We accept this Graduate Applied Project as conforming to the required standard.

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Abstract
This research was done in preparation for the creation of a teacher’s guidebook to aid teachers in developing an inclusive outdoor education program. The purpose of the guidebook is to provide information about outdoor education, skills that can be developed and activities to engage all students in outdoor education. It is the creator’s intent that the guidebook be used to support a teacher’s understanding and instruction of outdoor education for their classrooms, inclusive of students with exceptionalities. The areas addressed in the guidebook are: Cognitive Development, Physical Development and Social-Emotional Development.

Keywords: outdoor education, special education, students with exceptionalities, inclusion, cognitive development, physical development, social-emotional development
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Chapter 1

Introduction

Outdoor Education Today

Inclusion of outdoor education into schools and curriculum has been increasing over the last few years with greater promotion of sustainability and environmental education as well as community and skill development. In many school curriculums environmental aspects have typically been added to the curriculum through the sciences, social studies or physical education streams. In British Columbia, the revised curriculum now includes outdoor education outcomes integrated into the K-12 curriculum documents and describes the importance of flexible learning environments through the following statement from their curriculum overview.

Learning can take place anywhere, not just in classrooms. Many schools and teachers create learning environments that explore the use of time and space in creative ways. The integration of areas of learning and technology also have opened the door for teachers and schools to approach the use of time and space in creative ways – ways that adapt to students’ needs and interests (British Columbia Ministry of Education, 2018a, Flexible Learning Environments).

With the revised curriculum, teachers are encouraged to include flexible learning environments that support the needs of their students, and for students in high school grades eleven and twelve, the new Physical and Health Education curriculum has an area of learning that focuses on outdoor education. According to the curriculum documents the outdoor education curriculum has the following big ideas:

- Participation in outdoor activities allows for the development of skills in a complex and dynamic environment.
- Spending time outdoors allows us to develop an understanding of the natural environment and ourselves.

- Participating safely in outdoor activities requires communication, teamwork, and collaboration.

- Participating in outdoor activities allows for the development of leadership skills that can be applied in a variety of contexts and environments (British Columbia Ministry of Education, 2018b, p. 1).

With the support of the revised curriculum, all students will have the opportunity to engage in more outdoor education for both environmental and personal development outcomes. Additional supports are available to aid teachers with instructing in outdoor education to include more opportunities for students to make use of flexible learning environments. In British Columbia, the Environmental Educators’ Provincial Specialist Association (EEPSA) is a volunteer organization that promotes networking, curriculum support and leadership for environmental education. This organization hosts professional development for teachers as well the creations of a guidebook, The Environmental Learning and Experience (ELE) Curriculum Maps, to “help teachers turn theory into practice for environmental learning by connecting learning outcomes across K-12 curricula with elements of the ELE Guide” (Environmental Educators’ Provincial Specialist Association, 2009, p. 7). In conjunction with this document, they also created an interdisciplinary guide for teachers to integrate environmental learning and experience into their teaching. With the combination of the two documents, as well as professional development opportunities, educators should be better equipped to incorporate outdoor education within the curriculum.
Other organizations are available across Canada to support teachers with integrating outdoor education. One organization is the Outdoor Council of Canada (OCC), which is a non-profit organization that works to “encourage, promote and facilitate safety-oriented outdoor education and recreation programs, along with leadership opportunities, which are accessible to every Canadian” (Outdoor Council of Canada, n.d., What is the Outdoor Council of Canada?). Through this organization’s service, teachers can utilize their resources for their instruction, locate trained outdoor leaders for different outdoor activities and participate in training to lead outdoor education activities. Another organization that supports the use of outdoor education is the Child and Nature Alliance of Canada whose aim is to “connect children and youth with nature through policy, research, and practice” (Child and Nature Alliance of Canada, n.d. About Us). This organization has created multiple initiatives to provide teachers, families and communities with resources, and training information to support the development of outdoor education with all children and youth. Their initiatives range from programs to develop youth leadership through the Natural Leaders Alliance of Canada, the creation of schools and outdoor education programs through the Forest and Nature Schools program, and providing evidence-based professional learning opportunities for educators interested in outside learning and play.

Within the province of British Columbia, a third non-profit organization called the Columbia Basin Environmental Education Network (CBEEN) provides teachers with additional resources, professional development opportunities and support for instructing outdoor education. They encourage environmental stewardship and sustainability by supporting environmental educators and have developed a program, Wild Voices, to support educators through engaging local experts in the co-education of K-12 students. This program “enables local specialists to develop programs connected to the local environment and tailored to their area of expertise and passion”
that they can share with educators and support with developing the K-12 curriculum through outdoor education (Columbia Basin Environmental Education Network, n.d., Wild Voices).

Outdoor education is becoming more of a focus and has shown to have significant benefits for all students through the development of skills in cooperation, leadership and building a greater understanding of citizenship within the changing world.

**Project Context**

Based on the changes and supports mentioned previously, outdoor education is developing in Canada and British Columbia and viewed as a beneficial method for teaching in and around schools. One area where the literature is insubstantial is with the inclusion of students with special needs in outdoor education programs. British Columbia has an inclusive education system and follows an inclusive philosophy to ensure that all students receive an equitable opportunity in their education.

British Columbia promotes an inclusive education system in which students with special needs are fully participating members of a community of learners. Inclusion describes the principle that all students are entitled to equitable access to learning, achievement and the pursuit of excellence in all aspects of their educational programs. The practice of inclusion is not necessarily synonymous with full integration in regular classrooms, and goes beyond placement to include meaningful participation and the promotion of interaction with others (British Columbia Ministry of Education, 2016, p. 2).

The inclusion philosophy also applies to the use of outdoor education that is being threaded into curriculums. The support for students with exceptionalities should remain the same in all environments, but how will this new focus on outdoor activities and these new outdoor locations affect the learning and participation of students with exceptionalities? The curriculum documents
and supports have provided teachers with resources to assist their teaching through the use of outdoor education, but there is very little support for how to teach students with exceptionalities during outdoor education activities. Resources connecting outdoor education and inclusion are an area of outdoor education programs that can be addressed to further support teachers and other educators to effectively promote inclusion for students with exceptionalities throughout their school day in any learning environment.

**Statement of Problem**

Ideally, teachers and other educators can use the various outdoor education documents to support their teaching of all students, but some students with exceptionalities might need more support from their teachers or support staff to adapt to outdoor education activities and new learning environments. It is my hope that through the use of outdoor education resources, as well as the resources on inclusion, teachers can be successful in addressing the issues that outdoor education might bring to their students with exceptionalities. However, if the teacher is new to instructing outdoor education they may struggle to be successful at supporting the learning of the whole class inclusive of those with exceptionalities.

