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Review of the effects of outdoor education on childrens' and adolescents self constructs

Jennifer French Thompson

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REVIEW OF THE EFFECTS OF OUTDOOR EDUCATION ON CHILDREN'S' AND ADOLESCENTS SELF CONSTRUCTS

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The field of Outdoor Education (O.E) is a relatively young field. Outdoor Education is a complex field with many unanswered questions and unknowns.

The purpose of this paper was to define Outdoor Education, as well as give an overview of the “beginning roots” of O.E. In addition, the purpose was to conduct an in-depth literature review of studies that have been conducted in the field of O.E.

As the field of O.E continues to develop and grow, it is imperative to describe the effects of outdoor education, as well as why and how they occur. It has been shown by individual studies that Outdoor Education programs can improve overall self-concept, self-confidence, and self-esteem. There are a plethora of studies that show the effects of O.E. However, there is no evidence to date of which specific factors within these programs are causing these measured effects. It is widely acknowledged and understood that more research is needed to examine what exact factors are influencing the changes which lead to the outcomes found in O.E programs.

This paper attempts to give the reader a broad understanding of the meaning of O.E., and all that it encompasses. In addition, the paper proposed suggestions for future research in the field of Outdoor Education.
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Chapter I

Introduction

Without self-discovery, a person may still have self-confidence, but it is self-confidence built on ignorance and it melts in the fact of heavy burdens. Self discovery is the end product of a great challenge mastered, when the mind commands the body to do the seemingly impossible, when courage and strength are summoned to extraordinary limits for the sake of something outside the self—a principle, an onerous task, another human life – Kurt Hahn

The Definition of Outdoor Education

In the 1950’s which marks the beginning roots of Outdoor Education, the classic definition of Outdoor Education was the following: “education in, about, and for outdoors” (Donaldson & Donaldson, 1958). In order to truly understand what is meant by this particular definition, it helps to depict the definition. The word ‘in’ refers to the fact that outdoor education, also referred to as O.E. can happen in many different outdoor settings (Ford, 1986). The actual experience of O.E can happen literally in any situation that usually pertains to the outdoors. The word 'about' is referring to the correlation between the actual outdoors to the natural environment. In other words, it is feasible to teach Biology for example, but the actual learning of this also takes place outdoors. Finally, the word ‘for’ is referring to the concept of combining the different aspects and dynamics of learning parallel with the outdoors (Ford, 1986).

In the field of O.E, this particular definition has been argued on many levels as not being comprehensive. However, the concept of O.E has evolved since then in the sense that it has incorporated the development of inter/interpersonal relationships as well as socialization. One proposed meaning by Bookes (1991) is that the actual meaning of
Outdoor Education (O.E) is relative to time and place (Neil, 2004). Overall, the term O.E is referring to obtaining knowledge by paralleling learning with the experience of the outdoors as well as developing interpersonal and intrapersonal skills. The definition of O.E is extremely complex in the sense that it encompasses many different concepts and dynamics of growth and learning. In order to help clarify different ways that O.E is defined as well as measured, the definition has been broken down into two main categories. These categories include psychosocial definitions and environmental definitions (Neill, J.T, 2004).

The term psychosocial has been defined as “A combination of psychological and social factors” (www.soinalnet.co.uk). Commonly used definitions under the psychosocial definition include “the use of experiences in the outdoors for the education and development of the whole person” (Neil, 2004). Another example of a psychosocial definition of O.E is the following: a means of curriculum enrichment, whereby the process of learning takes place out of doors (Neil, 2004).

The term environmental is defined as relating to the influences of a person’s surroundings (www.walgreenshealth.com). An example of an environmental definition for O.E is Outdoor Education is... “An experiential method of learning with the use of all senses. It takes place primarily, but not exclusively, through exposure to the natural environment” (Priest, 1990). There are a plethora of definitions of O.E in the field. More examples of commonly used definitions of O.E are included in Appendix D (p 55).

For the purpose of this paper, one specific definition of O.E has been chosen. The reason for this choice in definition is due to how successfully this specific definition encompasses the many dynamics of O.E in one simple definition. The definition is as
You can discover more in an hour of play than you can in a lifetime of conversation – Unknown

follows: O.E has been most commonly described as: 1) education in, about, and for the outdoors; 2) An experiential method of learning that utilizes the outdoors as an education tool; 3) education emphasizing relationships involving people and natural resources; and 4) education about sense of place. This definition was written by Porter Hammitt (1997) for the purpose of his program MOLA (Missoula Outdoor Learning Adventures). It does a great job of combining many definitions into one comprehensive definition. It successfully targets the varying dynamics of O.E.

