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Synthesizing the Outdoor Education Literature to Create a Definition and List of Primary Objectives

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Synthesizing the Outdoor Education Literature
to Create a Definition and List of Primary Objectives

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Plan B Project

Submitted in partial fulfillment of the requirements
for the degree of Masters in Science in Natural Science in the
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Laramie, Wyoming

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Let him fully realize that [nature] is the real teacher and that you, with your art, do
nothing more than walk quietly at her side”

Johann Pestalozzi

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I would like to dedicate this project to all of the people who have helped me realize the importance of wildness in my life. Without them, I would have never found my drive to share the transformative power of nature.

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Chapter I

Introduction

Background

Christian Itin (1999) said "If we want to develop critically thinking, self-motivated, problem-solving individuals who participate actively in their communities, we must have an educational system and educational approaches that model and support this" (p. 94). This educational approach is Outdoor Education. Outdoor Education and its related educational theories have been lauded for their ability to extend classroom learning (Anonymous, 1989) and to create students that are able to think critically about their experiences (Dewey, 1938). It is important to begin with a discussion of seminal educational theorists to create a theoretical framework for this branch of education.

John Dewey was one such educational theorist. He called for the integration of experience into students' education. Dewey's emphasis on experiential learning led him to propose that students should interact with the world instead of separating from it. He posited that the classroom created an environment in which learning was not integrated into every day life, that this type of learning isolated education from experience. He believed that true education should occur when students are interacting with their surroundings (Dewey, 1897). By challenging students to learn in real-life, teachers are preparing students to live as productive and intelligent members of society.

These educational experiences need to foster educational growth. They also need to develop a positive perception of future experiences (Dewey, 1938). In order to be beneficial to students, these experiences should create curiosity and inspiration. Dewey

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noted that, “The most important attitude that can be formed is that of desire to go on learning” (p. 49).

Paulo Freire was another educational theorist that called for the inclusion of student experiences. An important critique Freire made about the educational system was how it treated students as empty vessels. He felt that teachers would simply deposit information into the students. He called this the “banking concept of education” (1970, p. 72). By simply giving the students information, teachers created a passive student. Like Dewey, he claimed this education created a disparity between students and the world. By learning with the banking method, students could not experience their environment to create their own learning, or advocate for social change.

To ameliorate this issue, Freire called for “problem-posing education” (p. 80). This type of education challenges students to be thoughtful towards what they are learning and encourages them to have discussions with their fellow students and teachers. In this way, problem-posing education connects students to the world and helps them create their own learning.

Kurt Hahn was another seminal theorist. In an article on the impacts of out-of-class experiences, Hattie, Marsh, Neill and Richards (1997) claim that Hahn was the founder of Adventure Education. Hahn believed that the development of personal character was a critical part of a students’ education (Veevers & Allison, 2011). This development of personal character included “the ability to follow out what [the student] believes to be the right course in the face of discomforts, hardships, dangers...” (Veevers & Allison, 2011, p. 7). He felt that students needed to face adversity instead of avoid it.

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By addressing hardships, Hahn believed students could overcome personal weaknesses and develop character.

Building upon the ideas of students' character development and facing adversity, Hahn called for education as a sort of "moral equivalent of war" (Hahn, 1960, p.2). War can create a landscape that requires effort from the entire man, not just the physical, emotional or intellectual aspects individually. The moral equivalent of war is thus the idea of fully engaging every aspect of man without the call for violence. This idea of fully engaging man carried well into Hahn's understanding of education: inspiring students to give themselves fully to the common cause of learning required for them to face difficult situations and develop character.

Dewey, Freire, and Hahn proposed many concepts that are central to Outdoor Education. This is by no means an exhaustive list of educational theorists that have contributed to the development of Outdoor Education. However, this brief history is meant to give an understanding of the foundations of this branch of education and to set a framework for the rest of this project.

Statement of Problem

One major issue within Outdoor Education is the struggle to find a unified definition. Because of the incorporation of many different educational theories, this branch of education has been defined in many different ways. One of these is Experiential Education. This theory is defined as hands-on learning. While another incorporated theory, Environmental Education is defined as education about environmental awareness. Both of these are dissimilar to a third, Outdoor Adventure Education. This theory is defined as education that challenges students in unique ways.

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Each of these incorporated educational theories is related to Outdoor Education but with individualized definitions they do not provide guidance for a common definition for Outdoor Education. The lack of a common definition can make it difficult to discuss, research or implement this branch of education.

Another issue in Outdoor Education is the lack of a common list of primary objectives. Implementing Outdoor Education to different programs creates divergent primary objectives. Outdoor Education has been used in Outdoor Adventure programs such as Outward Bound, Environmental Education programs such as North Cascade Institute, or even wilderness therapy programs like Second Nature. Each program has its own goals and outcomes with unique primary objectives. For example, the primary objectives of Outward Bound are leadership, service and strength of character (Outward Bound, 2015). North Cascade Institute focuses on environmental awareness and a close relationship with nature (North Cascades Institute, 2015). Finally, the primary objectives of Second Nature are personal restoration and personal development (Second Nature, 2015). These different primary objectives are not generalizable and cannot be universally applied to all Outdoor Education programs. Implementation to dissimilar programs can create divergent primary objectives and can cause confusion as to what this branch of education actually is.

Finally, there has not been much theoretical work done on the topic of Outdoor Education within the last 10-15 years. Major contributions to the definition and primary objectives of Outdoor Education come from work produced several decades ago (Donaldson & Donaldson, 1958; Priest, 1986). Basing current research and discussion on dated definitions could create inaccuracies since the definitions do not incorporate

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findings from recent scientific studies. Similar inaccuracies could occur from implementing dated primary objectives into Outdoor Education programs.

Purpose

The purpose of this project is to synthesize recent scientific studies, seminal texts, and journal articles to help create a definition and list of primary objectives for Outdoor Education. Developing a definition and list of primary objectives could be beneficial to Outdoor Education. These two important factors could help educators implement, discuss and research Outdoor Education.

Questions

The questions that guided this literature review are:

- * How does the literature define and outline primary objectives for Outdoor Education?
- * How can the literature be synthesized to create a common definition and list of primary objectives for Outdoor Education?

Terms

Branch: A type of education that incorporates many different educational theories but has unique themes that are distinct from incorporated theories.

Related Educational Theory: Educational theory that is incorporated into Outdoor Education but has a unique definition and primary objectives.

Primary Objective: Skill-based educational outcome that provide guidance for teachers.

Chapter II

Literature Review

Methods

For this literature review, I synthesized seminal texts, scientific studies, and journal articles within the field of Outdoor Education in accordance with methods typical of theoretical educational research (Krathwohl, 2009). In locating research studies for this project, I used key words including *Outdoor Education*, *Adventure Education*, *Experiential Education*, *Environmental Education*, and *educational theorists*. I searched for seminal works dating back to the late 1800's because these texts are foundational to the modern understanding of Outdoor Education. In addition, writings within the last 10-15 years are not expansive enough to fully elucidate Outdoor Education and the related educational theories. I concluded the review once literature began to cite multiple works that I already synthesized.