Through the use of outdoor education, teachers assist students in developing specific skills and abilities such as collaboration, teamwork, and leadership as well as to advance competencies with environmental aspects of society. These skills are essential to all students, including those with exceptionalities, although students with exceptionalities may require the development of other skills to support their full participation in outdoor education. These other skills could include: following multiple step directions, listening for understanding, space management, and managing behaviours. The instruction of these skills through outdoor
education will support students with exceptionalities to engage with their peers, learn through outdoor education and adapt to learning in a different environment to the classroom.

To adequately prepare teachers to be successful in teaching outdoor education more information and supports for inclusion in outdoor education need to be available for all.

**Personal Context**

I have grown up around children of all abilities, as my mother opened up our home as a placement for disabled individuals in order to support their families, and later she operated a home preschool. I have always been able to observe as well as experience working with students both with and without exceptionalities throughout my childhood and high school. I knew very early I would be a teacher and that I wanted to work with students with exceptionalities so throughout my high school years I volunteered to support students with their class work and in some cases I supported them with their social skills during their time at school. After graduation, I travelled abroad to Wales to work for an outdoor education facility where I was employed as an assistant to the tutors leading the outdoor education programs. Through this role I was responsible for preparing the equipment, supporting with supervision and instructing classes in outdoor education activities. During my year there I was responsible for two programs that worked with both children and adults with exceptionalities. One of the programs was a weekly outdoor parent and child preschool program that catered to all students with and without exceptionalities. Young children and their parents were engaged in outdoor activities to promote the development of social skills and collaborative learning through exploring in the outdoors. The second program that I worked with was a community composting and gardening program for adults with exceptionalities. In this program, we would travel around the local community collecting compost to be brought back to the outdoor education centre where the participants
would engage in learning about the process by which compost becomes soil. The participants would then deliver the soil to the community members and work with the community by maintaining the gardens and lawns of both private homes and public spaces. This program encouraged community and cooperation within the group, development of social skills for the participants and was positively regarded by the community. Through these programs I experienced first hand the advantages that the outdoor environment had for the members of these programs. Throughout our work both on the outdoor education centre as well as in the local community, I was able to observe incredible changes in the participants whether it was through their participation, social skills, and communication and even though their overall enjoyment in the program’s activities. These two programs became an essential part of the local community and outdoor education centre as well as for the children and adults who engaged with them and through the program they were able to be successful members of a group and the broader community.

On returning to Canada to attend university, the importance of those programs for both the children and adults and the benefits that they gained from their participation through acceptance, social development and community made an impact on me and helped to frame my mind-set during my education degree. My experiences in Wales enabled me to focus my studies during university and incorporate the ideas of special education into all of my activities for my classes, placements and general interests in education. After graduating with a Bachelor of Education I began teaching and have had opportunities to work with many students with exceptionalities and have also been fortunate to include some outdoor education aspects into my weekly teaching routines through physical activity, local community explorations, field trips to local forests or parks and by using the schools outdoor spaces. I have witnessed improvements in
areas such as social skills, engagement, behavioural management and overall positivity, in both my students with and without exceptionalities from our outdoor education lessons. I also found that the change of environment from the classroom to an outdoor space, the specific activities and the access to nature also had a significant influence on these students.

Since becoming a teacher, I have continued to further my learning in both special education and outdoor education through networking with other teachers, professional development courses and trial and error with the teaching of my classes.

Rationale

I believe from my experiences that outdoor education can reach students on an individual level and is capable of supporting the learning for each child by providing them with a different instructional venue which can support the needs of all students inclusive of those with exceptionalities. Many teachers have not had the experiences that I have had with outdoor education instruction or experience, and when I discuss some of the ideas of outdoor education, it appears very daunting for them. They have had very limited experience with managing a class in an outdoor setting, teaching without classroom tools and effectively engaging students in outdoor activities to promote learning. Some were also concerned about how the change in routine might affect their students with exceptionalities. They thought the new environment might also create too much stimuli, make students uncomfortable, or cause them stress while trying to engage in an unfamiliar environment, and therefore potentially leading to challenging behaviours to manage while maintaining a class in the outdoors. These teachers all stated that they were not confident with instructing outdoor education, and they expressed that the added worry of teaching students with exceptionalities in an outdoor environment made them hesitant to try.
Purpose of Project

In my research, I have located many organizations, professional development activities and resources to assist teachers with instruction using outdoor education, but not many resources included the information or guidance on the inclusion of students with exceptionalities in outdoor education. As a teacher of physical education and geography, I find it easy to generalize my teaching to a new environment, but I can understand the challenges and fears that come to mind for teachers regarding their students with exceptionalities and how they may react to a new environment.

Throughout my conversations and experiences, I have observed the benefits of students with exceptionalities participating with their peers in outdoor education experiences. There is a lack of research on the use of outdoor education to support students with exceptionalities and also a lack of resources to assist teachers with instructing students with exceptionalities in an inclusive outdoor education program.

The teacher’s guidebook that I created through this project will assist teachers instructing in the outdoors to engage students with exceptionalities and to ease their transitions from classroom to an outdoor learning environment while allowing for their full participation, to the best of their ability, with their peers. The information in this guidebook will focus on specific skills and actions that can be a challenge for students with exceptionalities such as social skills, behavioural and emotional responses, communication, listening and attention and physical capabilities.
Overview of Project

Through the review of literature on both outdoor education and various exceptionalities, I have created a teacher guidebook containing information, activities and lessons to assist teachers in instructing outdoor education for a fully inclusive outdoor learning experience.

The guidebook provides information on ways to support students with exceptionalities through lessons, games, and activities and highlights specific skills that teachers will need to develop in students in an engaging way to keep them all participating and learning in an outdoor education environment. Various locations are also identified to allow for participation in outdoor education where access to nature may be challenging.

The guidebook provides examples of ways to instruct in the outdoors for teachers who are either not confident in their ability to educate through outdoor education or who need support instructing students with exceptionalities in an outdoor environment. The games and activities are adaptable and can be adjusted to suit the needs of each child or classroom.

Conclusion

Throughout my research and experiences, I have found that outdoor education is beneficial for all students’ learning by providing a varied learning environment, hands-on experiences, and more stimulating methods of instruction. These benefits are also useful for students with exceptionalities to learn with their peers, and can significantly influence their confidence, social skills and behaviour while engaging in this learning style. The benefits of participating in outdoor education are important for all students to engage with and learn from and therefore, should be an instructional method used within the educational systems.

Unfortunately, without proper support and resources for teachers, outdoor education is being left out of many classrooms, and the benefits are being missed for all students. With
teachers gaining access to outdoor education support and resources as well as having the ability to participate in guided experimentation, all teachers can succeed with bringing outdoor education to all students and allow for more significant experiences for learning and self-discovery for all students. With an improvement in a teacher’s confidence and ability to instruct outdoor education, together students and teachers can engage in new ways of learning, practice their skills in new environments and engage with the natural world.