*Evolution of the Term Outdoor Education*

The foundation of O.E roots back to the concept of Progressive Education, which incorporates the theory that learning is not simply accomplished sitting in the classroom, however also done through experiencing life (Lund, 1997). This concept began to emerge in the Nineteenth century from the Empiricist school of thought which proposes that knowledge is solely based on one’s senses and experiences (Lund, 1997). In addition to the evolution of education philosophies, the changes that were occurring in our society was affecting the O.E movement. Within our society in the 19th and 20th century, many social and educational reforms were taking place. The importance of having “leisure” time was becoming more and more evident. Suddenly, these “leisure” time activities were incorporating outdoor activities. The outdoors was becoming incorporated within the education program through the development of recreation programs. Some examples of these activities included camping, biking, rowing, canoeing, snow shoeing, fishing, hunting, and riding. Our society was discovering the benefits of exercising as well as being outside. In correlation with these societal changes, the founding of outdoor schools in America began emerging between the 40’s and 50’s (Lund, 1997).
As outdoor schools began to emerge, what exactly the term "outdoor education" defined and encompassed continued to emerge and evolve. One way O.E has been broken down to better understand its complexity is demonstrated by the concept of the "Outdoor Education Tree" developed by Priest (1986). As demonstrated in the "tree roots" concept, from outdoor education stems many other forms of O.E which all share the common goal of interpersonal and intrapersonal growth. These stems include "adventure education, environmental education, eco muse, eco tourism, ecopolitical education, earth education, eco psychology, challenge education, wilderness education, expeditionary education, outdoor sports, outward bound school camping, scouting private camps, recreation". Another approach to understanding how many dynamic and varying concepts stem from the root of O.E is demonstrated by the creation of a concept map. A concept map is when the main term O.E is placed in the middle, and branches that help define the meaning are created. An example of a concept map for O.E would include roots such as self discovery, building blocks, self awareness, increased self confidence and self esteem, learning specific outdoor skills, learning inter/intra personal skills, increase communication skills, biking, hiking, camping skills, and climbing (Priest, 1986). Outdoor Education falls into many different fields. Some of these fields include environmental education, adventure education, experiential education, earth education, challenge education, wilderness therapy, natural history, outdoor recreation, group facilitation, outfitting, and guiding. Traditionally, outdoor education programs do not follow rigid, regimented curriculums. They can vary in their content, as well as their purpose. Examples of various curriculums include camps, workshops, field days, trips, tours, outings, classes, and expeditions. The design of many outdoor programs follows a
general guideline, or a set of goals to be obtained within the program. However, most programs leave a lot of “wriggle” room. This “wriggle” room allows for true discovery and learning to occur. Too often in education, there is too much structure and rigid guidelines that the students feel that they cannot be creative, or think “outside” of the box more. Through the development of the concept of O.E comes the creation of basic principles that strive to give an O.E program a guideline or goal to strive for. The following paragraphs will discuss the principles that exist today.

**Principles & Potential Benefits of Outdoor Education**

Major principles have been created in the field of O.E. These principles have been created from the compilation of various theories and programs. These principles give a general outline for outdoor programs to potentially follow and strive for in their program. They include the following: “O.E. utilizes the outdoors as an educational tool; O.E ranges from natural science to group dynamics to personal growth; O.E uses the outdoors as an educational tool; O.E incorporates cognitive, physical, and affective domains of learning and; O.E strives to utilize the progressive learning theory” (Outdoor Education Workshop, MOLA). These principles are general guidelines to help an O.E program outline what goals the program should possibly strive to reach and accomplish. The development of philosophies and principles enables an organization to build a foundation of what they stand for, as well as strive for. As the outdoor education world continues to grow, programs that are offered are becoming more and more tailored for specific needs with specific goals. Examples of this include Outward Bound, with a philosophy of self-growth, or programs such as the YMCA camps that strive to be family based. Another local example is the program Inner Roads that incorporates the
You can discover more in an hour of play than you can in a lifetime of conversation – Unknown

philosophy of self-awareness and self-growth. The potential benefits of Outdoor Education participation are countless. In order for the benefits to be able to be more specifically categorized, three main areas of possible growth have been outlined (adapted from Ewert, 1989 p 49). These areas include psychological, sociological, and physical areas. The possible areas of psychological growth have been categorized into these areas, which include self-concept, confidence, self-efficacy, sensation seeking, actualization, value clarification, and personal testing. Sociologically, the notable areas of growth include friendship, compassion, belonging, interpersonal and interpersonal skills, communication skills, and communication. Physical areas may include personal abilities, and increased knowledge (Ewert, 1989). In much of the research that has been conducted in the field of O.E., one main aspect that the individual studies focus upon is the potential development and growth of an individual’s self-constructs.

What Direction is Further Research Headed?

The field of Outdoor Education began over 50 years ago. The beginnings of research went hand in hand with the beginning roots of O.E. Since the beginning of O.E over 50 years ago, common questions that many researchers have attempted to answer include the following: “What are the short term, as well as the long term effects of O.E?; are people different after participating in O.E programs?; which programs have the most dramatic effects on participants?” (Neill & Richards, 1998:38). As the field of O.E continuously evolves, the focus of research in O.E evolves as well. In past research, the majority of the focus has been on the actual effects of O.E on an individual. These effects may include increased physical ability, increased self-esteem, or the possible effects on one’s development of his or her self-constructs. It has been shown through
research that the most effective way to assess the emotional and psychological growth of children and adolescents’ is through measuring the possible growth in her or his self constructs. There are many different constructs that are included under the “umbrella” of the term self. The term “self construct” is actually a broad term that encompasses the following terms: self-esteem, self-efficacy, self-confidence, and overall self-concept. The development of a positive self-construct is the foundation to the development of a healthy, well-balanced individual. Without acquiring a true sense of who we are as individuals, and being comfortable within our own skin, leaves us in a potentially difficult and unhappy place in life. Current research is able to measure one’s development of self-constructs through using quantitative scales. The constructs that seem to be most frequently measured in studies include self-confidence, self-esteem, and overall self concept (Brekenridge & Vincent, 1965 et al; Marsh P., 1999). However, as O.E evolves, the focus of research is becoming enriched in the sense that researchers want to understand what is occurring “under the surface”. They yearn to understand why these measured changes occur. An in depth review of various studies focusing on the development of one’s self-constructs, as well as the potential positive effects found in this area will be examined in the review of literature.

