fraser to the outpost of Hope during the gold rush of the 1800’s. Read the background information contained in the article below and watch the video before embarking on your adventure to the edge of the Fraser River near historic downtown Hope.

- History of Hope
- Paddlewheeler Video
- Teacher Support Documents

Figure 7. Social studies curriculum page.

http://www.cascadesadventures.com/#!socials-curriculum/pulxu
**Science Adventures**

*Water Velocity and Volume*

Do you ever wonder just how much water is rushing by you as you sit down on the banks of the Fraser River? While the volume and velocity of the water will change at different times of the year and in different parts of the river, you can estimate the volume and speed of the river using simple math.

- Velocity Calculation
- Flow Rate Activity
- Teacher Support Documents

**Human Impact.**

I'm sure you have walked along a river before, but have you paid attention to what lives by the river? The edges of a river can be the home to many different living things, from plants and animals near the water to the many fish species in the water and birds in the air that all rely on the river. Unfortunately, humans can impact what lives here in a very negative way. Watch the video below to find out one way we are harming these sensitive riparian zones.

- Illegal Dumping
- Teacher Support Documents

*Figure 8. Science curriculum page.*

http://www.cascadesadventures.com/#/science-curriculum/nyhja

**Explore the locale.** The focus of the project was designing of the material and instructor support. Specific exploration of the Fraser River watershed is a logical next step and would be undertaken by individual classrooms in the future.

A video was created as a walkthrough of the website that took place in the Fraser Canyon and geotagged at the entrance to the Tikwalus trail as an example video for the program (Figure 9).
The following videos were shot by the Cascades Adventures crew. They offer an introduction to Adventure Learning on the Fraser River of British Columbia. As you begin to create your own videos, please link them into the interactive google map. Information on how to do this is found in the resources section.

Figure 9. Sample video of adventure learning.
http://www.cascadesadventures.com/#\video/c1tws

Share the collected data. Systems have been designed to share the collected data that will occur by future classrooms. A Google community has been established in order for learners to present data. Instagram and Twitter accounts have been established to disseminate information. A multi-layered Google map (Figure 10) has been created with initial layers designed to provide information regarding school location. Video data from small-scale adventure
learning programs can be submitted to one of several layers on the map corresponding to history, science, or economic activities presented.

Figure 10. Adventure learning – Fraser River interactive Google map.
http://www.cascadesadventures.com/#!map/c157m

Collaborate with students in the classroom and online. The most important aspect of the project design to facilitate collaboration is the Google community. With this space, learners can engage both synchronously (Google hangouts) or via updates posted to the community board (Figure 11). Although individual learners can collaborate within single classroom, the power of the Google community allows for learners situated in geographically distant schools
to communicate and share the learning with each other.

Figure 11. Home page for the Google community.
https://plus.Google.com/u/0/communities/114781482742988191619

Teacher Support

A key component of the project was creating support systems for teachers to implement the adventure learning framework. Three different areas of focus were employed in order to achieve this: curriculum design, technical support for technology use, and risk management support for teachers who have yet to take students outside or feel uncomfortable in doing so.

Curriculum design. Although adventure learning can be implemented with any area of curriculum study, two areas align themselves well and were the focus of this project: science and social studies curriculum.
http://media.wix.com/ugd/281c43.dbd4fbcfe0894e5bb14e0c5b3f2e8880.pdf
The short-term goal of the project was to create a limited number of curriculum activities in each area of study in order to demonstrate the concept of adventure learning. The long-term goal of the project is to allow classroom teachers to add activities to the community in order to grow the wealth of information. Specific activities within both science and social studies curriculum were created along with teacher support documents to aid in the implementation of both classroom activities and outdoor adventures. Both generic, non-geographically specific, activities were created around rivers and streams in general that can be used up and down the Fraser River Basin as well as activities specific to local, geographically specific, areas such as Hells Gate and the Fraser Canyon. One accompanying document of specific importance was the adaptation of a trail report that can be used with any outdoor activity. The trail report (Figure 12) is a document that students can use to summarize the learning experience that has taken place in an outdoor adventure activity.

