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Developing a Teacher Guidebook to Increase Outdoor Education in Schools.

Patrick Schuette

Hamline University

A capstone submitted in partial fulfillment of the requirements of the degree of Master of
Arts Education: Natural Science and Environmental Education.

Hamline University

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Epigraph

Humankind has not woven the web of life. We are but one thread within it.
Whatever we do to the web, we do to ourselves. All things are bound together. All
things connect.

- Chief Seattle Duwamish

Chapter One

Introduction

Outdoor education is about much more than learning content information in a classroom; it is the class and teaching mindset which rekindles students' passion for learning and discovery. Students build self confidence, become leaders, work in teams, discover different types of intelligences, find themselves, and heal when connected to nature. Adults and students are in need of a disconnect from technology and the indoors. The literature shows a meaningful nature experience in young people can influence long-term, lasting changes in their lives.

Kids do not go outside and play as much as they once did. This has led some schools to create outdoor/nature preschools and kindergartens, as well as bring back recess in the elementary schools. Richard Louv (2005), author of *Last Child of the Woods* and founder of The Children's Nature Network, argued environment-based education is essential to be taught at all levels which will help school be seen as a portal to the wider world and not a form of incarceration. In my opinion high school students and a majority of adults have lost this important connection to nature, causing society to suffer. Outdoor education needs to be taught at all levels and students have to be exposed to the wonders nature has to offer.

How can an outdoor education guidebook increase engagement in school while developing intrapersonal and interpersonal skills? My capstone project consisted of developing a guidebook to help teachers and administration start an elective outdoor education course at their schools. In my opinion many students struggle in school and need healthy coping mechanisms. Being able to disconnect from the busyness of society and get back to basics is important. This guidebook helps teachers get their students into nature to have real hands on experiences and to

teach students more about themselves. The guidebook helps the teacher justify the importance of the outdoor education to his/her administration and school board. Lastly, the guidebook helps outdoor educators build an outdoor education teacher network which they can collaborate and share ideas.

There needs to be major reform in American education. We have arrived at a point where it seems many students are behind a screen the majority of the day. The creativity and autonomy in learning and teaching is being removed from schools as schools are focusing on taking a multitude of “all-important” standardized tests. The issues of technology, screens, and disconnect from nature expand beyond our classroom. In the past, families spent more time outdoors as they depended on nature for food and survival. Today, children can often be afraid of nature because it can be foreign to them. Too often kids would rather play a videogame or be on their phones than go fishing, hiking, hunting, skiing, playing ball, etc. Since many students are not learning outdoor hobbies at home, I believe schools need to start teaching them. Students should have the opportunity to sign up for an outdoor education class when schools are offering countless other elective classes like band, shop, art, physical education, graphic design, teacher assistant, work experience, and study hall.

The Journey

My journey consists of three main parts: my educational years, my career as a teacher, and my family. These major themes have helped develop my teaching philosophy and love for the outdoors.

My educational years. My journey has led to my passion for outdoors and education and is the influence behind developing an outdoor education guidebook. I did not grow up having

one specific mentor, but many people contributed to my journey. As a family we spent a lot of time outdoors, which helped to foster my love for nature and exploring. Every summer we took a family trip out of state and my family instilled in me the love of travel and new experiences.

Some of my favorite college classes involved hands on learning experiences. I loved the geology field trips to the Iron Range in Minnesota, Fishes of the Red River Valley field course, the caves in southern Minnesota, snorkeling in Itasca, and visiting bogs by Ely. My junior year of college I volunteered to go as a team leader on a week-long South Dakota field investigation with a group of middle school students. I led a group of eight boys as we discovered the wonders of Pipestone, the Badlands, the Black Hills, Devils Tower, Wind Cave, and more. This experience allowed me to see the impact field investigations have on students and how much they can learn when they are outside of the classroom. All in all, I experienced the trip three times and this field investigation continues to influence my passion for outdoor education.

Between my fourth and fifth years of college I had another life-changing experience that shaped my education philosophy. I chose to go to visit my sister who lived in the rural parts of Kenya. I learned a great deal from that trip and feel strongly everyone should experience another culture for an extended period of time. I stayed in a poverty-stricken village with my sister. I found peace in how simple life can be. I learned about the culture, school system, and how happy people can be in an exceptionally simple form of life. The simplicities and disconnect from technology in outdoor education reminds me of my learnings in Kenya.

Teaching. I joined the Conservation Corps of Minnesota (CCM) as a head youth team leader. I spent three months living in the woods of St. Croix State Park, Voyageurs National Park, and other places in the Midwest. I had youth across the spectrums creating the most diverse

culture of which I have been a part . The diversity was from rural to metro, race, wealth, sexual orientation, disability, and many other classifications. The culture fostered acceptance and led to a great learning experience about myself, others, and nature. Living in tents for a summer and teaching people about nature and themselves is what I love, and CCM was the longest stint I had doing it. I left even more passionate about alternate ways of learning and the importance of nature in one's life.

Three years ago I started a teaching job in Minnesota, where I teach three-fourths of the time at an Area Learning Center (ALC) and one-fourth of the time at the high school. I love the alternative setting and have added a trimester of outdoor education to the winter, as well as the one that is the fall. In the outdoor education class, I have taken my students on overnight camping trips, hiked, canoed, fished, etc. Since I have started teaching the class, student interest has increased and the class has been at capacity for the past two years. I also teach biology, physics, chemistry, earth and space, engineering, and robotics. I love both the high school and the ALC and know teaching is what I am meant to do. I think making connections and understanding each student is essential to having a successful class. I hope to have an outdoor education class at the high school within the next two years. My director and I are also looking at doing a field class in the Boundary Waters Canoe Area, Yellowstone, or the Dakotas and rotate the spot each summer.

My family. My wife and I have been together since high school and her family has been a huge inspiration to my love of outdoors. My father-in-law still farms land and raises beef cattle and chickens. We butcher a few hogs and a steer each fall and spring. We plant about an acre

garden and raise enough fruits and vegetables to sustain our families for a great part of the year. He is the one who introduced me to my love of ice fishing and brought me back to spearfishing.

Everyone in my family, which now consists of me, my wife, our four-year-old, our three-year-old, and our nine-month-old, is deeply connected to the outdoors. Currently my family enjoys going hiking, biking, fishing, rock climbing, snowboarding, cross country skiing, gardening, and many other outdoor activities. We have continued our family tradition of traveling out of state. We have taken our kids to South Dakota, Glacier National Park, the Upper Peninsula of Michigan and this summer will go to Missouri for the solar eclipse. I have made it to the Boundary Waters Canoe Area six times in the last seven years and took my two girls this year for the first time. I have found nature heals me and keeps our family happy. I want to share the wonders of nature with my students who do not get outside on a regular basis or who have not been exposed to nature growing up. My journey is far from over, and my time with the Environmental and Natural Science Masters program through Hamline has brought me closer to the next stages of my journey.

Chapter Summary

An outdoor education guidebook was developed to help schools increase student engagement and develop intrapersonal and interpersonal skills. This guidebook can be used by teachers to start an outdoor education course at their school and build their teacher network.

Outdoor education is more than learning in a classroom. Students build self confidence, become leaders, work in teams, discover different types of intelligences, find themselves, and heal with being reconnected to nature. This is done by changing the mindset of school. Outdoor education is a needed elective course at schools because students are not as exposed and active

outside as they once were. Even when they are, the constant connection of technology is plaguing them. People are becoming too disconnected to real-life skills and nature. High school students need breaks from learning in a traditional setting. It is important to give them opportunities to learn through experiencing the outdoors and nature.

Travel and experiencing new places has been a big part of my life. My trip to Kenya helped shape my love for nature and culture. I have learned the most in school when being on field investigations or leading them. My time in South Dakota leading students and the many field trips I have been a part of have made me realize the importance of experiential learning in the field. I also spent time with the Conservation Corps leading youth in outdoor service projects helping me realize the importance of service learning. Lastly, teacher autonomy is essential for fostering creativity and the well-being of teachers. My family and life experiences have helped develop the passion and value I have for outdoor education.