**Outdoor Education Programs in Existence Today**

It is staggering how quickly the field of O.E is growing in size, in terms of how many outdoor programs there are in existence. Over the past 40 years, there has been a substantial increase in outdoor education programs. By 1975, there were over 200 Outward Bound adventure-based programs in existence (Ewert, 1983). By 1985, there were 542 wilderness related courses being offered by Universities across the U.S...
You can discover more in an hour of play than you can in a lifetime of conversation – Unknown

(Hendee & Roggenbuck, 1984). There are over 12,000 day and resident outdoor programs currently operating in the U.S to educate the 10 million plus children and adults that attend them each year. Resident outdoor programs are programs where individuals spend the night on site. Non-profit groups operate about 8,000 outdoor programs, and 4,000 outdoor programs are privately owned. There are over 2,000 camps that are members of the American Camping Association, as well as over 700 Wilderness experience programs currently in existence (Friese, Hendee, & Kinziger, 1998). In the past 20 years, the number of outdoor programs in the U.S has grown by nearly 90% (Academia center, camp trends, retrieved 10/12/2004). The field of outdoor education continues to grow at a rapid pace from outdoor day camps, to new programs offered for credit at universities. The benefits of these programs are becoming more widely discovered and acknowledged.

Most outdoor programs in existence today fall into the following categories: adventure therapy programs, personal growth programs, camping programs, recreation programs, and college adventure programs (Berman & Davis, 2000). Adventure therapy programs intertwine wilderness settings combined with adventure as part of the therapy. Most of these programs are geared towards youth that are troubled and often have been diagnosed with mental health issues (Berman & Davis-Berman, 1995). These programs can take place in many shapes and settings. Some examples include ropes courses, family therapy programs, adjunctive therapy, and wilderness therapy (Davis-Berman & Berman, 2000). A wonderful example of this type of program in Missoula, Montana is Inner roads. This is a fairly new program offered to troubled youth seeking interpersonal as well as intrapersonal growth. Personal growth programs are generally not intended to be therapy.
However, a central goal of personal growth programs is to have an overall positive effect on one’s general psychological well being (Berman & Davis, 2000). A great example of a personal growth program is Outward Bound. One of their program philosophies is personal development. Some key areas that personal growth programs tend to focus on include the following areas: self-knowledge, tenacity, teamwork, acceptance of responsibility, self reliance, psychical fitness, and the ability to go beyond self imposed limitations (Berman & Davis, 2000). The organization of camping programs originates back to the 1900's with the first camp being in Algonquin Park, Ontario. The stated goal of this specific camp was to improve social behavior. The overall purpose of camps is to facilitate emotional well-being of campers (Berman & Davis, 2000). Recreation programs, on the contrary, do not attempt to facilitate emotional growth (Priest, 1999). The stated purpose of recreation programs is to get participants excited and energized (Priest, 1999). The goals of these types of programs are to simply have a great time, in a safe, organized (hopefully!) manner. It is important to state here that although recreation programs do not have a stated goal of self-growth, it is identified as being a secondary goal. More specifically, skill development and moral growth are stated as secondary goals (Berman & Davis, 2000). It is important to understand that even though a program may not have the specific goal or philosophy of self-growth does not necessarily mean that self-growth, as well as self-discovery do not take place on their own accord. Outdoor programs naturally force individuals into potentially awkward, uncomfortable situations where they may experience a plethora of emotions. They may learn to be far less inhibited and take more risks. Emotions ranging from fear, to being uncomfortable around strangers, to excitement and joy of self-discovery are common emotions for an
individual to feel while participating in an outdoor program. The last main category of outdoor programs includes college adventure programs. College adventure programs originated at Dartmouth College in 1935 (Berman & Davis, 2000). The purpose of these types of programs is to utilize adventure in order to orient new students. This method assists in facilitating emotional and social development of new students who are going through the same challenging and stressful period of their lives (Berman & Davis, 2000). These programs are used across the nation in Universities during orientation program. It should also be mentioned that many companies across our nation utilize programs such as ropes courses and retreats in order to encourage fellow employees to increase a sense of bonding with each other. In conclusion, there is definitely a common theme that runs through every type of outdoor program, whether stated or unstated: the theme of facilitation of overall emotional growth and well being.