Finding a Definition

This section will address unique aspects and common themes of the definitions of related educational theories. The unique aspects are (a) critical thinking skills, (b) student-led learning, (c) challenging activities and the associated risk, and (d) wilderness. The common themes are (a) being outdoors, (b) interdisciplinary teaching, and (c) facilitating hands-on learning.

Related Educational Theories

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Each educational theory related to Outdoor Education has a unique definition. It is important to discuss these differences because each of these educational theories is incorporated into Outdoor Education and thus contributes to the unified definition of this branch of education. I chose to look at Environmental Education, Experiential Education, Outdoor Adventure Education, Adventure Education and Outdoor Education.

Environmental Education. Environmental Education is widely accepted as a type of education that teaches about the outdoors (Bogan, 1973; Disinger, 1985; Ford, 1981). Even as far back as the late 1700s, educational theorists called for students to study the environment (McCrea, 2006). The birth of modern Environmental Education is considered to begin with the passing of the National Environmental Education Act (NEEA) of 1970. This act was a piece of legislation that was created in response to a public interest in education for the environment. The NEEA was the initial effort by the US federal government towards the creation of Environmental Education (Palmer, 1998). The act facilitated the creation of the Office of Environmental Education and developed national grants to support education about the environment (McCrea, 2006).

Shortly after the NEEA was created, there was a push to define Environmental Education. In his article on defining Environmental Education, W. J. Bogan (1973) wrote that there was not a definitive definition because the field was so new. Instead he presented a working definition:

Environmental Education is the process that fosters greater understanding of society's environmental problems and also the process of environmental problem-solving and decision-making. This is accomplished by teaching the ecological relationships and principles that

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underlie these problems and showing the nature of the possible alternative approaches and solutions (p. 1).

This definition contains many concepts that are still important to Environmental Education today, including environmental problem solving and teaching ecological relationships (Cole, 2007).

At the heart of Environmental Education, students are challenged to critically think about the connection between humans and the environment (Priest, 1986; Stapp, 1970). Critical thinking is analyzing, synthesizing or evaluating certain information (Bloom & Krathwohl, 1984). Critical thinking in Environmental Education can be demonstrated when students create solutions to environmental issues. For example, students learn about beavers' impact on river ecosystems. They are taught about the changes in these ecosystems over the past one hundred years due to fur trapping. The students are asked to analyze particular information about the decline of river health to find potential solutions. After analyzing pertinent information, students evaluate and synthesize an appropriate solution to the human effects on beavers and river health. By critically thinking about the connection between humans and the environment, students foster a greater understanding of environmental issues and their possible solutions.

Experiential Education. Experiential Education can be traced back to Socrates. His teachings centered on asking questions instead of telling students the answers (Crosby, 1995). In the 20th century, Experiential Education was named and further elucidated by, John Dewey and L.B. Sharp. In his book *Experience and Education* (1938) Dewey states, "Education in order to accomplish its ends both for the individual learner and for society must be based upon experience" (p. 113).

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L.B. Sharp was another educational theorist that proclaimed the virtues of Experiential Education. He believed that this educational theory was common sense, natural, and realistic because it was based on the principle of “learning by doing” (Ford, 1981). L.B. Sharp (1943) proposed, “Which ought and can best be taught inside the schoolrooms should there be taught, and that which can best be learned through experience dealing directly with native materials and life situations outside the school should there be learned” (Sharp, 1943, pp. 363-364).

A central theme of Experiential Education is student-led and teacher-facilitated learning (Chapman, 1995; Joplin, 1995). This educational theory allows students to discover new ideas in their own way and take responsibility for their learning (Joplin, 1995). For example, an elementary class participates in a nature walk as part of their environmental studies curriculum. One student sees a rainbow and is fascinated. She runs back to her teacher and asks about how rainbows are formed. In this way the student is guiding her own learning.

Because Experiential Education is student-driven, it is less focused on the teacher (Baldwin, Persing, & Magnuson, 2004; Ewert, Sibthorp, & Sibthorp, 2014). Teachers are considered guides for student learning instead of being knowledge deliverers. In the previous example, the teacher took the children on a nature walk and guided them to learn about their surroundings instead of telling students about them directly. By stepping back, the teacher allowed the students to lead their own learning.

Outdoor Adventure Education and Adventure Education. Outdoor Adventure Education and Adventure Education are theories that can be traced back to Kurt Hahn (Hattie et al., 1997). Hahn believed that education should include opportunities for

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personal development. He suggested this personal development comes from facing adversity instead of avoiding it (Veevers & Allison, 2011).

One critical theme of these educational theories is the inclusion of challenging activities (Baldwin et al., 2004). In their article on Youth Adventure Programs, Deane and Harré (2014) state that challenge and risk are purposely included in this type of education because of the personal development associated with them. When students successfully face a challenge such as backpacking over a high mountain pass, they will develop personal skills such as confidence and self-esteem (D'Amato & Krasny, 2011; Stiehl & Parker, 2007). Facing challenges in small groups can also improve social skills (Furman & Sibthorp, 2013). Examples of challenging activities are traveling in and navigating natural terrain (Hattie et al., 1997) living in small groups, and participating in rope courses. Participating in these challenging activities can lead to student achievement but can also cause stress for some students (Rohnke, 1989).

Challenge by choice is a concept created by Karl Rohnke to ameliorate the stress of facing challenges that are too difficult for students (Wallia, 2008). It is the idea that students choose to challenge themselves as much as they feel is appropriate. For some students this may mean pushing themselves to climb a long and difficult route while other students may find an easier route is the right level of challenge for them. In this way, students can set goals that are more personalized. In her paper about challenge by choice Wallia (2008) stated that students gain a high level of self-confidence when they achieve their personalized goals. Students can also gain enlightenment and satisfaction when they achieve personal goals (Rohnke, 1989). This sense of accomplishment is an important

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reason that challenge by choice is offered to students in Outdoor Adventure and Adventure Education programs.

Challenging activities can lead to different types of risk. Actual risk, for example, could come from students losing their footing while traversing an ice field. The outcome from this slip could be the student sliding into a crevasse. However, risk does not necessarily have to be life threatening. Students can perceive risk in activities that actually have a low level of physical risk. For example, students might feel at risk when they participate in top rope climbing. Top rope climbing is a type of rock climbing in which the rope runs from the person belaying on the ground through a redundant anchor system at the top of the climb directly back to the rock climber. In this way, it is unlikely that the climber will ever fall more than a few inches if she slips off the rock. While students could perceive risk, the actual risk is very low. Emotional risk is another type of risk associated with challenging activities. Wilderness Education Association Curriculum (2015) states that teachers need to be appropriately prepared to handle the emotional risk that is often times apparent when students face difficult situations. An example of emotional risk is when students open themselves up to the challenge of bonding with a small group of people at the beginning of an Outdoor Educational program.