Technical components. A number of different technical aspects of adventure learning are employed in this project that classroom teachers may or may not be confident in using or for which they may have limited exposure. Having said that, every effort has been made to choose platforms or devices that are easy to use, have free access, or have minimal cost to purchase. The following is a description of each device or platform along with how it can be used as an aid to implement the adventure learning framework.
The Google community has been designed as the central sharing platform (https://plus.Google.com/u/0/communities/114781482742988191619). Since Google platforms tend to be ubiquitous in today’s classroom (Google docs, Gmail, Youtube, etc.), it was a logical choice for implementation of both asynchronous community sharing as well as synchronous engagement of classrooms via Google hangouts. A Google document FAQ link was made available to interested classroom teachers via the Cascades Adventures website (https://support.Google.com/accounts/answer/27441?hl=en) that, through easy step-by-step instructions, allowed for teachers to set up a Google account in order to gain access to the Google community.

There are many devices that have cameras as standard equipment. Apple devices are not better or worse than other personal devices from other companies (Sony, Google, Samsung, etc.), but as many individuals currently own Apple devices and they all work in the same way, they were chosen as the focus for the video component of the technical implementation part of the project.

iMovie comes standard on any Apple computer, so there is no cost involved in the implementation of this software. Windows Moviemaker is an alternative if individuals are restricted to PC devices in the school, but iMovie convenience of export to social media platforms (Youtube, Vimeo) and simplicity in the editing platform made it the clear choice and the focus software for movie production in this project.
A central gathering space was necessary for this project. There are other sites that are available (e.g., https://we-explore.com), however, there were several reasons why a stand-alone website was created for this project. Creating a website from scratch allowed the project to include all relevant material and could adapt to the needs of the project easier than fitting a mould standardized to multiple users. The developer could add content easily and the type of content could be moderated closely.

**Risk management.** Research into why classroom teachers do not engage youth in outdoor activities has shown that teachers are quite risk averse and see the outdoors as a potential risky endeavor. In order to help alleviate this concern, a section of the *Cascades Adventures* website devoted to risk management was created. A frequently asked question section was added to the website as an initial ease the fear tactic (Figure 13).
Checklists were designed so that classroom teachers who were new to excursions felt more at ease with going outside and had a tool to decrease the number of items forgotten for particular outings (Figure 14). A parent consent form (Figure 15) was also created for teachers either as an example of what to add to one currently in use in their school, or as a stand-alone document if there was no current form.
Teacher Checklist - Walking or Day Trip

This checklist covers suggested components for safely engaging students in an outdoor walking field trip. There may be other formal expectations at the school and district level that are specific to your school district. Please seek out further details from your district regarding field trip requirements.

1. Permission Forms Returned to Office

2. Pre-walk route and area to be used for class. Eliminate or minimize any safety hazards that are present within your desired location.

3. Safety Talk with Class
   - Maintain group contact
   - Appropriate footwear and clothing
   - Expectations: What do you want students to achieve during the trip

4. Equipment check to ensure everything is prepared
   - First Aid Kit is stocked
   - Batteries charged (Cameras, iPods, etc.)
   - Clipboards
   - Two-way radios

5. Trip Plan filed with Administration

6. Weather Check

7. Group List with pertinent medical needs listed

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Figure 14. Day trip teacher checklist.

http://media.wix.com/ugd/281c43_ce8c7e109fce446ab332924faaca7cb.pdf
Informed Consent Form

Your student has the opportunity to engage in an outdoor educational field trip. The content of the trip will allow for your student to experience nature while learning about concepts we discuss in class.

Destination:

Distance:

Duration:

Risk Management Considerations: Our outdoor program makes every effort to provide quality programming that meets learning objectives and manages the risks posed in outdoor settings. Careful consideration is given to the size of groups, adult to student ratios, types of activities undertaken, equipment used, terrain selected and instructors’ decision making. There are, however, inherent risks involved in outdoor activities. These include a host of factors ranging from environmental (weather, terrain, animals, etc.) to human actions and inactions, and include the risks involved in transportation to and from the excursion. It is important that parents understand the types of activities their children or youth will be participating in and acknowledge the risks associated with these activities. If you have any questions or concerns, please seek clarification from your student’s school, the outdoor program leader or from outside sources.