There is naturally a lot of enthusiasm as well as passionate verbal support that O.E. experiences have been extremely powerful and effective for many individuals. A main dilemma is, as this field grows, these “verbal” accounts are no longer going to be sufficient evidence to claim tangible effects of O.E. There are many unanswered questions in the relatively young field of O.E. It has been shown in countless studies that O.E has a positive impact on individuals. However, the question that seems to be the latest focal point in O.E research is the following: Even though there is proof of chance occurring within one’s self-constructs, which specific components of a program are influencing these measured changes to occur?
Statement of Purpose

The purpose of this paper is to give the history and philosophical background of Outdoor Education and to define Outdoor Education (O.E). In addition, the purpose is to do a thorough review of current research in the field. The focus of the review of literature will be to review individual studies conducted in correlation to specific benefits that have been discovered... An additional focus is to summarize an overview of meta-analyses that have been conducted measuring the different effects of outdoor education on individuals.

Possible areas of research, as well as ideas for future research will be examined. Finally, the author’s thoughts on Outdoor Education, as well as her personal goals in the area of Outdoor Education will be discussed.

That which ought and can best be taught inside the classroom should there be taught, and that which can best be learned through experience dealing directly with native materials and real life situations outside the school should there be learned.

- Julian Smith, (1943).
Chapter II

Review of Related Literature

As Professor John Passmore, organizer of the first Outdoor Education conference stated:

Outdoor education can: offer meaningful learning situation which should be an important part of every child's education.

Stimulate students' curiosity and permit them to discover the excitement and satisfaction of learning out-of-doors.

Provide excellent opportunities to examine through personal experience of many of our present social and cultural values” (Passmore, J., 1972).

The review of literature will encompass the following areas: 1) the philosophy of outdoor education; 2) the development of self-constructs in children and adolescents in relation to Outdoor Education; 3) various single studies broken into various types of outdoor education; 4) Meta analyses examining the effects of outdoor education.

Philosophy of Outdoor Education

The year 1930 marks the year when the first traditional school of Outdoor education was created. In 1930, the first short-term resident camping program in the United States was created (Hammerman, 1980). However, the philosophers that founded the school of Outdoor Education date back to the 1500's. There are key names in the history of the philosophy of O.E. The founding father of the term “sensory learning” is John Amos Comedius (1592-1670). He was of the belief that actual learning happens through expressing one’s senses (Neill, 1998). In other words, learning occurs through hearing, seeing, feeling, touching, and truly experiencing an object. Jean- Jacques Rousseau (1712-1778) felt that a child is naturally very curious, and this curiosity should be encouraged, instead of discouraged. The “traditional” classroom as one knows it today discourages curiosity and creativity in many aspects.
Rousseau also supported the school of thought that physical activity is a necessary part of a child’s education. One last prominent name that appears frequently in the roots of Outdoor Education is Johann Henrick Pestalozzi (1746-1827). He felt that the fundamentals of education should incorporate firsthand, tangible experiences. Also, that incorporating practical skills was essential to a well balanced education (Hammerman, 1980). A famous quote by Pestalozzi illustrates his thoughts on the school of education.

*Lead your child out into nature, teach him on the hilltops and in the valleys. There he will listen better, and the sense of freedom will give him more strength to overcome difficulties. But in these hours of freedom let him be taught by nature rather than by you. Let him fully realize that she is the real teacher and that you, with your art, do nothing more than walk quietly at her side*— Pestalozzi (Hammerman, 1980).

Five schools of philosophy of Outdoor Education emerged from the founding philosophers of O.E. The purpose of the development of these philosophies is to outline what the school of O.E is striving to accomplish. These five schools of philosophy include wilderness experience, experiential learning, psychological growth, outdoor education, and postmodernism (Lund, 1997). One of the five philosophies of O.E is psychological growth. The possible psychological growth of an individual can be measured through the measurement of one’s possible growth in his/her self-constructs.

The term “self-construct” is a broad term in that it is the main root for the multiple constructs that fall under the umbrella of this term. The multiple constructs that have been determined to make up the term “self” include the following: self esteem, self-knowledge, self-perception, self worth, self-confidence, self-image, and
overall self concept (Ewert, 1989). For the purpose of this paper, the following self-constructs that will be focused upon in the context of research review are defined below:

**Definitions of self constructs**

**Self-esteem**: Self-esteem refers to general feelings of self-worth or self-value.

**Self-efficacy**: Self-efficacy is belief in one's capacity to succeed at tasks. General self-efficacy is belief in one's general capacity to handle tasks. Specific self-efficacy refers to beliefs about one's ability to perform specific tasks (e.g., driving, public speaking, studying, etc.).

**Self-confidence**: Self-confidence refers to belief in one's personal worth and likelihood of succeeding. Self-confidence is a combination of self-esteem and general self-efficacy.

**Self-concept**: Self-concept is the nature and organization of beliefs about one's self. Self-concept is theorized to be multi-dimensional. For example, people have separate beliefs about physical, emotional, social, etc. aspects of themselves.

-Neil, 2004

A common thread throughout many of the research studies conducted in this field is looking at the effectiveness of an outdoor program in relation to the possible growth and change in one's self-constructs. This focus on the development of one's varying self-constructs seems to be at the core of philosophies of many outdoor programs. As it will be discussed further, different outdoor programs tend to focus on the possible development of specific self-constructs. In order to better understand what exactly is meant by the term “self-construct”, the actual development of self-constructs in children and adolescents will be examined.