Outdoor Education. This branch of education can be traced back to L.B. Sharp who taught Experiential Education in an outdoor learning environment. The integration of an outdoor learning environment and Experiential Education eventually became what we now know as Outdoor Education (Carlson, 2005). An important definition put forth by Donaldson and Donaldson (1958) was, “Outdoor education is education in, about, and

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for the outdoors” (p. 17). While this definition has been adopted by some (e.g. Adkins & Simmons 2002; Ewert, Sibthorp, & Sibthorp, 2014; Priest, 1986), it has been argued as being too narrow by others (e.g. Ford, 1981). In her book on the principles and practices of Outdoor and Environmental Education, Ford (1981) claims that the *about* in Donaldson and Donaldson’s definition is problematic because it limits the subject matter of Outdoor Education. She claims that many subjects can be taught in the outdoors and an understanding of this branch of education should not be limited to environmental topics.

While this paper is focused on defining Outdoor Education as a whole, I wanted to briefly mention a unique aspect of Outdoor Education that did not arise in other educational theories. Many resources stated that learning takes place outside (Donaldson & Donaldson, 1958; Ford, 1986; Reynolds, Lodato, Gordon, Blair-Smith, Welsh, & Gerzon, 2007), but not necessarily in a wilderness setting. This small but significant differentiation is important to understand. Being in the wilderness is different than simply being outdoors because of certain factors such as remoteness from amenities (Jostad, Paisley, & Gookin, 2012). A definition of wilderness comes from Day and Petrick (2006):

... As a location where natural conditions are preserved.... Within these locations, ample resources are available to provide opportunities for solitude and renewal. In addition, these places are rich depositories of educational, aesthetic, and cultural values. We also refer to wilderness as a place where attitudes and behaviors

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differ from those of “civilized” living and offer numerous opportunities for self-reflection and growth (p. 4).

According to this definition, wilderness provides opportunities that are separate from other outdoor experiences. A separation from civilized living allows for students to learn about themselves and their surroundings. It also challenges them to live successfully in the woods (Ford, 1981) and learn practical skills (Sharp, 1943). It is, therefore, a crucial aspect of Outdoor Education.

Common themes among definitions

Throughout this research, I identified several common themes among all of the related educational theories. The commonality of these themes indicates that they are an important aspect of Outdoor Education. Therefore, I will use these common themes in the synthesized definition.

In the outdoors. The outdoors is a unique learning environment that gives students the opportunity to gain hard and soft skills that can be used in the classroom and in real-life scenarios (Deane & Harré, 2014; Gair, 1997; Stiehl & Parker, 2007). Hard skills include: (a) survival skills (Anonymous, 1989), (b) navigational skills (D’Amato & Krasny, 2011) and (c) shelter development skills (Sharp, 1943). Being outdoors challenges students to learn softer skills as well. These softer skills include: (a) leadership (Ewert, 1989; Ewert & Garvey, 2007; Kosseff, 2003), (b) problem solving (Prouty, Panicucci, & Collinson, 2007; Reynolds et al., 2007) and (c) communication skills (Sibthorp & Jostad, 2014). Leadership will be discussed in more depth later in this paper. Because of the developmental value of learning outdoors, being outside is an important venue for Outdoor Education.

Interdisciplinary education. A common theme that arose in much of the synthesized literature was interdisciplinary education (Bogan, 1973; Disinger, 1985; Proudman, 1995). Interdisciplinary education is defined as “a process by which students come to understand bodies of knowledge and acquire ways of thinking from two or more subject groups and integrate them to create a new understanding” (Shroff, 2011, p.1). Subjects are not taught independently: Instead, they are taught in a way that the relationship between them is apparent (Parkin, 1998). Creating these connections between subject matters is akin to building bridges between distinct landmasses. The bridge unites different concepts and thus creates a link between two unique ideas (Klein, 1990). There is no separation between various disciplines as is often seen in Middle and High School education.

Another important aspect of the interdisciplinary education is teaching students *how* to achieve the correct answer (Joplin, 1995) and not simply giving them the correct answer. The following example demonstrates this. As part of their science unit, students are taught about the scientific process and also how to effectively gather scientific articles. These students are asked to do a research project about the decline of milkweed, the resulting effect on monarch butterflies, and present possible solutions to this issue. Students use their knowledge about the scientific process to analyze and synthesize the articles they read. From this synthesis they propose a solution to the milkweed and monarch butterfly problem. Students are not given an answer but are taught and use the tools to arrive at the answer.

Hands-on learning. Hands-on learning is at the heart of Experiential Educational and also a concept found in other related educational theories. At its very basic

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understanding, hands-on learning is learning by doing (Adkins & Simmons, 2002; Ford, 1981). Another definition of this type of learning comes from Itin (1999). In his paper about the philosophical beginnings of Experiential Education, Itin defines hands-on learning as “A process through which a learner constructs knowledge, skill and value from direct experience” (p. 91). Learning is thus extended beyond textbooks. For example, students can connect to the local agricultural community by talking to local farmers. The students can use that information to start their own gardens (Parr & Trexler, 2011).

The reason why this type of learning is important is because it challenges students to learn in a meaningful and applicable way (Adkins & Simmons, 2002; Martin & Leberman, 2005). The students who learned about the local agricultural community can make this learning meaningful and applicable by interacting with their surroundings (Chapman, 1995). Hands-on learning is important to all of the related educational theories because it is more authentic and meaningful than simply learning from traditional didactic methods such as lecturing or reading textbooks.

Primary Objectives

Another important aspect of this project is to create a list of primary objectives for Outdoor Education. Primary Objectives are concise descriptions of what educators want their students to achieve by the end of a lesson or unit. In this way, these objectives provide guidance for teachers. For example, if a teacher has a critical thinking skills objective, this teacher will want students to be able to analyze relevant information about a subject to create their own definition of a term. Therefore, the teacher tailors their

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teaching in a way that will lead the students to learn critical thinking skills. The objective of critical thinking skills guides the way the students are taught.

It has been argued that programs should classify program goals into primary and secondary objectives (Stiehl & Parker, 2007). In this paper, when I refer to *primary* objectives I mean the objectives that guide skill based educational outcomes while *secondary* objectives guide curricular outcomes. In the example above, critical thinking skills are the primary objective. A secondary objective would be based on curriculum and is less generalizable and more pertinent to a particular program. A secondary objective could be glaciology. Glaciology is the content that would give structure or meaning to the teacher beyond the primary objective of critical thinking skills. In this way, secondary objectives are particular to specific programs.

Finding primary objectives. This section will examine unique primary objectives of Environmental Education and Outdoor Education and common primary objectives across most related educational theories. The unique primary objectives are the (a) creation of motivated and active citizens, and (b) inspiring personal development. The common themes among all related educational theories are (a) creating environmental awareness, (b) building student relationships and (c) inspiring self-awareness. A discussion of these primary objectives is important because it can provide a better understanding of these educational theories.