In the next chapter I will review the literature available for outdoor education and special education as well as the recent case studies that have been conducted in both outdoor education and special education. I will make connections between the two specialties highlighting how each specialty can affect the other and how they can be used together to support the development of students with exceptionalities in an inclusive outdoor education program.
Chapter 2

Literature Review

Introduction and Focus

In the previous chapter, I discussed my intention to create a guidebook to support teachers with incorporating outdoor education into their teachings, support students with exceptionalities through outdoor education and provide teachers with a resource that will provide information and activities on integrating inclusive activities in an outdoor education program.

In this chapter I will explore the complex and extensive fields of both special education and outdoor education. Due to the breadth of knowledge within both fields, the research will focus on ways in which outdoor education can support students with exceptionalities, skills that can be developed through outdoor education and methods to create an inclusive outdoor education program.

Throughout the review, both special education and outdoor education will be outlined to identify the beliefs behind each specialty, the knowledge base and theorists who have added to the development of the methodologies and an outline of current research and studies that have been conducted. The review will aim to highlight ways in which the two specialties can influence the other and together assist with instructing students with exceptionalities in an inclusive outdoor education program.

Special Education

A special education student is defined as a “student who has a disability of an intellectual, physical, sensory, emotional or behavioural nature, has a learning disability or has special gifts or talents” (British Columbia Ministry of Education, 2016, p. 1). These disabilities can be major challenges that prohibit students from engaging in a classroom, to minor challenges that make it
difficult but can be overcome by teachers and the students with adaptations to lessons or materials. Although each student with exceptionalities is included in public schools, they each have specific challenges that make participation, learning and knowledge acquisition challenging. Every exceptionality has characteristics or difficulties with learning, socializing, or other physical and cognitive abilities. According to Pullen and Hallahan (2011), there are “eleven traditional categories of special education: intellectual and developmental disabilities, learning disabilities, attention deficit hyperactivity disorder, emotional/behavioural disorders, communication disorders, deaf and hard-of-hearing, blindness and low vision, traumatic brain injury, autism spectrum disorders, multiple and severe disabilities, and special gifts and talents” (p. 173). Within this resource, the authors outlined each of the 11 traditional categories to address the definitions, identifications, causes, educational treatments, main theories, important research and practices for each category. This resource has been designed to assist educators in understanding the “historical and foundational concepts that underpin each category,” (p. 173) and can then be used to assist in their instruction of students with exceptionalities within their class.

One theorist whose ideas are involved with the instruction of students with exceptionalities is Vygotsky. He is well known for his work with social theory and defectology and for his research on instructing students with disabilities in the education system. Vygotsky stated, “one must treat the child with a disability in the same way as a normal one” (as cited in Vygodskaya, 1999, p. 331). His view of treating students with disabilities as normal students is the goal of inclusion in today’s schools. In the same article, Vygotsky says, “one must keep in mind that any child with a disability is first of all a child and only afterwards an impaired child” (as cited by Vygodskaya, 1999, p. 331). This is the goal of inclusion, that all children are seen as
equal then after we can observe the differences that make them unique and how changes can be made to support those differences. Vygotsky’s view on special education is through social theory, in which he considers “learning as a shared-joint process in a responsive social context” (Gindis, 1999, p. 334). He believes that children, with or without disabilities, can best achieve with proper assistance from others but most importantly adults. Scaffolding or providing support for students with their education is essential to social theory as a support for struggling students to achieve and understand the concepts taught. The support that they receive can help to direct their attention and learning positively, and this format of education will work for both students with and without disabilities.

Vygotsky also worked on his domain of research coined ‘defectology,’ which translates from Russian as the ‘study of defect.’ This term “referred to the study of children with disabilities and methods of their evaluation, education, and upbringing” (Gindis, 1999, p. 334). In this research view, Vygotsky believed in the links between students with normal versus those with abnormal behaviours and learning challenges, and that both followed patterns of developmental formation. His viewpoint on all children is that their “development is not a straight path of quantitative gains and accumulations, but a series of qualitative, dialectic transformations, a complex process of integration and disintegration” (Gindis, 1995, p. 78). However, at the heart of his theory was the idea of scaffolding and supporting students with disabilities in a way to bridge the difference between the paths in which a child with disabilities has veered away from his or her peers. To support the child, he promotes not removing the challenge from the child but supporting the child to achieve the challenge through a different means. The goal of special education instruction is to assist students with achieving at their
developmental level, to the best of their ability, through various methods that will support their challenges and make them successful and capable of learning.

Piaget, another theorist whose ideas have been used to support the development of students with exceptionalities, had similar thoughts to Vygotsky. Piaget also hypothesized that development occurred in qualitatively different stages that occur in sequence and are “invariable and universally observable because, to some extent, the characteristics that mark out each stage are determined by maturational factors” (as cited by Anderson et. al., 2004, p. 16). The child’s development can be observed moving through Piaget’s stages in sequential order, no matter the child’s ability, but different children move through the stages at different rates depending on their maturation, physical factors and environmental input. Within each stage, a child’s development progresses in a “sequence from simpler to more complex levels of organization,” developing more sophisticated responses to external circumstances, which Piaget defined as accommodation (Helmore, 2014, p. 5). To move through each stage and gain this more complex understandings children must integrate new knowledge and understanding with already existing knowledge. Piaget refers to this occurrence as assimilation, in which “the mind modifies its schemata in the light of new experiences” (Helmore, 2014, p. 6). A child will add to their understanding of the world around them by modifying their previous knowledge as new information and experiences force them to change their knowledge base. This action is a process of multiple experiences and opportunities, which provide repetition and hands-on engagement with their environment, to gain new information and modify their knowledge base to develop a more complex understanding.

Using Piaget’s theory of sequential stages, and building on previous knowledge to develop more complex understanding it becomes apparent that instruction, knowledge and
experiences must be provided for a child at their developmental level. “Children at different developmental stages have differing abilities to explore past patterns and to construct new ones” (Benevento, 2004, p. 24). If a child is attempting to understand a concept without the previous knowledge to build upon, then they will not progress through the stages or with more complex understanding. Differentiation of learning engagements needs to be provided at multiple stages to be able to allow individuals to gain the required knowledge that they are developmentally ready for.

In addition to instructing students at their levels, it is also important to keep in mind that as children move through Piaget’s stages they may fluctuate with their comprehension of complex and simple understandings. “It is possible for simpler logic of earlier internalized relationships to continue to shape a child’s experience even though that child has developed more complex meaning-making structures” (Benevento, 2004, p. 25). Every experience may not add to a child’s understanding or modify his/her thinking, but with repeated engagement, multiple experiences and differing engagements, a previous simple knowledge base can later develop with more sophisticated ideas to help develop more complex level understandings. To fully support students with exceptionalities, learning engagements should be provided at an appropriate developmental level, with multiple opportunities to engage in the activity and different methods of engagement to act on a learner’s knowledge base in different ways.