**The Development of Self-Constructs in Children and Adolescents**

The history of the term “self” dates back to 700 and 1500. The original concept of ‘self’ referred to the weak, crude, and selfish nature of human beings (Tucker-Ladd, 1996). It is believed that the concept of the independent, true self did not begin developing until about 800 years ago. Back in medieval times, the community would tell you what to do, what values
were important to have. Times have changed now in the sense that it is no longer believed that the community in which we live dictates what we do, how we should think, what beliefs we should have, what our personal worth should be based upon, etc. (Ladd-Tucker, 1996). Times have evolved to where it is believed that we as individuals create these values, otherwise known as self-constructs on our own. In today’s world, the ‘self’ theory has evolved into the belief that every human is responsible to decide what is right on his/her own accord (Ladd-Tucker, 1996).

We, as human beings begin to develop our self-constructs, and our overall sense of who we are, and what we are about, in our childhood. The term “childhood” is defined as “the development phase preceding adolescence, ranging in age from six to ten years” (Neil, 2004). Adolescent development is defined as “the physical and cognitive growth of those in the approximate age range from ten to twenty-two years old” (Neil, 2004). The term “youth development” is defined as “the physical and mental growth of youth between six and twenty-two years old” (Neil, 2004). We begin to develop self-constructs from virtually the time we begin to understand life, and begin to experience things, and have interactions with others. As mentioned before, the development of a positive self-construct is a vital part of the development of a healthy human being. If we develop poor self-constructs, we develop poor views of ourselves, as well as poor coping skills for life itself. Feeling good about one’s self, and having a sense of confidence and overall well being of oneself is the crux to success in life itself. Once poor self constructs begin to develop, whether it is a lack of a positive home environment, or a child getting teased at school, or being picked on for always coming in last in a team setting, it is very hard to “undevelop” these self constructs. The exposure to a positive environment is quintessential to the development of a healthy, well-balanced
individual. It has been shown through research that an important variable that assists in the development of positive self-constructs is the exposure to a supportive environment (Ewert, 1989). There are many examples of what is meant by the term “supportive” environment. Some examples include a positive home setting with supportive parents, a school setting, a great sports team, church group, any support group, or an outdoor program (Ewert, 1989). Experiences an individual has, and the people in their lives have a major impact on his/her self-perceptions in this world. The more supportive and positive one's environment is, the better chances that particular individual has to develop positive views and feelings about themselves. Outdoor Education settings are an excellent example of a supportive, nurturing, and positive environment.

Now that the definition as well as the development of the term “self construct” in relation to O.E has been established, the paper will now review research in the field of O.E; with the focus being studies looking at facets of the development of one’s self-constructs.

**Research in the Field of Outdoor Education**

*For most outdoor education advocates the ready-at-hand, ad hoc evidence is sufficient to support their enthusiastic claims about outdoor education. Indeed, the smile when a participant conquers a challenge and the glowing words spoken during a debrief are often compelling. But is it enough to let such evidence speak for itself? Anshel, Muller, & Owens (1968).*

*It is important to understand the actual meaning of the term Outdoor Education Research. By definition, the term research is “the process of systematic investigation, experience and analysis” (Neil, Dec 2004). Therefore, the definition of Outdoor Education Research is “the investigation of the theoretical principles and phenomena that are related to*
Outdoor Education" (Neil, Dec 2004). Traditionally in the field of Outdoor Education, there are three types of research that are utilized. The three main types include quantitative, qualitative, and mixed. Quantitative data is defined as “a set of observations where any single observation is a number that represents an amount or count” (Witte & Witte, 1997). The term qualitative data is defined as “a set of observations where any single observation is a word that represents a class or category” (Witte & Witte, 1997). Mixed refers to the combination of quantitative and qualitative measures. Research done in this field has attempted to examine and analyze the effects of O.E on different levels. Two traditional ways of reviewing the literature of O.E are qualitative or quantitative studies, and the alternate approach of utilizing a Meta-Analysis. A Meta-Analysis is a combination of the outcome statistics of several different studies into a single, overview study. The purpose of conducting a Meta-Analysis is to statistically integrate outcomes from separate studies (Cason and Gillis, 1994). Within the field of O.E. research, conducting Meta- Analyses was necessary in order to make sense of the large amount of information from various research studies. Results found in a Meta-Analysis are reported in effect sizes. The effect size, also known as the ES is showing how much difference existed between ratings at two different points in time. An example of this would be measuring an individual’s self-esteem before and after an outdoor program. In other words, it is measuring the quantified amount of change (Neill, 11-13 January). Traditionally, the effects of O.E on the participants have been looked at on a psychological level, as well as on educational and therapeutic levels (Neill, Dec 2004). There are a plethora of factors that can affect one’s outdoor experience. It is a true challenge to be able to determine when, where, why, and how an individual’s self-constructs have been influenced. The actual process of O.E has been referred to in literature as a “black box”. When participants enter an O.E experience,
they are said to be entering into a "black box". After the experience, they step out of the "black box", without really knowing or understanding what happens in the middle (Neill, July 2004). In other words, it is hard to measure or understand what exactly happens during an outdoor education experience. Through tests and measures, it is possible to measure for example, a change in one's self esteem or self-confidence before and after an experience. However, it is fairly difficult to examine what exactly caused this internal change. It has been found that programs that distinctly have a program goal or philosophy have more positive effects overall. A prime example of this is the Outward Bound Program. Hattie, et al (1997) found that Outward Bound Programs effects were substantially larger than for other types of outdoor education programs. This was due to a key feature of Outward Bound programs, which is their strong philosophy around the concept of self-development. Outward Bound Australia, which mainly focused on the development of self, achieved effects in the order of twice the size of other Outward Bound schools, and approximately four times the effects of other research outdoor education programs (Outward Bound Australia, 1998b). The following section will depict individual studies looking at different types of outdoor education programs in relation to their possible effects on the development of various self-constructs in children and adolescents'.