The guidebook which I developed helps teachers start outdoor education in their school. The skills and hobbies learned in outdoor education will help students develop healthy lifelong habits. The focus stems from the question of *How can an outdoor education guidebook increase engagement in school while developing intrapersonal and interpersonal skills?*

In chapter two, the literature for outdoor education, mental health, autonomy in education, too much technology, and guidebooks was studied. These main themes in the literature are essential in understanding the mindset outdoor education requires to be effective.

Chapter three is about the development of the outdoor education guidebook. Key components in this guidebook were to make it digital, accessible, and manipulatable. The goal was to make the guidebook more than an accumulation of lessons because outdoor education is

place-based and lessons will adjust by location. The guidebook also includes justification of why outdoor education is important, a letter to the school board and administration, resources, example lessons, and a teacher contribution folder.

Chapter four is a reflection on the entire capstone experience. The reflection will have topics of the outdoor education guidebook, the literature review, and the process of doing a capstone project.

Chapter Two

Literature Review

The focus of the literature review is to develop a teacher guidebook to increase outdoor education in schools. The themes of the literature review are outdoor education, overexposure to technology, mental health, autonomy in teaching, and guidebooks.

Outdoor education is learning experientially about the outdoors. It is how humans learned in the past, and it helps instill a passion for learning and discovery. Outdoor education is not a class; it is a mindset. A big part of outdoor education is adventure, discovering the world and finding a role in the world. (James & Williams 2017; Ford, 1986; Woodhouse & Knapp, 2000) The second part of the literature review focuses on the mental health impact of technology use and over access to news media. The main reason people are discounted from nature is because of the increased access to technology in our society (Rideout, Foehr, and Roberts 2010). With fewer outdoor enthusiasts there are fewer people passing on their passion of the outdoors to younger people. This includes people moving from rural areas into urban areas due to job demographics changing from farming and trades to more white-collar and factory-type work.

The next part of the literature review looks at teacher autonomy and the impact on students and teachers. How does giving teachers options and freedom to be creative affect teacher success and student learning? What if teachers were allowed to take their students off campus and have off-site learning experiences with other people, experts, and more prominent locations? The literature says that off-site and place-based experiences will have lasting impacts on students (McGowan, 2016). These experiences are the types of things students remember when looking back at school and are often the things that shape them in their careers and lives.

Schools are putting a focus on learning standardized test content which causes students to have less time for classes that focus on vocation and life skills (Berliner 2011). Schools are teaching academics but are not teaching to the whole person.

Lastly, guidebooks were studied to give best practice on format in getting the information gathered out to teachers. Teachers like easy to use resources. The resources should be accessible and easily adapted to fit the teacher's needs or scenario. This section of the literature review will be used to form the outdoor education guidebook which will assist teachers when starting an outdoor education course at their schools.

Outdoor Education

The main focus of the literature review is outdoor education. What is it? Why is it important? Does it work? The literature supports the impact that outdoor education has on students and claims it really does work. Outdoor education has a lasting impact on students. Students are more likely to change their habits and continue with those habits long-term even after one semester of being exposed to an outdoor experience (McGowan, 2016).

What is outdoor education? Outdoor education is not easily defined because it crosses from mainstream education into other organizations which are not school based (Ford, 1986). Recreational programs, scouts, conservation agencies, management programs, and other facets that interact with the outdoors all view outdoor education with variation (Ford, 1986). In his research Ford (1986) defined outdoor education with this broad definition, “outdoor education is education in, about, and or, the outdoors” (p.2). However, this definition is literal and does not define the actual meaning of outdoor education. Multiple definitions and aspects of outdoor education must be studied to get a better understanding.

Outdoor education is an extension of classroom instruction, experiential, multidisciplinary, connects place with self and community, and often includes service learning, learning skills, and curricula designed with broad objectives (Woodhouse & Knapp, 2000). Outdoor education is often place-based learning which is current best practice in education. Place-based education helps students connect to their community, find value in serving others and enhance appreciation for the natural world (Sobel, 2004). A study conducted by Glover (2014) said, Outdoor education has direct nature experiences, which have real consequences. These experiences are on a continuum and lead to many methods and locations of learning. The curriculum must allow students to make their own decisions and take action, which will inherently affect the outcome of the learning. The mental and physical challenges provided to students allow for students to internalize their locus of control, giving ownership in the learning experience (McGowen, 2016).

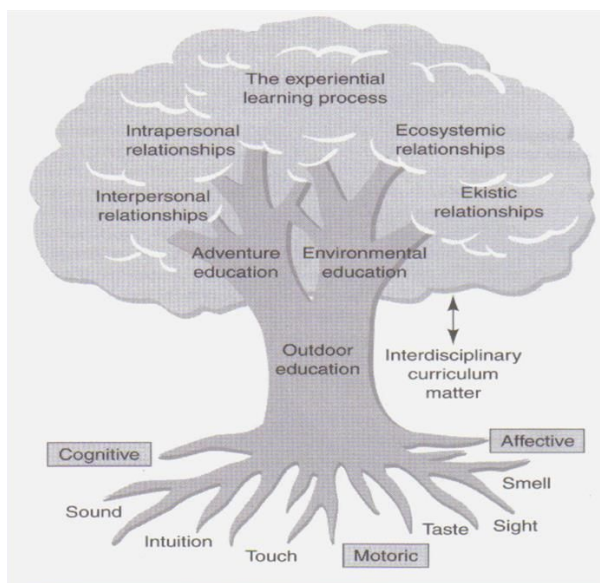


Figure 1. Priest's model of outdoor education

Priest, S. (1988), 'The ladder of environmental learning', *Journal of Adventure Education*, Vol.5, No.2, pp.23-25.

Location can range from the deepwoods, a lake, a garden, urban outdoors and even indoors in some instances should be place-based to help students develop an understanding and care for the location in which they reside (Woodhouse & Knapp, 2000; Glover, 2014). The amount of time is also important with outdoor education programs needing repeated and consistent nature experiences (Shanley 2006). Outdoor education best practice consists of place-based learning where students learn physical and mental skills with the outcome of success being directly related to those skills. Outdoor education will look differently depending on location because it is influenced by local environmental, students, resources, and culture.

Mullins (2014) suggested there has been a focus to “deskill” outdoor education to make it more accessible because teaching outdoor skills are often limiting factors in the programs. However, the skills learned in outdoor education are essential in the success of the program because it helps students develop an internal locus of control (McGowen, 2016). To have a successful mainstream outdoor education program, one must still have adventures which teach skills such as kayaking, canoeing, rock climbing, orienteering, archery, fishing and mountain biking (Mullins, 2014). Schools are able to provide these experiences on campus, at local parks, during field trips, and by bringing in experts.

Quay (2016) alluded to the complexities of outdoor education in the title of his research, “Outdoor education and school curriculum distinctiveness: more than content more than a process” (p. 1). Lugg (1999) says outdoor education is distinctive with its own process and curriculum which changes depending on teacher and location. “There is a lack of clarity about the purpose of outdoor education, even among outdoor educators” (Lugg, 1999 p.25). Quay focuses on the changes of outdoor education through time as well as Australia compared to the

United States. Quay (2016) states a big difference between Australia and the United States was Australia has held on to the philosophy of outdoor education being about camping and adventures in the outdoors. The United States already at the beginning of the twentieth century was viewing outdoor education as a much broader idea which includes gardening, well-being, and other subjects being learned in the contexts of the outdoors (Quay, 2016). The consequence of not agreeing upon outdoor education curriculum and philosophy is outdoor education is not taken seriously as a subject. Instead of focusing on content, programs should be focusing on the process of outdoor education, which will allow teachers to stay more uniform and allow justification to their school (Quay, 2016).

Warren (1998) referred to outdoor education as situations that take place in an outdoor setting which have challenges and adventures that are used to educate through direct experiences. This definition gets at the root of what outdoor education is. Understanding why outdoor education is taught in such a manner is just as important in understanding the definition of what it is. The outcomes of teaching in this manner develops the mindset of outdoor education.