You are required to review and sign this Parental Permission Slip. Do not do so until you have read the program proposal in full. You do have choice and it is acceptable for you not to offer consent for all activities.

Trip Details

Parent/Guardian Signature: ________________________________

Figure 15. Parent informed consent form.
http://media.wix.com/ugd/281c43_ef05cd4eb0974e06a3074cb468384125.pdf
It is understandable that teachers who have never taken students into outdoor settings in order to participate in adventure education or for curricular ends to be unsure where to begin. Equipment is an essential component of both the teacher’s comfort level and students safety and enjoyment of the experience. Along with an equipment checklist for excursions, a simple equipment help zone (Figure 16) was established on the website to address some areas that teachers may not initially recognize as important before venturing outside. Combined with the consent forms and checklists, the information provided on the website should both alleviate some initial concerns of classroom teachers regarding the risk factors of outdoor education and provide clear steps to limit the risks associated with outdoor learning spaces.
Equipment Help Zone

Video Capture Equipment
There are so many different types of video capture technology now that it can seem daunting to choose a camera that will work for you. We suggest using iPod/iPhone as a simple tool that will take good quality footage and be able to easily edit within the device using iMovie software. You can upload straight to YouTube without the use of a computer.

Video Editing Software
iMovie is a very easy and cost effective tool to edit your footage. You can use it on an iPad, iPhone or iPod, or use a desktop computer to edit your footage.

First Aid Kit
There are some great pre-packaged backcountry first aid kits and they come in well thought out containers. This is a great starting point and you can add specific equipment they are missing (e.g. pens, etc.).

Personal Outdoor Gear
This will be very personal. If you are starting out and have little in the way of personal equipment, but you are excited to get outside both personally and professionally it is suggested that you choose equipment that will last and keep you dry and warm. It will set you back a chunk of your paycheck, but being comfortable outside will pay dividends in the long run.

Figure 16. Equipment help zone.
http://www.cascadesadventures.com/#/equipment/eltpb
Chapter Four: Reflections

“Like, if you try be less and do less, that’s not progression, you’re not moving forward, you’re basically just slowing down. I don’t think it’s about doing less, I think it’s about doing more. It’s about being more creative, it’s about being more active.”

    JP Auclair

Project Summary

The project summarized here is a representation of research into adventure learning and the barriers to the implementation of outdoor learning spaces by classroom teachers. The initial adventure learning framework was expert generated in nature and had little focus on using outdoor spaces for experiential learning. As a result, the newly defined small-scale adventure learning framework created by Miller et al. (2008) utilizing six guiding principles that included exploring the local, was used as the basis for the creation of the project. The foundational place that was chosen to ground the project was the Fraser River Watershed, a significant cultural, historic and economic waterway in British Columbia. There are two separate, but interwoven areas that were produced for this Master’s project.

The website (www.cascadesadventures.com) is the first component of the project. A user-friendly online web editing tool (www.wix.com) was used to create a space teachers could access in order to:
1. Gain knowledge of technology (videography, Google+ help, outdoor equipment, etc.),

2. Implement the Adventure Learning framework,

3. See sample curriculum, and

4. Acquire risk management procedures for outdoor learning environments.

An interactive map was also generated (maps.Google.ca) and embedded into the website. Teachers and students can geotag video generated while at adventure sites during class experiences and share those experiences. Others users can view video of local or geographically diverse areas and use them to generate ideas of how to implement an adventure learning experience themselves.

The second component of the project uses online spaces to share the experiential learning to come. A Google community was formed to in order to provide both synchronous (Google hangouts) and asynchronous platforms to share learning. Individuals or classrooms have the opportunity to upload various media artifacts (e.g., video, still photos, audio, etc.) so other community members have the ability to share in the learning experience. Twitter and Instagram feeds were generated to further engage and interact with learners online. The experiences that are shared to the Google community or through the website can be disseminated to a larger audience through the Twitter and Instagram communities creating a greater impact from the initial learning experience.
The freedom of information and protection of privacy act (FIPPA) requirements are presented to users, both on the website and as a requirement to join the Google community. Making FIPPA information available is a necessity of the online spaces as potential information and likenesses of vulnerable youth may be shared on the platforms implemented in this project.