**Effects of Short Term Adventure Camps on the Development of Childrens' and Adolescents' Various Self-Constructs**

This following section contains a short description of seven studies that examined the effects of adventure camps on one's overall self concept. Following the descriptions of the studies is a summary of the major findings from these studies.
• A study entitled “The Impact of Short-Term Adventure Camp on Self-Concept and Anxiety in Japanese Early Adolescents” was conducted (Iida, Imura, & Van Der Smissen, 1986). The purpose of this particular study was to look at the effects of adventure programming on the self-concept of adolescents. The target population was 155 children (114 males, 41 females) in the 6th through 8th grades. They were volunteers, and participated in an adventure camp experience, which included a three day mountain climb. The majority of the target population was from the Tokyo Metropolitan area. The instruments used in the study included the Children’s Self-Actualization Scale (CSAS), the State Anxiety Inventory (SAI), as well as a pre/posttest for an 8-day camp trip, as well as a pre/posttest for the 3-day mountain experience. The results that were found from the tests were the following: statistically significant change in achievement and self effort; statistically significant positive change in self concept; significant change in overall self concept; and achievement motivation in female subjects. Subjects who displayed a great reduction of anxiety levels had a greater improvement in self efficacy than those subjects with low reduction of anxiety levels (Iida, Imura, & Van Der Smissen, 1986).

• In a study conducted by Hazel worth and Wilson (1990), thirty-nine campers participated in a study entitled “The Effects of an Outdoor Adventure Camp Experience on Self-Concept”. The purpose of this study was to evaluate a coed outdoor adventure camp program designed to
increase camper's self-concept. The sample consisted of 39 campers, ages 12-15 years old who participated in a 9-day outdoor adventure program. The methods that were used in this study included pre-post test, using the Tennessee Self-concept scale. This scale measures 9 self-concept areas: physical, ethical, personal, family, social, identity, self-satisfaction, behavior, and self-criticism. The results of the study were broken down into four sections. From these four sections, the following results were found: significant positive change of self-concept of family; significant positive change of self-concept in moral ethical views and family; significant positive self-concept change in moral-ethical and social areas; and significant positive self-concept change in moral ethical, identity, and self satisfaction.

A study in which 59 children (29 male, 30 female, ages 9-15) attending a 3-week coed summer camp was conducted. The study entitled “Self-Esteem Change and a Summer Camp Experience: Longitudinal Study of Self-Esteem Before and After a Summer Camp Experience” had a purpose of assessing change in self-esteem of campers attending a summer camp (Grayson, not dated). The methods that were used in this study included a pre-post test, 6 month follow up, using the Piers-Harris Children’s Self Concept Scale, Rosenberg Self Esteem Scale, and an open ended questionnaire given to campers and counselors. The results yielded a significant increase in self esteem scores between pre test and posttest, which was maintained at the 6 month follow up test (Grayson, not dated).
A study was conducted on “The Effects of a Sports Camp Experience on the Overall Self-Concept of Boys”. The study consisted of a 6-week day sports camp program. The population was fifteen boys’ ages 6-9 years old. The purpose of the study was to determine if different aspects of self-concept are independent, or if situations with specific criteria that enhance one aspect of self-concept positively affect other dimensions of self-image. Results showed significant differences in the sports ability, self-knowledge, and sports ability self esteem (Anshel, & Muller, 1968).

A study entitled "Programming and self-concept: How does what you do affect how they feel about themselves?" was conducted with the purpose of discovering what factors of the camping experience affect the campers’ self-concept. The sample for this study included 147 female campers who were in grades 5-11. Methods that were used for this study included qualitative methods: journaling. This entailed the campers’ making daily journal entries regarding what they liked the least during the day, as well as positive and negative feelings that they experienced during the 54-day experience. The results showed that the journal entries fell into 8 different categories of self concept: caring environment, interactions with campers and counselors, feelings of stress and pressure, opportunities to experiences empowerment and effectiveness, and program related experiences. Overall, the campers recorded 4 times as many positive experiences versus negative experiences. Peer judgment was the largest producer of negative feelings related to the program. Lastly, class
placement was extremely important to the campers. They expressed negative feelings when they were placed in lower level classes (Cowin, May 1989).

❖ "The Effects of Camp Experience on Self Esteem" was examined by Dorian & Chambliss, 1994. This study included 248 American children of the Greek decent that were attending a 2-week Greek orthodox summer camp in Greece. Their ages were grouped between 12-15 and 16-18 years old. The purpose of this study was to look at the effects of ethnic awareness focused camp experience on the self-esteem of the campers'. The methods used in the study were the pre-post test, as well as the Rosenberg Self Esteem Scale. The results yielded a significant increase in self-esteem scores. Also to be noted was that the 16-18 age groups scored higher than the younger age group on the pre and posttest of self-esteem.