Outdoor Education

Outdoor education is growing more popular in today’s culture and education systems around the world but is still a debated and not fully utilized method for instruction. It began to enter the culture and educational domains with “growing concerns for environmental well-being in the 1960s, and it addresses all three domains of learning: knowledge, skills and attitudes”
ADAPTED OUTDOOR EDUCATION

(Murphy, 2011, p. 39). Outdoor education is viewed as a method to reinforce and strengthen learning in other disciplines such as science or mathematics, and not as its own discipline or curricular area. With this view, outdoor education is seen as a way for students to develop skills, knowledge and attitudes towards environmental aspects of outdoor education only. For example, students would acquire the skills and knowledge of reading a map or using a compass to find their location or would gain or change their attitude towards litter or other environmental concerns. This idea of outdoor education creates a narrow view of its capabilities, and that it is only beneficial to the sciences and not to the greater education of the whole student. With more use of outdoor education in recent years, the understanding of its various benefits for all students is beginning to be viewed as a potential method of instruction to reach students abilities in more than just the science curriculums.

“Outdoor education is a holistic form of education which aids in overall wellbeing of adolescence, including academic, physical, emotional, social and psychological well being. It provides opportunities for students to apply knowledge and skills to master, especially in real-life situations, and increase the level of understanding of the relationship between humans and the environment” (Harun & Salamuddin, 2014, p. 71). Outdoor education has proven over the years to be a very beneficial support to instruction for teachers in certain aspects of their courses and learning, as well as for a student’s social and behavioural aspects of their learning.

The benefits that can be gained from outdoor education are abundant and widespread through various aspects of traditional education. According to Harun and Salamuddin (2014), outdoor education can assist with an “awareness of thoughts and emotions” (p. 71), “cooperative learning that emphasizes the interaction between teachers, students and learning experiences” (p. 72), the development of “knowledge and to enrich the process of socialization (p. 72), and an
understanding that “the process of self-development is a result of direct experience” (p. 72). The benefits of outdoor education can be extensive and helpful towards educators in promoting both the acquisition of knowledge and educational learning, but also in the development of social, emotional and cultural aspects which are essential for students to gain when working cooperatively with their peers and elders.

Learning through outdoor education is about the experiences that students participate in and not the product that they must acquire. “Emphasis should be given to adapt and learn about an issue and not just focus on the contents and products. Learning through experience is a mix between experience, perception, cognition and behaviour and seeks to generate the emotional, physical and mental imagination” (Harran & Salamuddin, 2014, p. 72). Many times people expect students to learn through memorization of facts or procedures and eliminate the reasons and explanations as to why. Outdoor education focuses more on the why, and to find the answers one must explore and experiment with their surroundings. To do this, students must adapt to various ways of thinking, procedures and learn by going around a problem and not just directly to its solution.

Outdoor education is primarily based on learning through direct experiences that require the active participation of students in a foreign environment and possibly outside of their safety zone. The outdoor education experience must be realistic and meaningful and when accomplished will require students to naturally use their problem solving, research and reflection skills to understand the environment around them. Each student will respond to these direct experiences in their way and “individual experience is very important in the learning process and the acquisition of knowledge through outdoor education” (Harun & Salamuddin, 2014, p. 72).
By internalizing an experience, students will develop a more complex understanding and go beyond memorization to developing problem-solving skills.

John Dewey’s educational philosophy had direct experience as an essential part of student learning. Although Dewey’s philosophy of education didn’t specifically discuss outdoor education, he did emphasize the immediate environment, both indoor and outdoor, in which students would experience and therefore learn through. Dewey considered how the learning environments changed over time and the removal of students from the outdoors disconnected students from the real world and that knowledge base that they could develop through their engagement with their community outside of schools. Dewey observed:

No amount of object lessons, got up… for the sake of giving information, can afford even the shadow of a substance for acquaintance with the plants and animals of the farm and garden acquired through actual living among them and caring for them (as cited in Rivkin, 1998, p. 199).

With students no longer engaging with families and communities, they are missing a vital aspect of the real world that cannot be made up by lessons in school. The experiences that students gained from the real world and engaging with nature is more beneficial, in Dewey’s opinion than recreating those experiences in school. He believed that good schooling was dependent on access to the outdoor world as that is where life is, not in a school building, which he thought, to be artificial and isolated from the real world. As Dewey stated, “the school building has about it a natural environment. It ought to be in a garden, and the children from the garden would be led on to surrounding fields, and then into a wider country, with all its facts and forces” (as cited in Rivkin, 1998, p. 200). Dewey’s expression of ‘facts and forces,’ emphasizes the amount that can be learnt from exploring the natural and real world. Looking at facts about nature in a book can
give a lot of information to students, but viewing that nature with your own two eyes and exploring the real world gives that direct experience that Dewey believed was important to students learning.

In Dewey’s educational philosophy, direct experience makes understanding and appreciating a concept more effective and has a higher chance of students preserving the knowledge for longer (as cited by Harun & Salamuddin, 2014, p. 72). By experiencing a concept first hand, a student is more likely to appreciate that concept and therefore remember it, as well as gain a greater understanding. The process of self-development that students engage in when experiencing nature is crucial to learning through direct experiences. Students will engage with their environment and make discoveries to learn through what they see before furthering their understanding with information from other sources. Dewey continues to expand on direct experience, self-discovery and the learning process by also stating the benefits to socialization while experiencing the outdoors. “Experience is very important in order to develop the knowledge and to enrich the process of socialization” (as cited by Harun & Salamuddin, 2014, p. 72). By participating with others in first-hand outdoor experiences, students develop greater social skills through the communal development of their understanding and appreciation of the real world environment around them. In Dewey’s view of outdoor education, it is an important learning method to connect students to the real world, to promote self-discovery through direct experiences and to encourage learning in a social hands-on method that is absent or artificial in the classroom.

The various methods that outdoor education can utilize to develop experiences with acquiring knowledge, socializing and discovering the real world are essential in today’s education with the changes to society and culture. The access to the environment is diminishing,
and the value of it is being outweighed by the gain of knowledge through facts and information rather than through discovery and inquiry. Outdoor education is a learning program that can be used by all teachers in many locations and can be adapted to all ages and disabilities of students. Teachers can use the playground, a local field, the forest, or even a walk on the sidewalk to achieve various direct experiences to assist students with acquiring knowledge and gaining experiences in the real world. Providing hands-on, real-world experiences for students will aid in promoting self-discovery, acquisition of knowledge, socialization for learning, and more memorable learning experiences for all students, with or without exceptionalities. In the next section, more specific information will be provided on the benefits of outdoor education on students with exceptionalities.