Outdoor education is more than being outside, it is about giving students experiences that will stay with them long term. Choices made by students help determine the experiences which they will take during class as well as the outcome of each experience. Outdoor education courses can occur anywhere in the world. The content and process will vary depending on the location and resources, but each location can have its own place-based outdoor education class. Traditionally outdoor education has focused on adventures like camping, hunting, and wilderness survival but has morphed to include other outdoor skills and lessons. Lessons that incorporate skills in the outdoors which allow students to develop both physically and mentally can be

classified as outdoor education. Activities such as gardening, birding, and carving would all be included under the umbrella of outdoor education. It is important to remember outdoor education is a mindset which focuses on the whole person and not a specific subject. Self reflection and development of one's self and place is essential through the course (McGowen, 2016)

The confusion of defining outdoor education is laid out nicely by Ford in one of her early publications.

Between the two poles of this spectrum are many people who seem to compromise on some, albeit weak, combination of the two issues. There are also those who would not agree with either point of view, because they feel that outdoor education is not a separate subject, but rather a process of teaching (any subject) in the outdoors. (Ford, 1981, p. 69)

This excerpt highlights the spectrum of outdoor education from not being a stand alone course to a course of outdoor recreation to teaching all subjects in the outdoors

Why is outdoor education important? Quay (2016) studied the importance and outcomes of outdoor education as a stand alone course instead of just incorporating outdoor activities in content based courses. His closing statement of his article stated, "With outdoor education there exists the potential to articulate how all education can and should work" (p.8) According to James and Williams (2017), outdoor education increases students sense of self, improves students self confidence, and helps students collaborate in teams. Teamwork is an important twenty-first century skill. McGowen (2016) also stated students are able to make, "intrapersonal, interpersonal, community, and environmental connections while becoming comfortable with their identity" (p.4). Students must understand themselves before they can find

their place and start to see the deeper connections in life (James & Williams, 2017). The development of the whole person embraces critically thinking, making choices and learning from the outcomes of those choices. The development of these essentials justifies why outdoor education should be taught in conventional schools.

Not all people fit into the traditional school model, but all students have talents. Outdoor education allows some students to thrive who would otherwise not. Louv (2008) claimed classes like outdoor education can help level the academic playing field for students. By putting students in different scenarios than traditional school, they are given the opportunity to show skills, be leaders, and find their purpose (Louv, 2008). A distinction Louv (2008) made is students who develop as leaders in nature and the woods are often not the same leaders in the academic classroom. Conventional education is doing a disservice to students who learn and thrive in outdoor settings. Bredderman (1983) supported this same thought with claiming students who struggle with academics, motivation, attentional focus, or social skills gain the most from outdoor education programs.

According to Oltman, Marcie and Eckman (2002) young children's learning is diverse and multiple intelligence theory explains what kind of learners there are. There are at least eight main intelligences. They include: logical-mathematical, bodily-kinesthetic, musical, interpersonal, intrapersonal, spatial, and naturalist (Oltman, Marcie & Eckman, 2002). This theory is essential for teachers to understand that each student is unique and has his/her own talents and struggles. Teachers should incorporate multiple intelligences in every lesson plan. Oltman, Marcie & Eckman (2002) suggested including music or kinesthetic into a mathematical lesson will help the students pull from different parts of their brain to increase all skills, even the

the skills they struggle with. Often in high schools teachers get too egocentric to their content area and focus on intelligences that fit well with the subject and ignore other intelligences (Oltman, Marcie & Eckman, 2002).

Students are smart in different ways, but conventional education focuses on particular intelligences thus creating boredom in school. Traditionally education has been taught in lecture and in text. Both methods fit auditory and reading/writing learners but leave other types of students to struggle. James and William (2017) claimed, “forty-five percent of sixth through twelfth grade students were disengaged by school-based learning” (p.60). James and Williams (2017) responded to the statistic of disengaged students with, “Experiential involvement in active, in-context, outdoor environmental education is exciting and emotionally engaging for children and consequently leads to deeper and more effective learning” (p.3). Teachers continue to search for ways to engage students in all subjects because when students are engaged they learn more. The increased engagement might be from relevant content to the students, peer interactions, movement, etc. Outdoor education lends itself to be an engaging course because content is skills- based and often hands on.

Case (2017) stated “authentic” nature experiences do not need to be untouched, remote or expensive to have an impact. Experiences are often better when they are local because it increases the likelihood children will continue to have experiences beyond the class. More often than not kids get hooked on nature in their local woods climbing trees, playing by a creek, exploring a local park reserve, or going to a nearby lake (Case, 2017). Do not undervalue one’s local area because it is not as grand as the Grand Canyon or Yellowstone. Sigurd Olson (1958) stated, “Everyone has a listening-point somewhere. It does not have to be in the north or close to

the wilderness, but some place of quiet where the universe can be contemplated with awe” (p. 8). This quote from *Listening Point* emphasises the value in finding a place where a person can reflect (Olson 1958). It is important for students to find purpose in the local community because as they grow older they will remember those experiences and care for the local area in which they reside.

From Louv (2006) , James and Williams (2017), Quay (2016) and other experts in the literature outdoor education engages students, motivates learning, appeals to non-traditional students and has a meaningful, long-lasting impact. Even though outdoor education is not a content-specific course, students learn about themselves and how they fit in society. In a study from Quay (2016), “Education involves more than just curriculum and pedagogy, for it is ontological, about being, about who we are in the world, about who we have been and can be” (p.8).

Does outdoor education work? According to the research, the effectiveness of outdoor education is controversial. Outdoor education is difficult to define among outdoor educators and does not follow specific standards, content, or process which justifies the confusion of its effectiveness. The studies do show an increase in student motivation, enjoyment, and long term change, but these changes are not inline with conventional education programs.

According to Neill and Richards’ (1998), meta-analysis of outdoor education programs with over 12,000 participants, “sixty-five percent of those who participate in adventure programs are better off than those who do not participate” (p. 3). Based on the analysis, students had meaningful experiences from adventure programs. Those experiences helped shape the youth in some way for the positive with youth thinking they would not be the same person without those

experiences. Most adventure programs include outdoor skills, outdoor adventure, self reflection, leadership, and conservation (Neill & Richards, 1998). The meta analysis suggested that students benefit from outdoor education programs with participants viewpoints shifting after being in such programs.

McGowen's (2016) students were part of an outdoor adventures course where students incorporated all subjects into one course as well as doing traditional outdoor education curriculum. McGowen (2016) stated that ninety-five percent of her students agreed or strongly agreed they perceived an impact on developing their self authorship from a five-day winter camping adventure. Participants who volunteered with elementary students had an eighty-nine percent perceived impact on developing their self authorship and those who canoed had a fifty-three percent perceived impact on developing their self authorship (McGowen, 2016). Students who participated in the adventure program become more self aware and learned more about themselves and how they fit into the world. McGowen (2016) did pre and post tests with her students to gain her data which is common practice when trying to determine the impact of an outdoor education course.

However, the effectiveness of outdoor education programs is irrelevant if schools do not value the desired outcomes of outdoor education classes. Schools are less focused on the student as a whole person and more focused on academics alone. Berliner (2011) claimed standardized tests scores have consequences for schools, teachers, and students. A side effect of high-stakes testing is that curriculum is narrowed to assure proficiencies in math and reading (Berliner, 2011). Schools will continue to focus time, energy, money, and quality teachers, into specific

courses to bring tests scores up. The research is promising for outdoor education courses for schools that are whole-student focused.

According to the National Geographic article by Williams (2015), “When we slow down, stop the busywork, and take in beautiful natural surroundings, not only do we feel restored, but our mental performance improves too” (p.1). Williams (2015) interviewed Strayer, and he stated participants showed improvements in cognitive function in a three-day wilderness backpacking trip. The participants performed fifty percent or better on creative problem-solving tasks than people who were not on such a trip (Williams, 2015).