❖ A study conducted in 1992 by Evans, Piromrak, & Karnsaway, 1992, had the purpose of determining the effects of summer camp attendance on children’s self-esteem sampled 40 girls, ages 7-10 years old. This study used a combination of both quantitative and qualitative data collection. The methods that were used included a pre-post test, as well as the Martinek-Zajckowsky Self Concept Scale for Children. This particular study found a significant change in self-concept scores, as well as a direct correlation between camping and the change in self-concept scores.

❖ A study was conducted identifying 4-H camping outcomes using a standardized evaluation process across multiple 4-H educational centers.
The purpose of the study was to develop a standardized evaluation process, and to evaluate camping participants’ outcomes using standardized instruments in order to identify both the 4-H camping benefits as perceived by the youth, as well as the 4-H camping benefits by the camper’s parents/guardians. A total of 9296 surveys were distributed to the 4-H youth campers. The response rate was 87%. The camper’s ages ranged from 9 to 13 years old, the mean age being 11 years old. The perceived benefits from the campers were the following: improvement in communication skills, improvement in responsibility, improved self-confidence. (Garst, June, 2003).

The following study looked at a compilation of studies to determine whether or not outdoor education experiences truly do what they claim to do. The time of this particular study is “Do Outdoor Education Experiences Contribute to Positive Development in the Affective Domain?” The purpose of this study was to conduct an overall review of current literature in the field to make the determination of whether the empirical evidence that is available supports the following: the assertion that outdoor education experiences contributes to positive affective development, specifically to the development of one’s self concept, attitude towards the outdoors, and the attitude towards school and teachers. The participants for this study included school aged children ranging from eight to 18 years old. The outdoor experiences included day camps and resident camps. The length of these programs measured ranged
anywhere from a day experience to a two-week residential camp experience, all the way to a six-week day camp experience. The instruments that were used in the study included the Nowicki-Strickland Locus of Control Scale, Piers-Harris Self-Concept Scale, and the Lipsitt Self-Concept Scale. In addition to these scales, a Children’s Manifest Anxiety Scale, as well as the Millward-Ginter Outdoor Inventory was used. Both qualitative and quantitative measures were used. The majority of the designs were pre-post test designs. There was some use of control groups, randomization and matching. The overall findings from this study showed that on average, campers’ had an enhanced self-concept and positive changes in locus of control were noted, as well as positive retention in ones’ self concept. Improved teacher-student relationship was measured. There was little support for positive effects of outdoor education experiences in the realm of internal attitudes towards school and teachers however (Crompton & Sellar, 1981).

In summary, from the various single studies conducted looking at the effects of short-term adventure camp program settings in relation to the development of one’s self-constructs, the following was discovered:

- Iida, Imura, & Van Der Smissen, (1986) found statistically significant change in achievement and self effort, statistically significant positive change in self concept, significant change in overall self concept and achievement motivation in female subjects, subjects who displayed a
great reduction of anxiety levels had a greater improvement in self
efficacy than those subjects with low reduction of anxiety levels

➤ Hazel worth, Wilson,(1990) found significant positive change of self-
concept of family; significant positive change of self concept in moral
ethical views and family; significant positive self concept change in
moral-ethical and social areas; and significant positive self concept
change in moral ethical, identity, and self satisfaction.

➤ Grayson, (not dated) found significant increase in self-esteem scores
between pre test and posttest, which was maintained at the 6 month
follow up test.

➤ Anshel, & Muller, (1968) found results showed significant differences in
the sports ability, self-knowledge, and sports ability self esteem.

➤ Cowin, (May 1989) found results that showed that the journal entries fell
into 8 different categories of self concept: caring environment,
interactions with campers and counselors, feelings of stress and pressure,
opportunities to experiences empowerment and effectiveness, and
program related experiences. Overall, the campers recorded 4 times as
many positive experiences versus negative experiences. Peer judgment
was the largest producer of negative feelings related to the program.
Lastly, class placement was extremely important to the campers. They
expressed negative feelings when they were placed in lower level classes
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Dorian & Chambliss, (1994) found significant increase in self-esteem scores. Also to be noted was that the 16-18 age groups scored higher than the younger age group on the pre and posttest of self-esteem.

Evans, Piromrak & Karnsaway, (1992) found significant change in self-concept scores, as well as a direct correlation between camping and the change in self-concept scores.

Garst, (June, 2003) discovered overall improvement in communication skills, improvement in responsibility, improved self-confidence.

Due to the limitations of this paper, every individual study was not reviewed in this paper. However, the studies that were reviewed looking at outdoor adventure camps in relation to one’s self concept yielded positive results. It seems throughout the research that if the goal of an individual is too potentially increase his/her self-constructs, whether the individual suffers from low self-esteem or has an overall poor self-concept, any type of adventure based outdoor program would be an excellent program to target these goals. Also, as will be discussed further, it has been discovered that longer programs yield longer lasting results. Therefore, it seems that the best possible advice to give someone looking to increase his/her self-concept would be to research outdoor programs that have the following variables: adventure based, have a founding philosophy that they incorporate into their program, at least one week in duration, and preferably overnight based. An article entitled “Does Camp Enhance Self-esteem? Good news for the future of camping” states the following:

The analysis of the available research finds positive and significant results: positive in that outdoor experiences do enhance the self-
constructs of youth, and significant in that the result is not due to chance alone. However, the findings also show that not all camps make a positive contribution to self-construct. Only those camps that have a focus on self-enhancement as a working part of the program’s philosophy actually contribute to a youth’s development of positive self. Furthermore, youth ages six to ten benefit more than older youth (Marsh, 1999 p138).