**Outdoor Education Supports Students with Exceptionalities**

As briefly discussed in the previous section, outdoor education aids in enhancing social skills while students participate in discussions about real-world experiences. Social skills are essential for all students, including those with exceptionalities, to develop but it is not the only skill that can be acquired through outdoor education for students with exceptionalities. Outdoor education can be used to support multiple various skills for all students but specifically for those who need hands-on direct learning engagements to acquire some skills. Socialization, communication, attention, behaviour and emotional development are all aspects of a student’s development that can be supported through the direct experiences provided by outdoor education.

Communication is a vital skill for students both within school and in the real world and is a way that “one understands any transmission of information, ideas and emotions from one social entity (person, human group, and collectivity) to another by messages” (Elena, Sandu, & Anca,
2013, p. 59). It is an important skill to have in a formal education sense to be able to communicate ideas, express understanding and generate greater understanding in a collective group, but communication is also involved in a non-formal setting used to demonstrate personality, social roles and integrating students in a social framework. Communication is used throughout the day “through the materialization of talks, interpretations, explanations, definitions, etc.,” and is a skill that can be developed through the various experiences in an outdoor education program (Elena, Sandu, & Anca, 2013, p. 58). Through experiences in outdoor education students are required to problem solve, use previous knowledge and build a relationship with their peers to accomplish tasks and understand their surroundings. By using these processes, students must naturally talk, interpret their surroundings, explain their thoughts and findings and define what they comprehend; and in the process, work on their communication with themselves, their peers and their teachers.

Attention is another skill that some students have difficulties with and can be developed and improved through the use of outdoor education. According to Attention Restoration Theory (ART), which is a theory within environmental psychology, “the general population consistently reported a sense of rejuvenation after wilderness outings and other exposures to relatively natural environments” (Taylor & Kuo, 2008, p. 402). This sense of rejuvenation has aided both adults and children in performing better with attention tasks after experiencing natural environments. ART theory suggests that students find natural settings more absorbing and they, therefore, require the use of involuntary attention, giving students a break from deliberate modes of attention. This can then allow for more deliberate attention after the exposure to nature leading to a higher level of focus (Taylor & Kuo, 2008, p. 406). By providing outdoor experiences for students to engage in can not only influence students attention during the activity by using their
natural attention but can also lead to higher attention levels after exposure to natural environments.

A student’s emotional and behavioural skills can also be affected positively through participation in outdoor education. Some emotions and behaviours that have shown to be addressed with the use of outdoor education include defiance, withdrawal, shyness, fearfulness, and anxiety. These behaviours, among others, can be detrimental to student’s participation in school, with their peers and in their local community. Some of the improvements that have been found for students with emotional and behavioural challenges during engagement with outdoor education include “improvement in self-concept, social adjustment, academic achievement, and group cohesion,” as well as improved relationships with their teacher, parents and peers, and in some cases “teachers also reported greater ability to teach specific skills and academic behaviour, and to lessen disruptive behaviour” (Lappin, 1984, p. 3). These emotional reactions that students can have during experiences in an outdoor education activity demonstrate growth that not only assisted students with their emotional and behavioural challenges but also led to a more positive outlook and possible academic ability. According to another study conducted by Fox and Avramidis (2003), their findings suggested that the emotional growth that students gain with outdoor education is beneficial to students with acquiring a sense of belonging to a community and developing self-esteem which aids with developing skills to support their behavioural growth and helping a student to reach their potential (p. 280). They continue in their study to outline that “emotional growth did support growth in learning for those pupils who fully participated” and that with attaining full participation in outdoor education activities, students with emotional and behavioural difficulties can acquire both support for their behaviour and emotions as well as academic support (Fox, & Avramidis, 2003, p. 280).
Many studies have been undertaken and shown the benefits of student participation in outdoor education on many academic and non-academic challenges that arise in some students. Socialization, communication, attention, behaviour and emotional development are only a few of the skills that can be addressed using outdoor education and have been investigated in the studies mentioned in this section. As outdoor education becomes more prevalent in society, more studies are beginning to examine the effects that outdoor education has on both academic and developmental gains. In the next section, a few of the current studies that connect outdoor education and children with exceptionalities will be addressed.

**Current Studies**

There have been many research studies in the field of outdoor education that connect with the different developmental needs for students with exceptionalities, including communication and social skills, attention and concentration and emotional and behavioural development. The concept of student concentration and interest is one aspect that has been studied and proven to be supported by outdoor education experiences.

Sulaiman, Mahbob and Azlan (2011), completed a research study on sixty-two students in their first and third year of university in Malaysia. The researcher’s main objective was to “identify levels of concentration, to measure learning satisfaction levels and to analyze the quality of learning levels” of the students towards their learning issues (p. 12). The research was completed through surveys and observations of the student’s involvement in the out-of-doors activity in which the students sat in on a conference at the Parliament to learn about how policies are enacted, and communications occur during conferences. Although this activity was not taking place in the natural world, it is still considered as an outdoor education activity as the students are learning about and exploring in a new environment and therefore will demonstrate the
principles of outdoor education. Through their surveys and questionnaires, Sulaiman, Mahbob and Azlan (2011) discovered that the majority of learners enjoyed learning with peers and or teachers they liked, in an environment that they find to be relaxed, friendly and conducive to learning, and when the lesson is spoken in a clear voice with the use of group discussions. In their observations of the students, the researchers looked for key behavioural and body language cues such as appearing sleepy, chatting, looking bored, playing with paper or pen, and sitting in an unsuitable seated position, to name a few. They observed all the students over the course of an hour noting the behaviours of the students in both years. Their findings demonstrated that the third year university students demonstrated behaviours indicating that they “appeared alert and ready for the learning process in that particular environment,” while the first year students “behaviour indicated boredom” (Sulaiman, Mahbob & Azlan, 2011, p. 16).

This research was a good example of out-of-doors activities that can demonstrate the differences that certain educational experiences can have on some students and be lacking in others. It is important to know as a teacher that some lessons and activities may be intriguing and captivating to some students, but others may need a different form of activity to engage and captivate them for learning completely.

Another study by Taylor and Kuo (2008), looked at the effect of attention after exposure to particular natural environments. The objective of their study was to examine the “impacts of environment on attention in children with ADHD” (p. 1). This study involved the participation of seventeen children, 15 boys and 2 girls, ranging in age from 7-12 years old and who were all professionally diagnosed with ADHD. The researchers chose three locations to observe their participants including an urban park, a downtown area, and a residential area. Before each walk, the children completed a series of puzzles selected to “ensure some degree of attentional fatigue,
as the positive aftereffects of certain physical environments on attention are thought to reflect recovery from attentional fatigue” (p. 3). The children were then led on an individual guided walk that occurred with the same guide, length of time and with minimum conversation. After the walk, the children would answer questions about their experience on the walk, such as if they found the walk “fun, relaxing, interesting, scary, boring, weird, and/or uncomfortable” and were asked to rate the walk on a three-point scale from 0 to 2 or not sure. The children then participated in concentration and impulse control tests.