Richard Louv claimed, “We are genetically wired to be in nature. When you lose something that is so central to human existence, of course you aren’t going to do so well” (Louv, 2017 p.1). The increased amount of time away from nature is exemplified by Evans (2003), “Today, human beings spend more than 90% of their lives indoors” (p.1). Shanley (2006) stated rural and urban children used to grew up mostly outdoors free of adult interference and had direct experiences with the plants, animals, and the outdoors. Children are given far less opportunities to explore and be out in nature (Shanley, 2006). Kids are no longer allowed to be kids. Curiosity is punished. Freedom to explore is not allowed. Adults control children's’ lives. Shanley (2006) argued outdoor education courses can help students get back to nature and experience the freedoms they are missing from their lives.

Mental Health

Mental health is someone's physiological, emotional, and social well-being. Mental health is complicated and been studied greatly. The literature review will focus on what mental health is, the impact of nature on mental health, and the impact of technology on mental health.

What is mental health? According to *What is mental health?*, “Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices. Mental health is important at every stage of life” (What is mental health?, 2017).

Mental health issues have risen and are a growing problem in today's society. People often disagree with mental health issues by rationalizing that in the past mental health was not as understood. Doctors could not collect strong data in the past, and society hid the problems instead of trying to treat people (Twenge, 2015).

Mental health is how people handle stress, make choices, feel, and act. The fundamental skills associated with mental health are declining (Twenge, 2015). The increase of mental health issues is consistent between the 1930s and 1990s with anxiety and depression being the most notable (Twenge, 2011). However, since the 1990's suicide has decreased showing that not all measures of mental health have increased (Twenge, 2015). The decrease in suicide is often cited as evidence of mental health not increasing but Twenge (2015) argued that the decrease in suicide corresponds with the beginning of prescription antidepressants which are given to the most severe cases of mental health disorders. In addition to prescription drug treatments, raised awareness and the openness of disorders in society also have an impact on suicide. In the education field, there has been a clear increase in mental health issues and demand for the school to provide services for such individuals (Twenge 2015).

Oltman, Marcie, and Eckman (2002) in *Natural Wonders* made the important point of teaching to the whole child. There are three parts to a child: the mind, heart, and the body (Oltman et al, 2002). Educators often spend the majority of their day teaching to the “mind” part

of the child and the “body” is focused on during personal wellness classes, but rarely in education is the “heart” part of the child addressed. Educators often do not teach to the whole child because children’s emotions can be overwhelming (Oltman et al, 2002). Teachers can also get too ingrained in the subject’s content and forget about the mental needs of the students (Oltman et al, 2002). Students are not being taught how to develop mental health skills because teaching mental health skills can be overwhelming and education's focus is on content.

Nature and its impact on one’s mental health. Richard Louv, in a recent speech, tried to convince people to imagine a nature-centered future. Louv (2017) asked people to imagine hospitals offering healing gardens, prescribing nature as medicine for stress, and reducing obesity through nature play and gardening. The future described does not reflect current educational philosophy with free play decreasing in elementary schools and an increased focus on testing (Oltman et al, 2002). The decrease in free play is negative to society when taking into consideration that the most important things in life are learned through play. Although it is often considered frivolous or ineffective, play actually benefits children’s learning in several ways (Oltman et al, 2002). Children develop cognitive, social, emotional, physical interpersonal, problem solving, and creativity skills when play is fun and child driven (Oltman et al, 2002; Walker, 2015). Children that are playing get so interested in what they are doing they don’t realize they are learning.

When children play they are physically active leading to physical health benefits as well as mental benefits. Obesity has tripled in the last thirty years (Ogden, Flegal, & Carroll, 2002). The increase of obesity is also related to a decline in mental health. Programs like outdoor education focus on both physical and mental health.

Outdoor education and play are not the same, but outdoor education is activity-focused. Many of the skills which are learned are fun hobbies which people can continue to do in life as enjoyment like canoeing and hiking. Outdoor education is not play because it is adult-driven and learning objectives need to be met. Walker (2015) claimed natural play flourishes best outdoors in humans' natural environment. John Lubbok's statement on nature exemplifies the importance of learning through nature, "Earth and sky, woods and fields, lakes and rivers, the mountain and the sea, are excellent schoolmasters, and teach some of us more than we can ever learn from books" (Lubbok, chapter 4, 1895). Hermelin (1970) claimed people do not learn ideas from absorption of knowledge but construct concepts through personal experimentation and observations. Outdoor education helps students mental health because students are outdoors, doing physical activity, learning fun activities they can do in life.

Taking risks, learning from failed attempts, and problem-solving are all things that are important to someone's well-being and mental health. Woods (2017), after attending the Children's Nature Network International Conference, stated that it is better for children to learn risk as a six-year-old playing in natural areas than as a sixteen-year-old behind the wheel of a car. By not exposing children to the outdoors, they miss out on freedoms and learning responsibility which comes with those freedoms (Woods, 2017).

The impact of technology on mental health The use of technology has risen to a point where youth are on devices more than they are outside. Technology has helped our society advance but technology and those advancements have side effects. Mental health issues are rising and there is a correlation with the amount of technology people use daily (What is mental health, 2017) Youth have been fascinated with technology. The progression from radio, to the

telephone, then to television, to video games, followed by the internet has spanned generations. Smartphones combine all of the previous technology advancements resulting in people being constantly connected to technology with no break. Ninety-two percent of eighteen to twenty-nine year old Americans have a smartphone and seventy-four percent of Americans use social media (Smith, 2017).

American Eleven to fourteen-year-olds average eight hours and forty minutes of media use a day and when multitasking is taken into account nearly twelve hours (Rideout, Foehr, and Roberts, 2010). Data consistently shows an increase of technology use and being indoors and a decrease of time spent outdoors. Humans evolved in nature, and it is a vital part of us. Nature must be incorporated in people's lives to live a happy, healthy life style. Case (2017) completed a comprehensive study of Americans and nature with over 12,000 participants and found adults are worried about younger generations not interacting with nature. Case wrote, "Older adults are concerned that younger generations are overly reliant on electronic media, unaware of how the natural world works, and unacquainted with the simple enjoyment of being outdoors" (Case, 2017, *major findings: where nature is located paragraph 3*).

To help counter the lack of nature and overuse of technology Case (2017) suggested to set up programs in which adults spend time with young people in nature. Adults can show youth the greatness of nature and parents will have less concern since adults are supervising. Nature centers run year-round programs encouraging youth to get outside during all the seasons. James and Williams (2017) stated, "Children are spending more time engaged in sedentary, often technology-related, indoor activities, and less time in the outdoors" (p.3). Schools can help students by offering courses of outdoor education and physical education. Teachers can help by

planning lessons which do not require a device giving students a break in the day from technology. Teachers can help reduce mental health issues by bringing students into nature and having lessons outside. Students who are outside engage different senses which can help students focus not only when outdoors but also when they go back inside.

Autonomy in Teaching

Teachers are leaving the profession of education at an alarming rate. Many factors play into why teachers decide to not continue teaching and find another profession. Westervelt and Lonsdorf (2016) stated that on average eight percent of teachers leave the profession in the United States each year, which is much higher than other professions and higher than high-performing education countries such as Finland and Singapore.

Some of the reasons teachers are leaving the profession is because of low wages, increased issues of students, high-stakes testing, pressure from administration, lack of training, and lack of freedom. These factors and many more contribute to teacher-burn-out, which causes teachers to find other careers. Westervelt and Lonsdorf (2016) reported a case where a Texas teacher faulted the administration for putting pressure of not allowing any students to fail. He could not continue to work in a profession where the status quo was to allow all students to pass regardless of performance. According to the same article, teachers make about twenty percent less in wages than college graduates in other fields (Westervelt & Lonsdorf, 2016). Teachers are highly qualified and choose to teach because of a passion to help students. If that passion is lost or money gets tight, teachers are opting to leave teaching for another higher-paying job. The school model is changing to increase accountability of teacher and student performance. More tests and data are required to run schools like a business.