**Growth**

I entered the Master’s program with little recognition of the journey that would take place. The outcome, a piece of paper, was the goal I proceeded into the first course with. Little did I know how the two and a half year adventure into deeper understanding of education would change my personal and professional beliefs and actions to the extent it has. I have affirmed many of my ideals, while altered others with regards to education, in the end the confidence to share these ideals with others is what this adventure into educational understanding has taught me.

An important aspect of any teaching practice is the concept of reflection. Educational design thinking provides a framework for this practice. Both evaluation of our practice, and refinement of the process occur in order to establish better learning environments for students. While a component of a post-degree professional teaching program is devoted to addressing reflection of teaching practices, I have found myself continually addressing my teaching practice with each component of this Master’s program. From specific designs of multimedia presentations to general curriculum designs, I have questioned each
component of my teaching practice as a result of the learning that has occurred within this program.

A focus of mine for the last nine years as a professional educator has been to introduce learners into outdoor spaces. Anecdotally, I have seen benefits to actively engaging students in the outdoors, but through research for this paper I have been provided an avenue to explore and address these benefits in a very structured way. I have been able to focus on the concept of adventure learning as framework to address student access to outdoor spaces in a way that provides structure and specific curriculum to address the learning outcomes of a broad range of topics. Utilizing outdoor spaces is an important aspect of socio-emotional health, but it also has cognitive benefits and as a result of research into such benefits I feel armed to address individuals that are hesitant in taking students out and aiding in the teachers journey into the outdoor classroom.

**Confidence**

Immersion in a graduate program has been a transformative experience for me. The clarity of my educational philosophy has come as a result of the tough questions presented within the program. With this clarity also comes a level of confidence. Confidence that what I put out to others matters and is worthy of discussion. I feel as though I am in a position within both my school and district to provide leadership with regards to both technology and the outdoor education program. I am confident in putting ideas out there and willing to
contribute to educational discussions both at the school, district, and global educational levels.

**The Big 3 – Recommendations for Implementing Adventure Learning**

Adventure learning is a great structure to implement subject curriculum in outdoor learning environments. There is no need to see the outdoor classroom as a drain to the educational time spent doing math, science, or any other traditional curriculum subject indoors. Proper implementation of the adventure learning framework can address many learning outcomes.

**Determine the locale.** It is important in the adventure learning framework to ground the learning in a geographic area. It is not necessary for the space you utilize to be a remote wilderness destination that requires extensive resources, both time and financial, to reach. A tree on your school grounds, the stream created in the vacant lot next door, or a river down the block is all that is necessary for meaningful connections between the learning outcomes and the outdoor classroom. Once a geographically local area has been determined and curriculum has been established to address the learning outcomes, outdoor classrooms can become convenient resources to provide both cognitive and socio-emotional growth for the learners in a classroom.

**Share the learning.** It is important to share the learning that is happening in your classroom. Photographs, video, or other media artifacts associated with your outdoor classroom learning experiences are easily shared through multiple channels. The Cascades Adventures website
(http://www.cascadesadventures.com) and Google community
(https://plus.google.com/u/0/communities/114781482742988191619) are two avenues that have been created during this project to disseminate information to other learners. These tools are not the only way, but a convenient landing point for multiple users to engage with the learning in a variety of classrooms. Other sites are options (http://www.we-explore.com) and should be explored in order to choose the right fit for your situation.

Take the risk. Risk is not a four-letter word. Risk is inherent in any activity that we do in daily life. Become knowledgeable regarding the risk potential of activities outdoors and utilize outdoor spaces and the rich learning environment that they provide. Learners that engage with outdoor spaces foster leadership skills and the cognitive benefits of natural spaces should not be overlooked. Seek help from individuals that already engage in outdoor spaces and include outdoor clubs in your learning adventures.

The Cascades Adventures website is a rich resource for initiating adventure learning in your teaching practice. The skills to implement adventure learning are not difficult to acquire and localized learning environments within walking distance of your school building can provide rich, meaningful educational opportunities for your learners. Get informed and get outside, and get connected: both yourself and your students will be the better for it.
References


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