Environmental Education. The primary objective of creating active citizens can be seen in one of the first grants developed for Environmental Education, The Belgrade Charter (UNESCO, 1976). This grant was created at The United Nations Educational, Scientific, and Cultural Organization conference in Belgrade, Yugoslavia. The charter

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outlines the goals of Environmental Education (McCrea, 2006). The Belgrade Charter (1976) speaks to the primary objective to create active citizens:

The goal of environmental education is to develop a world population that is aware of and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones (para. 11)

Environmental Education thus aims to challenge students to become involved in solving current and future environmental issues. An example of this would be student participation in discussions. These discussions could address local energy production or the balance of recreation and conservation in sensitive native ecosystems. By understanding human involvement in environmental issues, students can learn how to work through these issues (Bogan, 1973). When students understand how to work through these issues, they can become active citizens to implement effective changes.

Outdoor Education. A major primary objective found in Outdoor Education is inspiring personal development. Personal development contains many different facets including self-confidence and leadership. In their mixed method study of the Outward Bound experience, Martin and Leberman (2005) found that self-confidence was one of the major outcomes from participating in an Outward Bound course. In another study on the outcomes of participating in an Outward Bound course, Goldenberg, McAvoy, and Klenosky (2005) found that in a questionnaire students reported that self-confidence was an important learning that they took away from the course.

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Leadership is another important aspect of personal development. In his book on outdoor leadership, Kosseff (2003) wrote that leadership style was an integral piece of the soft skills students learned from being in Outdoor Education programs. Leadership skills include the ability to implement a decision (WEA Curriculum, 2015), create group buy-in, and motivate group members (Ewert & Garvey, 2007). These leadership skills can be developed when students take on explicit leadership positions in student travel groups (Paisley, Furman, Sibthorp, & Gookin, 2008). For example, a student is given the responsibility of leading her group in a ten-mile travel day. The student picks an appropriate route and shares this path with the group. She ensures that everyone in the group is comfortable with the travel plans, inspiring group buy-in.

A final facet of personal development is self-reliance (Anonymous, 1989; McKenzie, 2000; Smith, 2015). Self-reliance is a trait where students depend on their own skills and knowledge to make decisions. An example of this trait is when students choose locations to put up tents based on their knowledge of previous lessons about camp set up.

Personal development in Outdoor Education is so important because the traits can be transferred to real life. In their paper on applying transformative learning theory to Outdoor Adventure Education, D'Amato and Krasny (2011) wrote that personal development leads to more competent and successful students. Students are also enabled to face real life scenarios with confidence (Neal, 1968). Inspiring personal development is critical to include in a list of primary objectives for Outdoor Education.

Common themes among primary objectives. Interestingly, it was difficult to find common themes across these educational theories. Despite the fact that these educational fields are all closely related to Outdoor Education, there was not any one theme that spanned all the studied theories. Several themes arose in all but one theory. These themes include: (a) creating environmental awareness, (b) building student relationships, and (c) inspiring self-awareness. Table 1 illustrates the link between the related educational theories and the aforementioned themes.

Table 1

Common Primary Objectives and Their Inclusion in Related Educational Theories

Primary Objectives	Experiential Education	Environmental Education	Outdoor Adventure Education/Adventure Education	Outdoor Education
Creating Environmental Awareness		X	X	X
Building Student Relationships	X		X	X
Inspiring Self-Awareness	X		X	X

Creating environmental awareness. Environmental awareness was a major theme among all of the related educational theories except Experiential Education (Kosseff, 2003). Environmental awareness can be defined in different ways. It can be an awareness of human impact on the surroundings (Priest, 1986). It can also simply be an appreciation of nature (Goodman & Knapp, 1981; Neal, 1968). In their article on the philosophy of Outdoor Environmental Education, Goodman and Knapp (1981) wrote that environmental awareness should develop life-long outdoor interests. Finally, D'Amato and Krasny (2011) state that an environmental awareness should change environmental behavior. Similar to Goodman and Knapp (1981), their interpretation is more hands-on and less conceptual. The different interpretations of environmental awareness were crucial to many related educational fields, especially Environmental Education (Bogan, 1973; Stapp, 1970).

The concept of environmental awareness was mentioned in every Environmental Education resource. The interpretation of this theme was slightly different in this field. Most articles spoke to this awareness leading to change (Adkins & Simmons, 2002; Pemberton, 1989). Environmental awareness was also linked to problem solving in Stapp's 1970 article entitled "The Concept of Environmental Education." Finally, Hungerford, Peyton, and Wilke (1983) wrote that resolving environmental conflicts is an essential part of being aware of the environment. In this way, environmental awareness is crucial for Environmental Education because it allows students to identify environmental issues and alternative solutions to those same issues (Bogan, 1973). It also gives students insight into possible solutions for developing positive living environments (Pemberton, 1989).

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Experiential Education was the only related educational theory that did not have environmental awareness as a primary objective. This is likely due to the fact that Experiential Education does not necessarily teach about the environment. There are many different topics that can be taught within Experiential Education, including health care (Cronin & Connolly, 2007). In health care, Experiential Education calls for medical students to work directly with patients and to supplement their learning from lectures and textbooks. Students can also learn to connect to their surroundings through Experiential Education (Gruenewald, 2003; Piersol, 2014). This connection can happen when students learn about local history by talking to older members of their communities (Smith & Sobel, 2010). Students can also learn about local geography by creating maps of the surrounding topography (Graham, 2007). There are many different applications of Experiential Education beyond teaching students about the environment. For this reason, creating environmental awareness is not a primary objective of Experiential Education.

Building student relationships. Building student relationships was a common theme across all of the related educational theories except Environmental Education (Jostad, Paisley, & Gookin 2012). Building student relationships include an increased awareness and respect for others (D'Amato & Krasny, 2011; Goldenberg et al., 2005) and thinking of others first (Furman & Sibthorp, 2013). Another important aspect of student relationships is the development of teamwork. In his book on Outdoor Education, Gair (1997) says that teamwork can be developed through Outdoor Education. Furman and Sibthorp (2013) found that students have a higher ability to work as a team member after they participate in an Outdoor Education course. Teamwork can be developed to different levels. Sibthorp and Jostad (2014) found in their research on social systems in

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Outdoor Adventure Education, that teamwork development depends on the amount of teamwork necessary for the activity that the students are engaged in. For example, large boat sailing requires more teamwork than backpacking. Despite the differences noted in activities, students claimed that opportunities to develop teamwork was the most prominent part of their Outdoor Adventure Education course (Sibthorp & Jostad, 2014).

Building student relationships can happen when students face challenges and work together in outdoor settings. By relying on each other, students produce a sense of community (Chapman, 1995). An example of this is when students face a large river crossing. This crossing would require the students to work together and support each other to successfully manage getting to the other side. Furman and Sibthorp (2013) in their research on the development of prosocial behavior in adolescents found that small group settings can cause students to think about others first. In her paper on the Outward Bound process, McKenzie (2003) also found that interpersonal skills and a concern for others increased after participating in an Outward Bound course. In this way, building student relationships is the outcome of facing challenges in small groups.