Westervelt and Lonsdorf (2016) stated this shift in schools has eroded the craft of teaching and seeing students as individuals. Students enjoy learning new things when their teachers are passionate and excited about their subject. School is not fun when teachers teach to the standardized test, not taking into consideration the interests and needs of the student. We live in a data-driven world which demands results. Teachers are forced to be universal in their teaching and align with other teachers. Creativity and passion are being removed from education. However, for education to be seen as a professional career, standards are essential. A compromise must be found between teacher accountability related to standardized test results and complete teacher autonomy without accountability (Westervelt & Lonsdorf 2016).

James and Williams (2017) stated that outdoor education is receiving less emphasis today in schools because of the increased emphasis on test-based accountability. Schools provide fewer opportunities for children to experience nature and actively participate in science. Schools want to perform well on tests so they focus curriculum, electives, and resources toward performing well on the tests, even if this is not in the best interests of the students (James & Williams, 2017). It is important that teachers speak up for the lack of engaging elective classes in their school to keep student interest high. Teachers that have power will work on new reforms to help fix the education system while teachers who feel helpless often continue with the status quo (Melenyzer, 1990).

Guidebooks

Best practices of designing teacher guidebooks is not as commonly researched as other subjects in education. The lack of research on guidebooks is not detrimental to this capstone project because there is enough research showing what teachers need to be effective.

Instructional materials have been created by large companies to shape what students learn and how teachers teach. Ball and Cohen (1996) claimed that in the 1950's and 1960's textbook learning with worksheets and chapter tests was common practice. Critics claimed predesigned curriculum "de-skills" the art of teaching and takes away from local decision-making in student learning and teaching practices (Ball & Cohen, 1996). Beetham and Sharpe (2007) argued holistic curriculum is not effective because students are unique and need curriculum designed as needs and learning styles are discovered by the teacher. Ball and Cohen (1996) stated teachers often dismiss developers' curriculum because it does not take into consideration teacher and student needs. Instead the developers' curriculum may become a small ingredient in a much larger assortment of lessons.

The education philosophy of teaching all students the same to meet the standards is out of date. Differentiated instruction is common best practice in education because differentiated instruction allows different types and levels of learners in a class to be successful (Beetham & Sharpe 2007). Teachers require resources that are adaptable to their specific students and location (Beetham & Sharpe 2007). To develop a useful guidebook, it must be adjustable by teachers to their place of learning as well as to their students. Outdoor education fits this model because the subject can be adjusted based on location and student desires. The guidebook must be fluid for teachers to find it useful.

The curriculum design process described in *Outdoor Education Methods and Strategies* is specific for outdoor education. Gilbertson (2006) stated the first step in curriculum design is to determine the goal of the unit. Specific objectives which have measurable outcomes will be written to meet the desired goal (Gilbertson, 2006). From the measurable objectives teachers will

then plan the lessons, introduction, duration, location, audience, equipment, main content, methods of teaching, rubrics, assessment, and reflection/follow up. The lesson plan development from Gilbertson (2006) consisted of sections on all aspects of developing quality outdoor education lessons. The two sections which were most in depth and the focus were the methods and assessment sections. In the methods section teaching strategies like *describe*, *demonstrate*, *do* and *whole-part-whole* were explained. The main theme in this section was how to be an effective coach to teach the physical skills associated with outdoor education. The assessment piece focused on reflection and building on the mental development of outdoor education. It also included the development of rubrics, journals, formative, and summative assessments.

Teacher resources are easier to be shared and adjusted to fit needs than in the past. Social media and google drive has allowed teachers to gain access to resources which were not available previously. Technology is transformational in schools, allowing teachers to move past lectures as well as allowing students to customize their learning (Beetham & Sharpe, 2007). Teachers can access lessons easily and adjust and format to fit student needs. Kesler Science (2017) is an example of a compilation of engaging science activities which can be easily accessed by teachers. Kesler Science keeps an updated website, facebook page, twitter account, blog and shared google drive folder. Teachers are able to access the resources and adjust to their needs. Teacher resources need to be digital which allows them to manipulate the resource as they see fit. According to the research, technology should be used with the guidebook to easily share the resource to other teachers.

The guidebook which was developed is not a traditional guidebook in the sense of the definition of guidebooks or handbooks. According to Dictionary.com, a handbook is, “1. A book

of instruction or guidance, as for an occupation: manual. 2. A reference book in a particular field, example a medical handbook. 3. A scholarly book on a subject, often consisting of separate essays or articles.” (paragraph 1). The outdoor education guidebook created was a mixture of the definitions as well as a resource guide. The guidebook itself is not a physical object but a digital collection of resources, making it by definition not a guidebook. From the research on teacher needs and autonomy it is important the guidebook is created and shared digitally.

Chapter Summary

The literature shows outdoor education has been taught in schools for many years but has not been a common course in all schools. Outdoor education classes and nature experiences are highly engaging and motivate students. These experiences often lead to long-term change and have lasting impacts. Many students who struggle in a traditional classroom are able to excel and become leaders in an outdoor settings. Nature is powerful in helping humans focus and heal. Even though nature is essential for our mental health, most people spend the majority of time indoors using technology. Lastly, schools have become more focused on standardized tests and less on individual student needs. This has caused teachers to have less autonomy and higher stress. Stressed out teachers are not good for students or school districts. There must be changes in the American education philosophy for students to have a chance in being successful. Teacher guidebooks need to be accessible and adjusted for teachers to find them useful. The development of the teacher guidebook to increase outdoor education programs in school will take into account the information from the literature review. The development of the guidebook will be focused on in chapter three.

Chapter Three

Methodology

The guidebook which was developed focused on the research question given in chapter one, *How can an outdoor education guidebook increase engagement in school while developing intrapersonal and interpersonal skills?* Chapter two, the research on outdoor education, stated the outcome of having students in an outdoor education course is increased engagement and development of interpersonal and intrapersonal skills. Chapter three focuses on making of the outdoor education guidebook.

A key component in the design of the guidebook was to make it digitally available to teachers for ease of sharing and editing. The intended audience for the guidebook are high school teachers and it was designed to help teachers in three distinct ways. Part one, titled *starting an outdoor education course*, provides ideas and resources needed to start an outdoor education class. Part two, titled *resources*, provides teachers with resources to use once outdoor education is established in their school. The provided resources consist of a teacher guide for implementing lessons, best practice in outdoor education, sample units, developing a network, and finding supplies. Part three, titled *other teacher's contributions* is a place for outdoor educators to network, collaborate, and share ideas.

Audience

The audience of the guidebook is teachers looking to start an outdoor education course and will be people who live in all areas of the world. The differences in location, climate, demographics, and resources will determine the lessons and approach teachers will take in their course. The guidebook was designed to appeal to a wide variety of teachers and give options

regardless of demographics. The audience for the sample lessons in part two, *resources*, was a class of twelve students in a rural Minnesota alternate learning setting. Students were cognitively capable and often needed help with mental health and social aspect of school. The outdoor education course was on a trimester system with a course running in the fall and a separate course in the winter. The class was sixty-five minutes in length but could be extended with a flex period which added an additional twenty minutes. The class could travel off campus with a large van as well as students driving personal vehicles.

Project Description

The project itself consisted of three parts. The first part focused on starting an outdoor education course and how to get support and funding. This folder included a letter to administration and the school board (see Appendix B). The focus of the letter is the benefits of outdoor education, financial requirements, and the mindset of outdoor education. Student learning of outdoor education content must be valued and measurable for schools to consider implementation. Schools need to know the benefits of course and the place-based style of learning and teaching that will be required for the course to be successful. In addition to the letter, a presentation was provided with cited facts and information which could be used to present to the school board or course approval committees (see Appendix C).

Part two of the guidebook is resources for teachers to use in their outdoor education class. The resources folder includes sample lessons which have been developed over the past few years. These lessons are specific to fall and winter outdoor education. Additional resources included an outdoor education teacher guide (see Appendix D). The teacher guide is broken into

the following sections: networking, resources, location and duration, lesson plans, and teaching methods.