The concentration of each child was measured by the use of the Digit Span Backwards (DSB) test, which is “sensitive to deficits in attention and executive functioning” (p. 3). This test “involves listening to a sequence of numbers from two to eight digits long (e.g., 2-5-1) and repeating the sequence aloud in reverse order (e.g., 1-5-2)” (p. 3). If the child got a correct response, then they would be given a new longer sequence until they received an incorrect response in which they would then receive a new sequence of the same length.

“Analysis of the Digit Span Backwards scores showed that children’s ability to concentrate varied significantly as a function of their previous surroundings” (p. 4). Taylor and Kuo found that there was a significant difference in concentration after the park walk compared to the other two less natural walks, which had no significant difference in concentration abilities between them. The children’s ability to concentrate in the DSB test was improved after the walk to the urban park, suggesting that the natural environment was more effective for concentration than the two more urban settings. The research also indicated that the student’s enjoyment of the parks matched with their concentration abilities, with the children rating the park more positively than the other two.
This study demonstrated that incorporating a natural, outdoor setting can have a significant impact on the attention and concentration of students with attention deficits and that engagement with outdoor education in a natural environment could lead to the greater acquisition of learning through improved focus and attention for such students.

A second aspect of outdoor education that can be important to all students within the education system is the acquisition of social and communication skills. Harun and Salamuddin (2014) conducted a research study on six hundred and seventy-one adolescence that attended a five-day outdoor education program. Their study was to discover whether “outdoor education promotes social skills and assess its effects on participants” (p. 71). The researchers measured the skills of cooperative teamwork, leadership ability and the ability to cope with changes through a questionnaire of the students participating. The researchers divided their participants into four groups with varying degrees of outdoor activities and difficulty levels and had one control group who had no outdoor education exposure.

The results of their study demonstrated that “outdoor education programs have a significant impact on individual social skills” when analyzing the pre and post-test data (p. 73). Their evidence showed little improvement in their control group, which received no outdoor education exposure, but a large increase of social skills acquired for the groups that engaged in outdoor education activities. The researchers continued to analyze their data further and see if there was more improvement for each component in social skills constructs, which included cooperative teamwork, leadership ability, and coping with changes. The outdoor education group showed an increase of ability with all social skill constructs, significantly in collaborative teamwork, while the control group gained no significant improvements in any of the social skill constructs.
The results of this study helped to confirm beliefs that outdoor education can positively influence the social and communication skills of the students participating, mainly if the organization of the activities is “designed to take into account the needs and desires of the participants” (p. 77). By catering the activities to support any needs that the students have, such as behavioural skills, movement-based activities, or thinking skills, the use of outdoor education can assist the student in both learning those needed aspects as well as developing their skills of socializing and communication with their peers. The methodologies that are used in outdoor education curriculums support communication and social skills and influence more engagement in participants.

A final case study on the effects outdoor education has on students with exceptionalities was examined by Fox and Avramidis (2003) and looked at how outdoor education affects students with emotional and behavioural difficulties (EBD). The sample population included 38 boys between the ages of eleven and sixteen, “all of whom display challenging behaviour often accompanied by associated difficulties in learning” (p. 269). The participating students represented a range of emotional and behavioural difficulties including but not limited to Asperger syndrome, Tourette syndrome, attention deficit disorder, epilepsy, dyspraxia and moderate learning disabilities. The head of education chose the students based on student interests and abilities to engage with the activities safely. The goals of the research was to answer the following three questions:

- Does participation in an outdoor education program result in better behaviour outcomes for pupils with EBD?
- Does participation in an outdoor education program result in better academic outcomes for pupils with EBD?
- What are the perceptions that the participants (both pupils and staff) hold about the utility of the outdoor education program? (p. 270).

The researchers hoped that the study would give information for the specific school, but also for integrating outdoor education practice in mainstream schools. The data was gathered on the participants through observations relating to their behavioural and academic performance as well as through interviews with participants on their perception of the program.

Through the study, the researchers found that the outdoor education program was “successful in promoting positive behaviour for this group of pupils with severe emotional and behavioural difficulties” (p. 273). The study found that the students who had the behavioural challenges associated with Asperger syndrome and ADHD showed the most improvement in their behaviours during their engagement in the outdoor education program, and the group of students with behavioural difficulties associated with obsessive/compulsive disorder demonstrated a generally positive improvement in their behaviours. The third group of student’s data is insufficient due to their engagement only on two days of outdoor education for concerns of their behaviours causing unacceptable risk and safety issues for the group.

The findings on the academic gains were less apparent to the researchers demonstrating varying degrees of academic success in the participants. The first group was unable to achieve most of the learning objectives during their outdoor education experiences, while the second group was able to achieve most of their learning objectives. Some of the discrepancies towards academic achievements were attributed to lack of participation due to violence and illness.

Finally, the perceptions of the outdoor education program were “overall positive and there was a strong feeling that the outdoor education program was both useful and enjoyable” (p. 278). The students were divided by academic ability in terms of their enjoyment, in such that the
more academically inclined students stated that the skill-based activities were most enjoyable, while the less academically inclined students found the physical activities to be the most enjoyable (p. 278). The students chose the activities that they demonstrated competence in and therefore perceived to be of value to them. “It could be suggested that as their skills in these areas have developed and have gained staff and peer approval, their increased self-esteem has been a factor in the behavioural and academic outcomes” (p. 278). Other comments from the participants included their enjoyment with working as a team and the other teachers and support staff involved emphasized the student’s development of interpersonal skills and confidence in their abilities.

Overall this study found a reasonably strong connection between students with social and emotional difficulties and positive effects of engaging in outdoor education experiences with their behaviours, emotional strength and social and communication skills. Overall, positivity in their self-image and that of their peers demonstrates the benefits of outdoor education for students with these exceptionalities.

**Future Research**

Through reviewing past and present research on both special and outdoor education, educators can help to influence their students in a positive way supporting their academic, social and developmental needs. Though there is research on both topics individually, there are few resources that connect the benefits of either specialty concretely. The programs of development for working and supporting students with exceptionalities outline aspects of methodologies for working with the students that are supportive of their overall wellbeing, academic success and development. These aspects are also outlined separately in the programs and resources
supporting outdoor education, but there is very little research that connects the two separate disciplines.

This project is aligned with the research because it values instructing students in an inclusive setting and not relying on one means to teach students but using various methods and environments to engage all learners and promote learning. If this resource can find commonalities between the two specialties, teachers can use one specialty to support the other and in the end support the whole child to develop critical skills and academics.