Challenging scenarios like river crossings and many others that occur in Outdoor Education challenge students to develop student relationships. The resulting social awareness, respect for others, and teamwork are important skills for students to develop because students can carry them into other social relationships in their real lives (Furman & Sibthorp, 2013). It is critical to include student relationships as a primary objective for Outdoor Education

Developing student relationships is not a primary objective of Environmental Education because there is no need for students to rely on their peers for support through

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difficult situations like there is in Outdoor Education. There is also little or no emphasis on developing teamwork to achieve challenges. However, many sources did state that individuals needed to know how to work in groups to make decisions.

In her paper on the principles of Environmental Education, Cole (2007) writes that students should learn to develop the skills necessary to make environmentally moral decisions both individually and in a group. Carter and Simmons (2010) also state that students should be taught to work together to synthesize possible environmental solutions. Learning how to work in a group does not necessarily occur in a group setting though. The emphasis on individual learning is a strong reason that student relationships are not a primary objective of Environmental Education.

Inspiring self-awareness. Inspiring self-awareness was another primary objective that was shared among all of the related educational theories except Environmental Education (Deane & Harré, 2014; Martin & Leberman, 2005; McKenzie, 2003). Self-awareness is the knowledge of self. In other words, it is an understanding of one's own personal needs, strengths, and weaknesses that is developed through direct experiences (Martin & Leberman, 2005; Smith, 2015). This skill is separated from other personal development skills because it is applicable to more than just Outdoor Education. For instance, a student could develop self-awareness when she learns her strength of perseverance when she finally completes a difficult rock climbing route. Not only is self-awareness important for the personal development of students, it also makes students more conscientious group members (Paisley et al., 2008). In Furman and Sibthorp's (2013) study of pro-social behavior in adolescence, they found that being self-aware

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helped students be more tolerant to other group members. In other words, self-awareness helped students become more aware of others (Goldenberg et al., 2005).

Inspiring self-awareness is not a primary objective of Environmental Education because this educational theory is more focused on promoting social change instead of personal change (Bogan, 1973; Hungerford et al., 1983). Students can create social change by taking a leadership position and while self-awareness has been considered essential for the development of leadership skills (Hanssen, 2009), it is not called for in Environmental Education. Environmental Education simply asks students to be leaders, not to develop them into leaders (Pemberton, 1989). Even though self-awareness can be important to developing leadership skills, inspiring self-awareness is not a primary objective of Environmental Education.

Synthesis

Figure 1 is a visual representation of different types of modes of knowledge transfer and their objectives. This figure was reproduced from Gilbertson, Bates, McLaughlin, and Ewert (2006). In the center space is Outdoor Education. Outdoor Education is at the center of the figure because it incorporates all of the presented primary objectives as well as modes of knowledge transfer. Moving out to the second circle of spaces are modes of knowledge transfer: Environmental Education or Interpretation, Adventure Education, and Ecotourism. I use the term *modes of knowledge transfer* because I do not feel that Ecotourism or Interpretation are educational theories. The third circle of spaces is primary objectives: ecological relationships, interpersonal growth or educational skills, and physical skills. All the spaces are encompassed in a larger circle of Experiential Education.

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In my research, I did not find enough evidence to support Figure 1. Based on my research, I modified Figure 1 and created Figure 2. The modified figure is a more accurate visual representation of my research. Following is a discussion of the changes made to Figure 1 to create Figure 2.

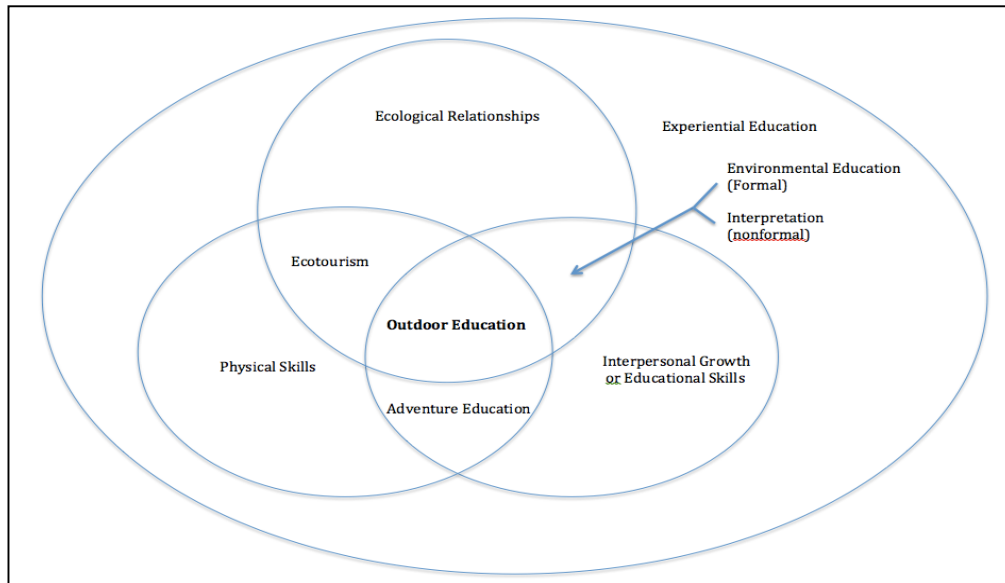


Figure 1. Relationships among educational theories (original). Showing the relationship among modes of knowledge transfer, primary objectives, and Outdoor Education. Reproduced from Gilbertson, Bates, McLaughlin, & Ewert (2006). *Outdoor Education: Methods and Strategies*. Human Kinetics.

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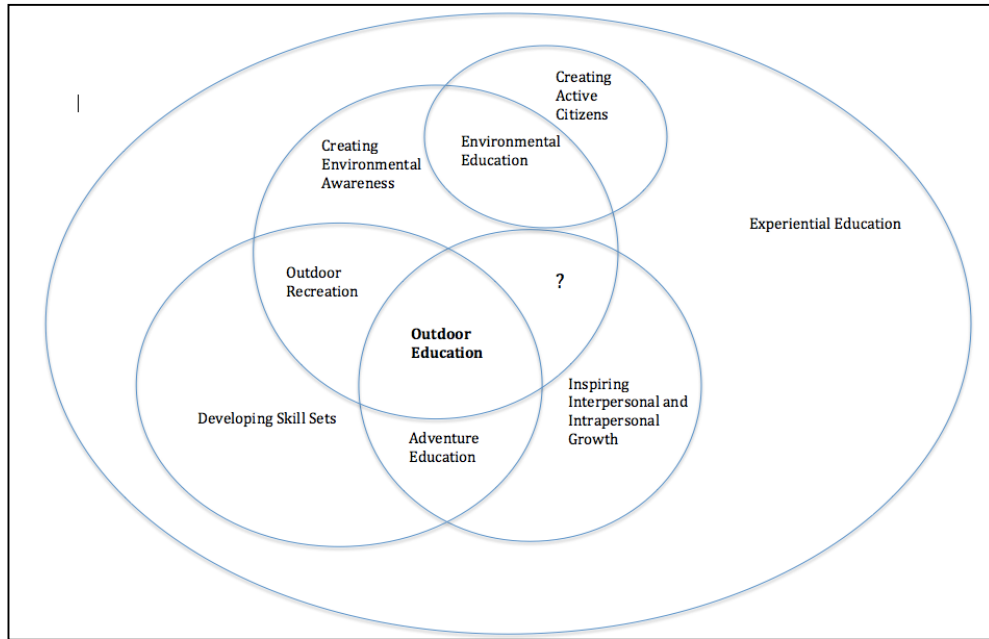


Figure 2. Relationships among educational theories (modified). Showing the relationship among modes of knowledge transfer, primary objectives, and Outdoor Education. Adapted from Gilbertson, Bates, McLaughlin, & Ewert (2006). *Outdoor Education: Methods and Strategies*. Human Kinetics.