The networking section of the teacher guide was designed to help teachers build a local network to learn more about concepts they are not familiar with. Having local experts come into class and assist with lessons and resources is important in having a successful course. The supplies section of the teacher guide ties in with the networking section because often the supplies for the class are expensive and can be borrowed from the community. For example, it might not be realistic for a school to have canoes and kayaks for a canoeing and kayaking unit, however a local camp or city park might be willing to borrow the supplies to the school or let them rent the boats at a reduced price. The money which would have to be spent on canoes or kayaks could be allocated to other supplies and offer a wider range of activities.

The location and duration section of the teacher guide stressed the importance of place-based learning. Outdoor education is often place based learning which is current best practice in education. Place based education helps students connect to their community, find value in serving others and enhances appreciation for the natural world (Sobel, 2004). Often, class will take place out of the classroom and in the community. The teacher will need to determine how far they can travel and still have enough time to have a productive class. The amount of time and the availability of resources in the designated distance, will determine the range of lessons that can be taught throughout the course.

Part two also included sample lessons: reading *Into the Wild* (see Appendix E), carving decoys (see appendix F), and volunteering (see Appendix G). Since outdoor lessons are more common and easier for teachers to find examples of there was a focus on indoor lessons. Reading

Into the Wild is an indoor lesson which can be done over the duration of the course. The volunteering lesson was provided because of the intrapersonal skills which can be developed from service learning. Carving teaches skills and has an indoor and outdoor component to the unit. An example outdoor lesson could have been canoeing as it fits the ideas of teaching skills which directly result in success or failure. As students develop the skills of paddle strokes, balance, and teamwork their ability to control and steer the canoe will improve.

Part three of the guidebook is a teacher contribution folder (see Appendix J) where other outdoor educators can add lessons and ideas. This part is a living folder that will host contributions from teachers continuously as they use the guidebook.

Curricular Framework

The framework for part two of the guidebook, titled *resources*, was developed from *Outdoor Education Methods and Strategies* (Gilbertson 2006). The first step in designing the curriculum was to determine the goal of the unit. An example goal would be: learners will gain an understanding of maple syruping in historical and natural contexts. Once the goal was determined, specific objectives were made. Objectives must have measurable outcomes from the lesson which reflected back to the learning goal (Gilbertson, 2006). An example of an objective would be: learners can identify the types of maple trees in Minnesota using a leafless branch sample.

The intent of the guidebook is for teachers to have autonomy to tailor the sample lessons to the place of learning. Allowing teachers to make the lessons more place-based increases the engagement of the students and likelihood of long-term change in the students. Smith (2002)

stated the benefit of place-based learning is in can overcome the disjuncture of school and children's lives because it has the ability to adapt to a particular place of interest.

Context

The guidebook was designed to be digital and shared via Google Drive. The purpose of this was to provide easy access for teachers. The digital documents can be copied by teachers and put into their drive folders where they can manipulate the documents to fit their specific needs. The guidebook has view only sharing to prohibit teachers from changing the master copy. The guidebook folders can be easily shared to teachers, administrators, listservs, and curriculum sites because it is on google. Since the guidebook was designed to be a free document it makes sense to make it as accessible to teachers as possible. Since the guidebook is broken into three main section: starting an outdoor education course, resources, and other teachers' contributions, each section has its own folder.

Flexibility was important for the transfer of the lessons to a wide variety of locations and settings. The sample lessons included in the resources folder consists of both indoor and outdoor lessons. It was important to share lessons which could be done indoors because of variable weather conditions outdoors. Having an ongoing lesson that can be done indoors can be important for days when weather or resources do not cooperate.

Outdoor education has direct nature experiences, which have real consequences (Glover 2014). It was stressed in the resources section of the guidebook students must make their own decisions, which will inherently affect the outcome of their learning. The skills which are developed should directly correlate with the success of the student meeting the goal of the lesson.

Timeline

The development of the outdoor education guidebook started in the spring of 2016. June 5th, 2017 the capstone project transitioned into a guidebook for teachers instead of stand alone outdoor education lesson plans. From June to July 2017 the guidebook was developed and published. The guidebook was first shared to social media groups and listservs on August 1st, 2017. The guidebook was presented on August 7th, 2017. The guidebook will continue to be shared as more teachers access the guidebook and share the resources with others.

Assessment

Determining the use of the outdoor education guidebook will not be difficult. By monitoring the amount of teacher contributions in part three of the guidebook I will have a good idea on how many teachers are using and contributing to the guidebook. Promoting the guidebook on social media will also give a gauge of use with being able to see how many teachers join, ask questions, or interact via social media. Assessing the research question of increased student engagement and development of intrapersonal and interpersonal skills will be done with a google form posted to the guidebook. I will post the questionnaire around winter break and near the end of school each year. From the information gained the guidebook can be adjusted as needed. The questionnaire will also include a question on how many people used the guidebook to help establish an outdoor education course at their school. This will help with determining the effectiveness of part one of the guidebook.

Chapter Summary

The guidebook that has been developed was created in the summer of 2017 and will continue to be developed as it is shared through Google Drive. The outdoor education guidebook

consisted of three main parts. The first part is a guide on how to start an outdoor education course. Administration must be convinced the school district is in need of the outdoor education for the course to be successful. The guidebook helps teachers or administration have facts, statistics, and the benefits of outdoor education. The second part is a guidebook of best practice in outdoor education. This section includes information on place-based learner, networking, resources, location and duration, lesson plans, and teaching methods. Part three of the guidebook is a place for outdoor educators to network and collaborate on outdoor education resources.

The audience for the guidebook is teachers wanting to start outdoor education in their school. The guidebook will also help teachers become better at teaching outdoor education once a course is established.

In chapter four I reflected on the entire process of developing the outdoor education guidebook. I started with the my journey, the changes which were made while making the guidebook, and end with the the future of the guidebook. Since the guidebook is a living and adapting document part of my reflection was on what the future holds.

Chapter Four

Conclusion

The three-part digital outdoor education guidebook was created to answer the research question *how can an outdoor education guidebook increase engagement in school while developing intrapersonal and interpersonal skills?* Part one of the guidebook is titled *starting an outdoor education course* and helps teachers start an elective outdoor education course at their schools. Part two is titled *resources* and is a guide on how to be an effective outdoor education teacher by engaging students and increasing students intrapersonal and interpersonal skills. Part three is titled *other teacher's contributions* and is an ongoing portion of the guidebook where teachers can submit lessons they use in their classroom.

Major Learnings

The major learnings will revisit the background, literature review, and methodology of writing the guidebook. Two major influences in the development of my learning and teaching philosophy are an upbringing of traveling and being success in field-based courses. The literature review on outdoor education, mental health, autonomy, and guidebooks was an essential part of this project because it addressed the current research in the field of outdoor education. This research helped justify the methodology and importance of outdoor education in high school. The additional lessons contributed from other teachers will make the digital outdoor education guidebook a growing document which will have a far greater impact than what I could have done alone. This unique aspect of the guidebook makes it stand out and will make it useful for years to come.

Background. I have had a wide range of experiences during my journey which have influenced the development of the outdoor education guidebook. Growing up traveling and experiencing Kenyan culture played a large role in realizing the importance of new experiences. The multitude of field investigations in college and chaperoning a middle school trip to South Dakota helped me see how impactful field experience is. Being a group leader in Conservation Corps Minnesota opened my eyes to diversity, positive attitude, and service learning. Also during my time in Conservation Corps the youth and I developed both intrapersonal and interpersonal skills. The Hamline's Masters of Arts in Education: Natural Science and Environmental Education degree served as a major inspiration for the development of this outdoor education guidebook.

The Master of Arts in Education: Natural Sciences and Environmental Education degree was a great program for my learning and teaching style.. The course *Foundations of natural science and environmental education* laid the framework of best practice in outdoor learning. Place-based education was a key component of the course which stuck with me throughout the master's program and became a key component of the outdoor education guidebook. *Society and the Environment* was an eye opening course which focused on outdoor and environmental education in an urban setting. I am unfamiliar with urban life because of this felt I grew the most from this course. The knowledge learned from this class was considered greatly when developing the guidebook because the largest population of students live in urban settings. Much of the inspiration for the guidebook came from the courses offered through the Audubon Center of the North Woods because of the hands on and field experiences the classes offered.