Conclusion

In this chapter I explored the very different specialties of outdoor education and special education, reviewing the history and beliefs of each, the knowledge base and theorists involved, as well as the current research that draws connections between outdoor education and special education. The aim was to explore the two specialties and make comparisons that could influence the instruction that one specialty could have on the other to assist students with exceptionalities in being successful during inclusive outdoor education experiences. Through this research and review, I have found connections within the literature and research that can be used to effectively guide students with various exceptionalities in an inclusive outdoor education program that can support their learning needs in addition to academic achievement. Through the completion of this literature review, I have been able to connect the two specialties and create a teachers guidebook to support teachers with implementing inclusive outdoor education experiences to aid in the development of specific skills in students with exceptionalities.

The literature that I reviewed has solidified my beliefs in the benefits of outdoor education for both academic and skill development for all students, but also those with exceptionalities in an inclusive educational setting. If inclusive education can incorporate the
ideas of outdoor education to promote academic and skill development in its curriculum, then students can have more opportunities to develop their skills and abilities and improve their learning through their engagement in multiple learning experiences.

In the next chapter I will expand on the process of designing this project through the use of the literature other sources to support the knowledge and project, my rationale for creating the project and design style, and outline challenges that I overcame throughout the process.
Chapter 3  
Considerations for Implementation of Product  

Overview  

Through the review of the research, I have created a resource for educators on incorporating outdoor education into their inclusive classrooms. The resource is called “Adapted Outdoor Education” to express that it provides adapted activities and games to support students with exceptionalities through outdoor education while engaging with their peers in an inclusive setting. Through the review of the literature and discussions with other educators it became apparent that there is room to expand the information and resources to support students with exceptionalities through inclusive outdoor education. This project aims to assist in filling the gap by providing educators with a resource to use within their inclusive classrooms to ease the use of outdoor education techniques while supporting those students who have exceptionalities and need extra practice with development of specific skills. The resource is designed for teachers to use through pre-planned activities and games with instructional methods supported by developmental and outdoor education theorists. The activities can be taught to all students within a class but are designed to specifically support the students with exceptionalities in the development of cognitive, social-emotional and physical skills.

Through this chapter I will provide further details regarding the process of designing this project including a description of the project and product, my rationale for creating this project, the design of the project, the data that was collected, as well as challenges that were met throughout the completion of the project.

Project Description  

The Adapted Outdoor Education guidebook has been designed for teachers to use to
assist with understanding child development through the eyes of the various theorists in the
cognitive, social-emotional and physical domains, and use the information to support the growth
of the associated skills with the developmental domains. Each chapter will provide teachers with
a brief overview of the theories within the specific developmental skills addressed in the chapter
and will provide recommendations for instruction to develop the cognitive, social-emotional, and
physical development skills. The chapter will also outline the skills that can be addressed
through the activities to provide background knowledge and a comprehensive understanding of
the skills prior to engaging in instruction. The activities and games section of the chapters will
outline the skills that can be acquired through the activities as well as comprehensive instructions
on how to engage all students in the activities for skill development. The activities can be used as
provided; however, teachers are encouraged to adapt the activities to suit the needs of the class,
their lessons, and their teaching style. A list of adaptations is included to offer suggestions on
making the activities more accessible to students with diverse needs.

Through the research, outdoor education has proven to be a beneficial educational
method to engage students in academic learning as well as personal and social development.
These benefits can be helpful for all students within an inclusive education program and should
be expanded on and utilized to support students to engage in a more holistic learning
environment. This resource will support educators who wish to utilize outdoor education
techniques within their inclusive classrooms and have comprehensive connections to both the
academics and developmental skills for their students with exceptionalities.

Adapted Outdoor Education guidebook supports teachers with their instruction of outdoor
education for skill development with inclusive classes by providing information and simple
activities to engage students while developing their skills and knowledge. The guidebook
demonstrates methods that can be easily used and adapted to instruct students with
exceptionalities during outdoor education activities. Adapted Outdoor Education will be
presented as a free digital download to be available for educators and schools who wish to utilize
the resource for inclusive outdoor education instruction. A copy of Adapted Outdoor Education
can be requested through email to jessica.e.robb@gmail.com.

Rationale for the Project

Through a review of the research and literature for both special education and outdoor
education, information is available for both specialties with comprehensive resources to support
teachers in either domain. However, upon further investigation literature focusing on ways to
connect the two specialties was sparse and not focused on inclusion of students with
exceptionalities using outdoor education. There is valuable literature on supporting specific
disabilities through outdoor education, the use of outdoor education to support students with
exceptionalities in private school settings, as well as the use of outdoor education for therapy, but
limited research conducted for inclusion of students with exceptionalities during outdoor
education. With this evident gap in current research and through discussions with other educators
about their lack of confidence to instruct students with exceptionalities in an inclusive outdoor
education program, the need for a resource for teachers became apparent.

In discussion with other educators and resources that provide instructional information or
teaching methods, a guidebook as a professional development resource for teachers to utilize to
further their knowledge of outdoor education and instruction seemed the most appropriate design
for the intent of this project. A guidebook provides background information on the topic that can
then be used to support the strategies and learning engagements. This guidebook can be used as a
professional development tool to gain a greater understanding of the concepts being expressed or
by using the games and activities within their inclusive classrooms, depending on the needs and desires of each individual teacher.

**Project Design**

To begin this project, I started looking at my knowledge and enthusiasm with regards to outdoor education and students with exceptionalities. My research began online reviewing the data provided by various outdoor education and special needs associations. I found many studies and literature for multiple skills, behaviours and academics that can be developed through outdoor education, but was unable to find clear examples of the benefits for students with exceptionalities. I continued to search for resources, using both online and text forms and began to have conversations with other educators both within the two specialties, as well as those working in inclusive learning environments. Through my additional research, I was able to find specific literature linking the two specialties and found the data was mostly on skill development through outdoor education with a focus on social, behavioural and emotional growth. In my discussion with other educators, I was informed of their opinions aligning with my beliefs of the uses of outdoor education to support students with exceptionalities, their interest in more resources on instructing outdoor education within an inclusive classroom, as well as their uncertainties with their ability to instruct and manage an entire class in an inclusive outdoor education environment. With the information from the literature and other educators, I began to move forward with the idea for the creation of a teacher resource to support instruction of outdoor education for students with exceptionalities in an inclusive education environment.

As I progressed with this idea, I continued to search for more research in both specialties to find as many connections between the two as possible and to gather ideas for activities that could support the skill development. Utilizing the research that I collected I began designing and
adapting previous activities from my outdoor education experiences to address skill development for students with exceptionalities. I continued to have conversations with other educators to discuss their ideas and receive feedback on the activities. The feedback I received included what activities teachers would use, whether they thought the activity was beneficial for their whole class, whether their students with exceptionalities would engage and learn in that activity and what actions could be taken to improve the activity for both engagement and skill development.

With the support of other educators and the research that I had conducted, I began to form the guidebook to support inclusive outdoor education for skill development. Through this process, I found strong connections between outdoor education and supports on cognitive, social-emotional and physical development and continued to form my research and my project on these areas of development through outdoor education.