I changed ecological relationships to creating environmental awareness. In my research, I found that ecological relationships are one aspect of creating environmental awareness (Ford, 1981). Creating environmental awareness also includes awareness of environmental management and quality (Smith, 2015) and an appreciation of nature (Parkin, 1998). Because the primary objective of creating environmental awareness includes more than just ecological relationships, I felt it necessary to change the term ecological relationship to creating environmental awareness in Figure 2.

Another term I changed is ecotourism to outdoor recreation. In my research, I found that outdoor recreation was a type of Adventure Education (Prouty et al., 2007). Outdoor recreation, like Adventure Education is meant to challenge students (Stiehl & Parker, 2007). Ecotourism is based on traveling to natural areas and conserving the

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environment (The International Society for Ecotourism, 2015) and is not closely associated with Outdoor Education. I changed ecotourism to outdoor recreation because of the stronger link between Outdoor Education and outdoor recreation.

I also changed physical skills to developing skill sets. While these two terms are very similar, developing skill sets is a more encompassing concept. It includes the important physical skills that are objectives of Adventure Education, outdoor recreation, and Outdoor Education, such as shelter development (Sharp, 1943), but also includes other important skills such as situational awareness (Stiehl & Parker, 2007). Developing skill sets is thus a more appropriate term for the figure.

A term that I added to the figure is inspiring intrapersonal growth. I included this in the space containing interpersonal growth or educational skills. There was a significant amount of evidence to support the importance of inspiring intrapersonal growth in Outdoor Education and Adventure Education (Ewert & Garvey, 2007); therefore, I felt it necessary to include this primary objective in Figure 2. I removed educational skills from the space including interpersonal growth because educational skills are an integral part to any educational theory and do not need to be explicitly mentioned.

The major adaptation to Figure 1 is the modifications to the space containing Environmental Education or Interpretation. Interpretation is proposed as a nonformal mode of knowledge transfer. Because my project is focused on formal educational theory, I omitted this term from the modified figure. I also moved Environmental Education from the space created from the overlap of ecological relationships and interpersonal growth or educational skills to the space encompassing creating

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environmental awareness. In my review of the literature, there was no evidence of inspiring interpersonal development as a primary objective in Environmental Education. It is therefore important to separate this educational theory from the space that incorporates inspiring interpersonal growth. Environmental Education does share the objective of creating environmental awareness with Outdoor Education (Adkins & Simmons, 2002; Gair, 1997). I ensured that this overlap was still mirrored in the figure.

In addition to creating environmental awareness, Environmental Education aims at creating active citizens (Stapp, 1970). This outcome is unique to Environmental Education and is not shared by any other educational theory. It is therefore separate from other educational theories.

Moving Environmental Education created an empty space in Figure 2. In my research, I was unable to find a mode of knowledge transfer that would fit appropriately in this space. The appropriate mode of knowledge transfer needs to have creating environmental awareness and inspiring interpersonal and intrapersonal growth as outcomes. It would also need to be a mode of knowledge transfer that is incorporated into Outdoor Education. Further research needs to occur to find an appropriate mode of knowledge transfer to fit in the space.

Chapter III

Discussion

Definition

After analyzing seminal texts, scientific studies and journal articles, I have synthesized a definition that incorporates both unique and common definitions of the related educational theories. The definition is,

Outdoor Education is a branch of education that is interdisciplinary and occurs in the wilderness through direct experiences.

This definition captures the essential pieces of Outdoor Education. Each term was deliberately chosen from the unique definitions of related educational theories and common themes among them. I will elaborate on the necessity of each term in this definition.

Interdisciplinary education is included in the synthesized definition because it describes the connections that Outdoor Education makes between subjects. Geography is learned through lessons on topography of surrounding landscape. Math is incorporated in the geography lesson by teaching how to triangulate locations onto a map. Language arts are taught through developing communication skills. These skills are supplemented with a government lesson on effective group leadership techniques. Connections among subjects are an essential part of Outdoor Education.

The inclusion of *wilderness* in the definition addresses the common theme of being outdoors. The term wilderness is used specifically to incorporate the added

difficulties of being so far from amenities. Being away from “civilization” increases the actual and perceived risk to any challenging situation. Students develop real life skills by working through these challenging situations. By facing challenges in the wilderness, students gain leadership skills, build relationships with fellow students, develop self-awareness, and gain a sense of achievement. The term wilderness is included in the synthesized definition because of all the important learning that it can promote.

Direct experience is included because of the important outcomes that are gained when students interact hands-on with their surroundings. Direct experiences challenge students to critically think about what they are learning. The students can become motivated and active learners who arrive at answers on their own. Direct experiences also give students the opportunity to lead their own learning in meaningful and authentic ways. Direct experiences are an important component of Outdoor Education and are, therefore, included in the proposed definition.

Primary Objectives

After critically analyzing the seminal texts, scientific studies and journal articles, of the related educational theories, I have synthesized the following list of primary objectives:

- * *Building student relationships*
- * *Creating environmental awareness*
- * *Inspiring personal development*

This list is comprised of essential primary objectives that should guide Outdoor Education. Each primary objective is included because of its unique contribution to the

implementation of Outdoor Education. This list is meant to be generalizable to any program. I will elucidate the necessity of each primary objective.

Building student relationships is a critical primary objective because of the social skills that are developed when students work together. Developing respect for others and becoming aware of others create conscientious students both inside and beyond the classroom. Students who learn these skills could become better community members. Teamwork is another aspect of building student relationships. Learning teamwork could help students to work more collaboratively with others. It could also lead to more efficient and productive work inside and outside of the classroom. The transferable social skills learned from building student relationships are why it is included in the short list of primary objectives.

Creating environmental awareness is included in the synthesized list because of its ability to connect students with the environment. When students are aware of their connection with the environment, they can critically think about environmental issues and synthesize potential solutions. Environmental awareness can also develop positive environmental behavior in students. Synthesizing potential solutions to environmental issues and having positive environmental behavior is critical to a world that is in a constant state of flux. Therefore, creating environmentally aware individuals is an essential primary objective of Outdoor Education.

The final primary objective on the synthesized list is *inspiring personal development*. The many facets of personal development are critical outcomes of Outdoor Education. Developing self-confidence is important for students to achieve personal goals and to gain a sense of accomplishment. Leadership skills are pertinent to working

in groups, especially in the face of adversity. Self-awareness is a skill that helps develop not only the individual but also social relationships. It is important to know personal weaknesses, strengths and needs in order to achieve tasks whether independently or with a group. Personal development helps students better understand themselves and possibly become more effective members of their communities.