Review of the literature. The literature review was the most difficult part of the capstone but was also the most rewarding. The literature review resulted in a shift in the capstone to be the outdoor education guidebook instead of outdoor lesson plans. The research showed outdoor lesson plans are more developed and there was a higher need for helping teachers start outdoor education in their school. The literature review also showed teachers need a place for outdoor educators to collaborate and network with one another.

Outdoor education needs to connect students to their location. This causes outdoor education courses around the world to look different because the course will be influenced by the local environment, resources, culture, students, and teacher (Woodhouse and Knapp, 2000, Glover, 2014). In the long term students are more likely to continue the skills and lessons they learned if they know they have access to them locally. Another important aspect of outdoor education was the need for students to be outdoors doing activities which require skills.

Outdoor education is important not just for the development of physical skills but also for the development of mental skills. Mental health is affected negatively with the increased use of technology and the decreased time in nature. Schools can help with giving students technology breaks by offering classes which are not technology focused. Courses like outdoor education can help students realize the importance of balance in their lives. Outdoor education also helps with intrapersonal, interpersonal, teamwork and problem solving skills.

The last part of the literature review focused on autonomy. The most surprising portion of the research was eight percent of teachers leave the teaching field each year. Teachers leave education at a higher rate than other professional fields. There were multiple factors that lead to

teachers leaving with teachers not having autonomy as one of them. With schools prioritizing performance on standardized tests and data collection teacher autonomy has decreased.

Methodology. The digital outdoor education guidebook transformed from an initial plan of writing outdoor education curriculum to something much greater. I am pleased with the direction the guidebook took and feel like it meets teachers needs as well as meets the goal of increasing outdoor education in schools. By making the guidebook a shared google folder the contents fulfill the requirements of being accessible, manipulatable, and relevant. By having part three of the guidebook something other teachers contribute to the guidebook will keep improving and stay relevant.

Part one of the guidebook is helping teachers start outdoor education in their schools. I think the more options schools can give students the more likely students will find something they are passionate about. Rideout, Foehr, and Roberts (2010) stated, eleven to fourteen-year-olds average eight hours and forty minutes of media use a day and when multitasking is taken into account nearly twelve hours. Statistics of increased time on media and decreased time outside is why outdoor education should be an offered option in schools. Outdoor education shows students first hand the fun and mental relief physical activities outside provide.

The letter to the school board and the presentation in part one focuses on McGowan's (2016) statement that students learn intrapersonal skills, interpersonal skills, community, and environmental connections while becoming comfortable with their identity when in outdoor education. The development of the whole person embraces critically thinking, making choices, and learning from the outcomes of those choices. I argue that the development of these skills is justification on why outdoor education should be taught in schools. It is important to not

overlook the value of part one even though it is shorter in length because if schools do not offer outdoor education courses the other parts of the guidebook become irrelevant.

Part two of the guidebook helps teachers improve in outdoor education. Teachers were provided with best practice in outdoor education, useful tips, and curriculum. The curriculum was designed by using a backward design approach. The method was outlined in *Outdoor Education Methods and Strategies* and was used because of its effectiveness in creating lesson plans which are skills based (Gilbertson, Bates, McLaughlin, & Bates 2006). The backward design process is used across many subjects in education and seemed to work well in creating outdoor education lessons. It worked well because once the main goals was determined objectives were easy to write. The objectives were often skills students needed to develop to meet the main goals. Rubrics of the skills were then created. Actual lessons and teaching strategies were formulated from the rubrics.

The curriculum I developed for part two, *resources*, was a small sample of outdoor education lessons. The intent was to leave this section small with my focus on the bigger picture of the guidebook. However, the lessons which I did develop were selected carefully with specific reason.

The first lesson provided is *Into the Wild*. I chose this lesson because I have found it important to have an ongoing indoor lesson. *Into the Wild* can be used as a bad weather contingency plan as well as a plan for a substitute teacher. It is difficult or possibly even unallowed for substitute teachers to take students outdoors or off campus. The *Into the Wild* lesson plan could be used by all teachers. The book is short enough to be taught in one course and is a great indoor lesson about the outdoors and mental well being. I have implemented this in

the past and students have been successful in listening, discussing and reflecting. The book can be controversial and lead to good student debates.

It is important to realize the autonomy teachers have when creating lesson plans for an outdoor education course. Teachers are able to build lessons which fit their skill set and to the interests of their students. The other indoor lesson I provided is a unit on carving decoys. It fits my skill set well with me being a spearfisherman and enjoying woodworking. Making a decoy is not an easy task and takes dedication. Students learn patience, observation skills, and artistic ability when studying the animal they are trying to mimic. It was important to note my students were able to take their finished fish decoys and actually go spearing as part of class. Having students see their final product in action is essential in their learning because it allows them to reflect better with seeing the success or failures of the decoy. I chose the carving unit as one of the sample lessons because it was another indoor lesson and carving is easily adjusted to a another place of learning by carving a local animal of importance. The unit could just as easily had students carve a duck or a loon with the place of learning being in rural Minnesota.

The third lesson provided is a unit of volunteering. A key component for outdoor education to be effective is students experiences need to be repeated and over an extended period of time. The biweekly volunteering unit helps students learn intrapersonal skills, interpersonal skills, communication skills, and patience. This was my students favorite unit throughout the year and the one I feel makes the biggest long term impact with the students. The curriculum provided was a small sample size but it will grow in quantity and quality as more people join and contribute to part three of the outdoor education guidebook.

Implications

Outdoor education is valuable to students. The learning which can take place when students are free to be outside and build relationships with teachers and peers is outstanding. Outdoor education can have lasting impact on students. For example three of my students this year bought a canoe and kayak to continue to enjoy the lakes of Minnesota. Another student chose to tent along the north shore as her graduation gift. These four students had a change in behavior since they told me they would have not done those things without taking outdoor education. Students are allowed to be different people when the walls are removed from education allowing new leaders to emerge. With a successful class students will become more aware of themselves and care for the community they live in.

Outdoor education can have huge impacts on students and their behavior but ideally it has an impact on the mindset of schools. The guidebook stresses outdoor education takes a growth mindset. The focus of the course is not on standardized test scores or a specific subject matter but has the encompassing goal of helping the whole student learn about themselves, others, and build on hobbies they can enjoy in their life. Schools must desire a course which benefit students in more ways than just content knowledge and willing to invest into outdoor education. Students will need to be allowed to leave campus and take field trips for a successful course. Teachers will need to be given autonomy to plan lessons that best fit the needs of the students and location of learning.

Limitations

The outdoor education guidebook book has limitations. Schools may not approve an outdoor education course or limit how it is taught. The current focus on standardized tests could

take away from the appeal of outdoor education. The resources required are expensive and often leaving campus is needed. If schools approve the course but require the teacher to be indoors and give the course little to no budget the outdoor education course will have a hard time being successful. It was discussed in the literature review that outdoor education has been “deskilled” to make it more school friendly. Teaching students skills like rock climbing, canoeing, and archery are difficult because there is high expense and the need to be off campus. To teach skills and to leave campus requires a large amount of time. Schools which run a seven period day with classes under fifty minutes will have a hard time to get enough in each class period to be effective. Outdoor education will work better in schools with a block schedule or flexible learning times.

Another limitation is the teacher's themselves. If teachers do not have the skills required to do the activities they cannot teach skills properly to the students. Teachers may need to be trained in the activities which are best for the location of learning. Another way to get around this limitation of teachers not possessing the required skills is for teachers to reach out to community experts and seek assistance. Community experts can help with teaching the skills of the activity, supplies, and keeping students safe. This actually make community experts a limitation because the community needs to have people wanting to volunteer which possess outdoor education skills. Not all communities will have these people or the teacher might not have the correct network established to identify who these people are in the community.