**Secondary Data**

As mentioned in the previous section I collected my research through personal experiences, print and online research and conversations with other educators and specialists. These three forms of data have supported my project by supplying a wide range of qualitative and narrative evidence of the benefits and uses of outdoor education to support students with exceptionalities.

The literature that I collected was primarily qualitative with most studies being concerned with the observations of changes or growth in the participants, as well as personal comments from participants on their engagement in the study. Many of the studies that I read incorporated researcher observations demonstrating the effectiveness of the study and questionnaires for gaining feedback from the participants, as in the case studies conducted by Sulaiman, Mahbob and Azlan (2011) and Fox and Avramdis (2003). Other studies, such as the one conducted by
Taylor and Kuo (2008) focused on interviews of student participants around their enjoyment and effectiveness of the activities they participated with. This study did include the use of a diagnostic test to measure the student’s results, which the researchers then compared with the feedback from the student interviews to make connections to support their studies conclusions.

I collected narrative data through my conversations with other educators and personal experiences teaching both specialties, and focused on the observations, motivations and opinions with regards to outdoor and special education. My experiences with both outdoor and special education instruction have shaped the way I teach students with exceptionalities and my observations have guided my progress with this project. Through the feedback from other educators, I focused on their opinions, beliefs and experiences to demonstrate the need for this resource as well as the effectiveness of outdoor education for skill development.

The project is not intended to provide concrete evidence that outdoor education supports all students with exceptionalities, only that there is evidence that has been documented of its benefits on learning and skill development and it can be utilized as an effective method for instruction. Qualitative data appeared to be the more beneficial method of data collection to develop this project and provide a resource to support teachers with inclusive outdoor education instruction.

**Challenges**

Throughout the process of this research, I experienced the challenge of finding the data to support the development of my project. In the beginning, finding comprehensive literature and research connecting the topics of outdoor education and special needs instruction was difficult. I was aware of the benefits from my teaching experiences and knowledge of both specialties but was surprised to find so few resources. The resources that were available primarily focused on
the use of outdoor education supporting academics for students, with no mention of students with exceptionalities. With the limited research I considered adapting my project to what literature and resources were available; however, I felt the need to address the gap in the literature and pursued developing a resource to support educators with instruction of outdoor education in their inclusive classrooms.

**Conclusion**

Through the process of my research and experiences, I was able to expand my knowledge of outdoor education and special education instruction and find evidence for the benefits of outdoor education supporting skill development with all students, including those with exceptionalities. From this research and experience, I was able to develop a guidebook to support the connections between the two specialties and promote inclusive classroom engagement with outdoor education for skill development. I will continue my research and engagement in outdoor education for students with exceptionalities and continue to improve my professional knowledge as an inclusive classroom teacher.

In the next chapter I will discuss the overall project and what I have taken away from the process of creating this project, the limitations of my project in the fields of special and outdoor education, and my recommendations for the future use of this project for other educators and for myself.
Chapter 4

Reflection

The inspiration for this project and paper came about from my experiences in both my personal and professional life. I began to realize my desire to support educational development in this area through my experiences with working with students and adults with exceptionalities, my engagement in outdoor education activities, and through professional discourse with other educators about outdoor education. These discussions and experiences are what gave me the idea of creating a resource to support teachers with instruction of an inclusive outdoor education program.

Through the process of designing this project, I was able to learn more about the various theorists involved in both specialties and was able to draw multiple connections between suggested instruction of students with exceptionalities and ways in which to support students engaging in outdoor education. The benefits from outdoor education on learning, development and overall health of students connects well with the theories of best practice for instructing students in the classroom. The challenge for teachers is in modifying these instructional and developmental ideas from the classroom to an outdoor environment location.

In my communications with other educators about instructing outdoor education with students with exceptionalities, there was a surprising number of educators who expressed concerns and even fears about teaching outdoor education and supporting their students with exceptionalities. Many educators avoided field trips, class outings and even some physical activity with their students for fear of not being able to instruct in that setting or for the behaviours that would arise from the change in setting. The lack of professional development, information and resources about incorporating outdoor education into daily teaching was a large
part of that fear. The teachers lacked the knowledge to move forward and try out this different method of instruction. In further discussions, many teachers agreed that with additional resources or professional development that they would be confident to attempt outdoor education activities with their inclusive classes. Further research and information for teachers would help to alleviate this stress and allow more educators to use this method of instruction to support the development and learning of all their students.

The resources that are available for instruction of outdoor education and special education are increasing, and as both specialties continue to grow more resources will become available to support the connection between the two. With the limited literature available, I was able to create a resource to support some of the developmental challenges for students with exceptionalities, although there are additional ways in which outdoor education could support students with exceptionalities. In the future through continued research with outdoor education and special needs methodologies, more information can be developed to demonstrate concrete instructional methods to instruct students with exceptionalities in an inclusive outdoor education program. For now, the connections are purely observational with limited concrete examples, although many researchers and educators believe in the benefits of outdoor education for all students’ academic and personal growth, including those with exceptionalities. With more research and literature available and more educators experimenting and performing research the benefits of outdoor education can be accessible to all students.

Due to the research available, the guidebook created for this project focuses on only a few skills that can be addressed through outdoor education. The use of outdoor education to support students with exceptionalities is much broader than this project can express and therefore should not be the only forms of outdoor education activities that teachers attempt with their
classrooms. This guidebook supports three areas of development including cognitive, social-emotional and physical development. In the research there was evidence of other areas of a student’s development that could be supported through an outdoor education program such as behaviours, language acquisition and academic ability, although the evidence was inconclusive or too broad to be fully included in this guidebook. I believe that with more research and time, further connections can be made to more specific disabilities, skills, and areas of growth than are currently available that will be able to better support teachers with instructing an inclusive outdoor education program. Teachers who are interested in developing an inclusive outdoor education program can begin with the activities provided in this guidebook, but after some experience with basic outdoor education strategies teachers should experiment with other engagements in the outdoors to further the experiences for their students and allow for more developmental and academic growth.

In further conversations with educators about the completed guidebook, many educators were encouraged by the ideas displayed in the guidebook and expressed their interest in trying out some of the activities and games with their own inclusive classes. Many educators said that the activities would be beneficial for their whole classes as well as their students with exceptionalities and expressed that they would find the resource helpful for them to begin activities for an inclusive outdoor education program. A few of the educators expressed that they have students with other challenges and would be interested in knowing when the resource would be expanded to include a wider range of skill development and activities to support both the included skills as well as those not yet covered. Overall the educators who assisted with giving feedback and comments were very positive about the resource, its simple and easy to use design, and how they could use the information and activities to improve their instruction of
outdoor education with their inclusive classrooms.

For myself, I hope that through more research and personal experiences teaching outdoor education with my inclusive classrooms, that this guidebook can be expanded to incorporate more developmental activities to engage all students in an inclusive environment through outdoor education.
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