Further Questions

This project is not an exhaustive study of Outdoor Education and its related educational theories. Through this project, I have discovered many questions that would not only further this research but also reify the implications of this project. The following list of questions could guide further study into this topic:

- * To what extent would the proposed definition and list of primary objectives affect the understanding and implementation of Outdoor Education?
- * How could the proposed figure guide implementation of Outdoor Education?
- * How would Outdoor Education programming successfully integrate secondary objectives into the proposed list of primary objectives?
- * Could Outdoor Education programs continue to be individualized with the implementation of the proposed definition and list of primary objectives?

Bias

Biases in this project included a preconceived notion of Outdoor Education and of the related educational theories. To a lesser extent, I also brought with me the preconception of the primary objectives for each of the related educational theories and

for Outdoor Education as well. While limited, these preconceptions may have influenced my critical analysis of literature.

Conclusion and Implications

Outdoor Education is a unique branch of education due to the incorporation of many different educational theories. While it is distinct from these theories, it is guided by their definitions and primary objectives. This study looked at unique definitions and primary objectives of related educational theories to find common themes among them. The study synthesized these common themes to create a definition and list of primary objectives for Outdoor Education. In addition, a figure was adapted to visually represent the relationship between pertinent modes of knowledge transfer and their primary objectives.

This project offers implications for Outdoor Education. The project proposes an updated definition, list of primary objectives, and visual representation of Outdoor Education, all of which could provide a strong theoretical foundation for this branch of education. A strong theoretical foundation could be important to provide a common understanding of what Outdoor Education is. With a common understanding this branch of education could be discussed, researched, and implemented more effectively.

Furthermore, effective implementation of Outdoor Education could provide unique learning experiences for students outside of the classroom. Because it is a hands-on, interdisciplinary teaching method, Outdoor Education could teach students important lessons that are pertinent to current environmental and human health issues. For example, it could be used to teach relevant topics including the relationship between

population dynamics and climate change, the importance of preserving open spaces, and how human health can be developed through outdoor activities.

References

- Adkins, C. & Simmons, B. (2002). Outdoor, experiential, and environmental education: Converging or diverging approaches? (ERIC Digest No. ED467713). Retrieved from ERIC Database.
- Anonymous. (1989). Outdoor education-Definition and philosophy. *Journal of Physical Education, Recreation, and Dance*, 60(2), 31–34.
- Baldwin, C., Persing, J., & Magnuson, D. (2004). The role of theory, research, and evaluation in adventure education. *Journal of Experiential Education*, 26(3), 167–183.
- Bloom, B. S. & Krathwohl, D. R. (1984). *Taxonomy of educational objectives book 1: Cognitive domain*. White Plains, NY: Longman.
- Bogan, W.J. Jr. (1973). Environmental education redefined. *Journal of Environmental Education*, 4(4), 1-3.
- Carlson, J.A. (2005). The legacy of Lloyd Burgess Sharp (1895-1963): A career history of a pioneer in outdoor education. *The Journal of Experiential Education*, 27(3), 326.
- Carter, R. L. & Simmons, B. (2010). The history of philosophy of environmental education. In A. M. Bodzin, B. Shiner Klein, & S. Weaver (Eds.), *The inclusion of environmental education in science teacher education* (pp. 3–16). Dordrecht: Springer Netherlands.
- Chapman, S. (1995). What is experiential education? What is the question? In K. Warren, M. Sakofs, & J. Hunt (Eds.), *The theory of experiential education* (pp. 236-239). Dubuque, IA: Kendall/Hunt Publishing Company.

- Cole, A. (2007). Expanding the field: Revisiting environmental education principles through multidisciplinary frameworks. *The Journal of Environmental Education*, 38(2), 35-45.
- Cronin, M. & Connolly, C. (2007). Exploring the use of experiential learning workshops and reflective practice within professional practice development for post-graduate health promotion students. *Health Education Journal*, 66(3), 286-303.
- Crosby, A. (1995). A critical look: The philosophical foundations of experiential education. In K. Warren, M. Sakofs, & J. Hunt (Eds.), *The theory of experiential education* (pp. 3-13). Dubuque, IA: Kendall/Hunt Publishing Company.
- D'Amato, L. G. & Krasny, M. E. (2011). Outdoor adventure education: Applying transformative learning theory to understanding instrumental learning and personal growth in environmental education. *The Journal of Environmental Education*, 42(4), 237-254.
- Day, M. & Petrick, E. (2006). *Designing residential wilderness programs for adults*. Malabar, FL: Krieger Publishing.
- Deane, K. L. & Harré, N. (2014). The youth adventure programming model. *Journal of Research on Adolescence*, 24(2), 293-308.
- Dewey, J. (1938). *Experience and education*. New York, NY: Kappa Delta Pi.
- Dewey, J. (1897). My pedagogic creed. *The School Journal*, LIV(3), 77-80.
- Disinger, J. F. (1985). What research says. *School Science and Mathematics*, 85(1), 59-68.
- Donaldson, G.W. & Donaldson, L. E. (1958). Outdoor education-A definition. *Journal of Physical Education, Recreation, and Dance*, 29(17), 17&63.

- Ewert, A. W. (1989). *Outdoor adventure pursuits: Foundations, models, and theories*. Columbus, OH: Publishing Horizons, Inc.
- Ewert, A. & Garvey, D. (2007). The philosophy and theory of adventure education. In D. Prouty, J. Panicucci, & R. Collinson (Eds.). *Adventure education: Theory and applications* (pp. 19-32). Champaign, IL: Human Kinetics.
- Ewert, A. W., Sibthorp, R. J., & Sibthorp, J. (2014). *Outdoor adventure education: Foundations, theory, and research*. Champaign, IL: Human Kinetics.
- Ford, P. (1981). *Principles and practices of outdoor/environmental education*. New York, NY: John Wiley & Sons.
- Ford, P. (1986). Outdoor education: Definition and philosophy. (ERIC Digest No. ED267941). Retrieved from ERIC database.
- Friere, P. (1970). *Pedagogy of the oppressed*. New York, NY: The Continuum International Publishing Group Inc.
- Furman, N. & Sibthorp, J. (2013) The development of prosocial behavior in adolescents: A mixed methods study from NOLS. *Journal of Experiential Education*, 37(2), 160-175.
- Gair, N.P. (1997). *Outdoor education: theory and practice*. London: Cassell.
- Gilbertson, K., Bates, T., McLaughlin, T., & Ewert, A. (2006). *Outdoor education: methods and strategies*. Champaign, IL: Human Kinetics.
- Goldenberg, M., McAvoy, L., & Klenosky, D. B. (2005). Outcomes from the components of an Outward Bound experience. *The Journal of Experiential Education*, 28(2), 123–146.