Future

The most important aspect of the guidebook at this point is to continue to share it to teachers. The more teachers which have access to the guidebook the more successful it will

become. The guidebook can increase the number of outdoor education courses in schools as well as the amount of teachers contributing lessons to part three of the guidebook. Some of the increase teacher usage will be from teachers sharing it to each other as well as me continuing to share it on social media, listservs, education groups, and my teacher network.

Adding to part one of the guidebook is also going to be important in the future. Getting ideas from other teachers can help me with this part as well. A section on budget planning or start up cost plans would be a useful document. The start up budget document could even be tiered with three different levels of spending. I would also like to present on the importance of outdoor education and the guidebook at Minnesota Association of Alternative Programs annual conference. Since outdoor education requires a bit of a different teaching mindset it works well in alternative programs. Also the intrapersonal and interpersonal skills developed in the course are especially important for students in alternative learning schools.

Final Thoughts

I have learned in researching the literature and teaching outdoor education is students can benefit greatly from outdoor education. The lessons in outdoor education teach students healthy hobbies which can be continued throughout life. Outdoor education focuses on developing the whole student by having students learn problem solving, teamwork, interpersonal skills, and intrapersonal skills to go along with the physical skills developed. Students find out more about themselves and how they connect to the community they reside in. Students also are able to disconnect from technology and be active physically and mentally while in an outdoor education course.

The guidebook which was developed has potential to have a bigger impact than originally planned. By adding part three of the guidebook the project can have lasting impact on teachers and outdoor education in schools. The more teachers collaborate and share ideas of what works in practice for their location the more likely outdoor education can be successful elsewhere.

Resources

- Ball, D. L., & Cohen, D. K. (1996). Reform by the book: What is, or might be, the role of curriculum materials in teacher learning and instructional reform? *Educational Researcher*, 25(9), 6. doi:10.2307/1177151
- Beetham, H., & Sharpe, R. (2014). *Rethinking pedagogy for a digital age: Designing for 21st century learning*. London: Routledge.
- Berliner, D. (2011). Rational responses to high stakes testing: The case of curriculum narrowing and the harm that follows. *Cambridge Journal of Education*, 41(3), 287-302. doi:10.1080/0305764x.2011.607151
- Bredderman, T. (1983). Effects of Activity-Based Elementary Science on Student Outcomes: A Quantitative Synthesis. *Review of Educational Research*, 53(4), 499. doi:10.2307/1170219
- Case, D (2017) The Nature of Americans. Retrieved May 6, 2017, from <https://natureofamericans.org/>
- Ford, P. M. (1986). *Outdoor education: Definition and philosophy*. Las Cruces, NM: ERIC Clearinghouse on Rural Education and Small Schools.
- Ford, P. M. (1981). *Principles and practices of outdoor/environmental education*. New York: Wiley.
- Gilbertson, K. (2006). *Outdoor education: Methods and strategies*. Champaign (Illinois): Human Kinetics.
- Glover, J., (2014) Adventure Movement Project: Building a Sustainable Adventure Movement. Retrieved from Proquest UMI: 1557871
- Handbook. (2017). Retrieved May 6, 2017, from <http://www.dictionary.com/browse/handbook>

Hermelin, B. (1970). PIAGET: The Child's Conception of Movement and Speed. *The British Journal of Psychiatry*, 117(539), 463-464. doi:10.1192/bjp.117.539.463

James, J. K., & Williams, T. (2017). School-Based Experiential Outdoor Education. *Journal of Experiential Education*, 40(1), 58-71. doi:10.1177/1053825916676190

Louv, R (2017) IMAGINE A NEWER WORLD: A Vision of a Nature-Rich Future, One We Can Create Together. Retrieved May 6, 2017, from <http://www.childrenandnature.org/2017/05/03/imagine-a-newer-world/>

Louv, R. (2006). *Last child in the woods*. North Carolina, USA: Algonquin Books of Chapel Hill.

Lubbock, J. (1895). *The use of life*. Leipzig: B. Tauchnitz.

Lugg, A. (1999). Directions in Outdoor Education. *Australian Journal of Outdoor Education*, 4(1), 25

Mcgowan, A. L. (2016). Impact of One-Semester Outdoor Education Programs on Adolescent Perceptions of Self-Authorship. *Journal of Experiential Education*, 39(4), 386-411. doi:10.1177/1053825916668902

Melenyzer, B. J. (1990). *Teacher Empowerment: The Discourse, Meanings and Social Actions of Teachers*.

Mullins, P. M. (2013). A Socio-environmental Case for Skill in Outdoor Adventure. *Journal of Experiential Education*, 37(2), 129-143. doi:10.1177/1053825913498366

Neill, J., Richards, G (1998) Does Outdoor Education *Really* Work? A Summary Of Recent Meta-Analyses. *Australian Journal of Outdoor Education* - 3(1). Retrieved

<http://www.wilderdom.com/pdf/Neill&Richards1998DoesOutdoorEducationReallyWork.pdf>

Ogden, C. L., Carroll, M. D., & Flegal, K. M. (2010). A review of prevalence and trends in childhood obesity in the United States. *Childhood Obesity Prevention*, 84-94.
doi:10.1093/acprof:oso/9780199572

Olson, S. F. (1997). *Listening point*. Minneapolis: University of Minnesota Press.

Oltman, M. E. (2002). *Natural Wonders: A Guide to Early Childhood for Environmental Educators*. Minnesota Office of Environmental Assistance.

Quay, J. (2015). Outdoor Education and School Curriculum Distinctiveness: More than Content, More than Process. Retrieved May 6, 2017, from <https://eric.ed.gov/?id=EJ1119263>

Shanely, S. (2006). Towards an Understanding of an Outdoor Education Program: Listening to Participants' Stories. (n.d.). Retrieved May 6, 2017, from <http://ufdc.ufl.edu/UFE0014940/00001>

Smith, A. (2017). Record shares of Americans now own smartphones, have home broadband. Retrieved July 19, 2017, from <http://www.pewresearch.org/fact-tank/2017/01/12/evolution-of-technology/>

Sobel, D. (2004). *Place-based education: Connecting classrooms & communities*. Great Barrington, MA: Orion Society.

Twenge, J. M. (2011). Generational differences in mental health: Are children and adolescents suffering more, or less? *American Journal of Orthopsychiatry*, 81(4), 469-472.
doi:10.1111/j.1939-0025.2011.01115.x

- Twenge, J. M. (2015). Are Mental Health Issues On the Rise? Retrieved May 6, 2017, from <https://www.psychologytoday.com/blog/our-changing-culture/201510/are-mental-health-issues-the-rise>
- Warren, K. (1998). A Call for Race, Gender, and Class Sensitive Facilitation in Outdoor Experiential Education. *Journal of Experiential Education*, 21(1), 21-25.
doi:10.1177/105382599802100105
- Williams, F. (2016) This Is Your Brain on Nature. Retrieved May 6, 2017, from <http://ngm.nationalgeographic.com/2016/01/call-to-wild-text>
- Walker, T. D. (2015). The Joyful, Illiterate Kindergartners of Finland. Retrieved May 6, 2017, from <https://www.theatlantic.com/education/archive/2015/10/the-joyful-illiterate-kindergartners-of-finland/408325/>
- Westervelt, E., & Lonsdorf, K. (2016). What Are The Main Reasons Teachers Call It Quits? Retrieved May 6, 2017, from <http://www.npr.org/sections/ed/2016/10/24/495186021/what-are-the-main-reasons-teachers-call-it-quits>
- What Is Mental Health? (2013). Retrieved May 02, 2017, from <https://www.mentalhealth.gov/basics/what-is-mental-health/>
- Woodhouse, J. L., & Knapp, C. (2000). *Place-based curriculum and instruction: Outdoor and environmental education approaches*. Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools.
- Woods, E. (2017). THE HEALING POWER OF NATURE: When Community and Nature

Come Together in the Face of Tragedy. Retrieved May 6, 2017, from

<http://www.childrenandnature.org/2017/05/03/the-healing-power-of-nature-when-community-and-nature-come-together-in-the-face-of-tragedy/>