- Goodman, J. & Knapp, C. E. (1981). Beyond a philosophy of outdoor environmental education. *Journal of Physical Education, Recreation, and Dance*, 52(4), 23–25.
- Graham, M. A. (2007). Art, ecology and art education: Locating art education in a critical place-based pedagogy. *Studies in Art Education A Journal of Issues and Research*, 48(4), 375-391.
- Gruenewald, D. A. (2003). The best of both worlds: A critical pedagogy of place. *Educational Researcher*, 32(4), 3-12.
- Guimps, R. (1902). *Pestalozzi: His life and work*. New York, NY: D. Appleton and Company.
- Hahn, K. (1960). *The moral equivalent of war (Outward Bound)* [Private Address]. Retrieved from <http://kurthahn.org/writings/writings.html>.
- Hanssen, S.B. (2009). *Self awareness in leadership: A case study on how a leadership development course can contribute to self awarenes* (Unpublished master's thesis). Norwegian University Science and Technology, Trondheim, Norway.
- Hattie, J., Marsh, H.W., Neill, J.T., & Richards, G.E. (1997). Adventure education and Outward Bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research*, 67(1), 43–87.
- Hungerford, H.R., Peyton, R.B., & Wilke, R.J. (1983). Yes, environmental education does have definition and structure. *Journal of Environmental Education*, 14(3), 1-2.
- Itin, C. M. (1999). Reasserting the philosophy of experiential education as a vehicle for change in the 21st century. *The Journal of Experiential Education*, 22(2), 91–98.

- Joplin, L. (1995). On defining experiential education. In K. Warren, M. Sakofs, & J. Hunt (Eds.), *The theory of experiential education* (pp. 15-22). Dubuque, IA: Kendall/Hunt Publishing Company.
- Jostad, J., Paisley, K., & Gookin, J. (2012). Wilderness-based semester learning. *Journal of Outdoor Recreation, Education and Leadership*, 4(1), 16.
- Klein, J. T. (1990). *Interdisciplinarity: History, theory, and practice*. Detroit, MI: Wayne State University Press.
- Kosseff, A. (2003). *AMC guide to outdoor leadership*. Boston, MA: Appalachian Mountain Club.
- Krathwohl, D.R. (2009). *Methods of educational and social science research: The logic of methods*. Long Grove, IL: Waveland Press, Inc.
- Martin, A. J. & Leberman, S. I. (2005). Personal learning or prescribed educational outcomes: A case study of the Outward Bound experience. *Journal of Experiential Education*, 28(1), 44–59.
- McCrea, E. J. (2006). The roots of environmental education: How the past supports the future. *Environmental Education and Training Partnership (EETAP)*.
- McKenzie, M. D. (2000). How are adventure education program outcomes achieved?. *Australian Journal of Outdoor Education*, 5(1), 19–27.
- McKenzie, M. (2003). Beyond the Outward Bound process. *The Journal of Experiential Education*, 26(1), 8–23.
- Neal, C. (1968). *Philosophy and goals for outdoor education*. (Unpublished doctoral dissertation). Colorado State College, Greeley, CO.

- North Cascade Institute (2015). *North Cascades Institute*. Retrieved from ncascades.org/discover/north-cascades-institute
- Outward Bound (2015). *Educational Approach*. Retrieved from <http://www.outwardbound.org/about-outward-bound/philosophy/>
- Paisley, K., Furman, N., Sibthorp, J., & Gookin, J. (2008). Student learning in outdoor education: A case study from the National Outdoor Leadership School. *Journal of Experiential Education, 30*(3), 201-222.
- Palmer, J. (1998). *Environmental education in the 21st Century: Theory, practice, progress and promise (studies)*. New York, NY: Routledge.
- Parkin, D. (1998). Is outdoor education environmental education?. *Environmental Education and Information, 17*(3), 275–286.
- Parr, D. M. & Trexler, C. J. (2011). Students' experiential learning and use of student farms in sustainable agriculture education. *Journal of Natural Resources & Life Sciences Education, 40*(1), 172-180.
- Pemberton, D.A. (1989). Definitional problems for environmental education and geographic education. *The Journal of Environmental Education, 21*(1), 5-14.
- Piersol, L. (2014). Listening place. *Australian Journal of Outdoor Education, 17*(2), 43-53.
- Priest, S. (1986). Redefining outdoor education: A matter of many relationships. *The Journal of Environmental Education, 17*(3), 13–15.
- Proudman, B. (1995). What is experiential education? Experiential education as emotionally engaged learning. In K. Warren, M. Sakofs, & J. Hunt (Eds.), *The*

- theory of experiential education* (pp. 240-247). Dubuque, IA: Kendall/Hunt Publishing Company.
- Prouty, D., Panicucci, J., & Collinson, R. (Eds.), (2007). *Adventure education: Theory and application*. Champaign, IL: Human Kinetics.
- Raynolds, J., Lodato, A., Gordon, R., Blair-Smith, C., Welsh, J., & Gerzon, M. (2007). *Leadership the Outward Bound way*. Seattle, WA: The Mountaineers Books.
- Rohnke, K. (1989). *Cowstails and cobras II: A guide to games, initiatives, ropes courses & adventure curriculum*. Dubuque, IA: Kendall/Hunt Publishing Company.
- Second Nature (2015). *Turning Hope Into Help*. Retrieved from <http://snwp.com/>
- Sharp, L. B. (1943). Outside the classroom. *The Educational Forum*, 7(4), 361–368.
- Shroff, M. (2011, October 23). Interdisciplinary education. *DNA-Research, Archives & Syndication*, pp. 1-3.
- Sibthorp, J. & Jostad, J. (2014). The social system in outdoor adventure education programs. *Journal of Experiential Education*, 37(1), 60–74.
- Smith, G. A. & Sobel, D. (2010). *Place-and community-based education in schools*. New York, NY: Routledge.
- Smith, P. R. (2015). Outdoor education and its educational objectives. *Geography*, 72(3), 209–216.
- Stapp, W. B. (1970). The concept of environmental education. *The American Biology Teacher*, 32(1), 14–15.
- Steihl, J. & Parker, M. (2007). Individual outcomes of participating in adventure. In D. Prouty, J. Panicucci, & R. Collinson (Eds.). *Adventure education: Theory and applications* (pp. 63-76). Champaign, IL: Human Kinetics.

The International Society for Ecotourism. (2014). *What is Ecotourism?* Retrieved from

<https://www.ecotourism.org/what-is-ecotourism>

UNESCO. (1976). The belgrade charter. *Connect: UNESCO, UNEP Environmental Education Newsletter*, 1-2.

Veevers, N. & Allison, P. (2011). *Kurt Hahn: Inspirational, visionary, outdoor and experiential educator*. The Netherlands: Sense Publishers.

Wallia, S. S. (2008). Challenge by choice: A sojourn at the intersection of challenge and choice. *Australian Journal of Outdoor Education*, 12(2), 39.

Warren, K., Sakofs, M., & Hunt, J. (Eds.). (n.d.). *The theory of experiential education*. Dubuque, IA: Kendall/Hunt Publishing Company.

WEA Curriculum. (2015). Retrieved from <http://www.weainfo.org/wea-curriculum>