Effects of Wilderness Therapy on the Development of One’s Self-Concept

There are a plethora of outdoor programs that incorporate therapy and wilderness together as a strategy to enhance a youths’ development of self-constructs. Wilderness therapy is loosely defined as a treatment option for severely troubled youths that are not being reached through traditional forms of treatment. The research shows that wilderness therapy can improve self-perceptions, increase social adjustment, and reduce recidivism of adolescent participants. It is an emerging type of program that is geared towards helping adolescents overcome emotional, addiction, and psychological problems they may be experiencing (Russell & Hendee, 1999). Many studies have specifically looked at the impact of wilderness therapy in relation to the development of a youth’s self constructs. There are two distinct types of wilderness therapy programs: contained programs that last up to three weeks and operate as expeditions with clients and staff remaining together for the duration of the program; and continuous flow programs that last up to eight weeks, with clients and staff that cycle in and out of the program (Russell
& Hendee, 1999). Following is a brief description of eight studies that examined the effects of Wilderness Therapy studies.

- A study entitled “Impacts of Wilderness Therapy on Youth’s Self-Conceptions: An Interactionist Perspective” had a sample size of 309 males, ages 12-18 years old. The participants were split into small groups, consisting of 4-10 males. They participated in a two-week wilderness canoe camping experience. A questionnaire was used requesting that the males rank themselves, as well as each member in his group relative to his perceived leadership status, as well as indicate the position in his group where he thought his peers would most likely place him. The design of the study was a pre-post study. Results from this study showed several things. The participants’ self ratings of their leadership positions in the group relative to the other members of the group were significantly correlated with the perceived rankings of their leadership position. Their perceived rankings of where they stood in the group were significantly correlated with their assigned ranks. It was also found that nearly half of those participants that ranked themselves higher than their assigned rankings were having problems getting along with their peers. Also, these participants that had higher self-rankings than their assigned ranking were most frequently identified by the leaders as having a hard time getting along with other peers (Bultena, 1981).

- Another example of a wilderness therapy study entitled “The Effects of Wilderness Therapy Programs on Changes in Self-Esteem and Teacher-

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Rated Behavior of Youth at Risk” (Allen 1991) looked at the effects of a wilderness therapy program on the changes in self-esteem as well as teacher related behavior of this particular population of youth that were at risk for emotional and behavioral difficulties. The quasi-experimental method was utilized in order to measure these possible effects. In this method, both treatment and comparison groups were used. This method yielded positive results. It showed overall positive results in increased self-esteem and teacher-rated behavior between the pre-test and the post-test measures (Allen, 1991).

❖ The effects of wilderness therapy on deaf youths as the main component of therapy was the topic of a study titled “Psychologically Maladjusted Deaf Youths and the Wilderness as Therapy” (Parent, 1990). It has been discovered that language itself has a strong impact on an individual’s intellect, cognition, self-esteem, as well as overall human development. Without being able to hear, we, as humans become deficient not only in language development, but also in psychosocial development and overall developmental processes. The purpose of this study was to examine whether or not wilderness therapy does in fact influence these specific areas in the development of hearing impaired youths: social relationships, self-esteem, and impulse control. The study yielded significant results in all three areas (Parent, 1990).

❖ A study entitled “Improving Self-Esteem of Elementary School Children with Adlerian Adventure Therapy” was conducted by Wick (1997). The
population examined included 66 fifth grade students from a multicultural urban area. The design of this particular study was a randomized Solomon four-group study. Half of the participants were pretested using the Piers-Harris Children’s Self Concept Scale. The other half of the participants (in combination of taking the Piers-Harris Children’s Self Concept Scale) was involved in a group intervention that combined Adventure Therapy with Adlerian theory. Results yielded the following: significant improvement in the group that participated in the group intervention combining Adventure Therapy with Adlerian theory in the following areas: behavior, and popularity. These results are in congruence with the focus of Adlerian theory combined with adventure therapy (Wick, 1997).

❖ The purpose of the following study entitled “Experiential Adventure Therapy plus Family Training; Outward Bound School’s Efficacy with Status Offenders” was to determine the efficacy of an Outward Bound school program for adolescent status offenders in the areas of behavior, family, and self-perception variables (Homier, 1994). The population for this study included a control group of 40 subjects, and an experimental group of 39 subjects. The following scales were used to analyze the data: the adolescent self-perceptions were assessed using the Harter’s Self-Perception Profile for Adolescents (SPPA). Eight different domains and global self worth were measured. The Eyberg Child Behavior Inventory (ECBI) was used in order to measure the parent’s views on the youth’s behavioral problems. It as discovered from this study that the Outward
Bound School program in correlation with family training was statistically effective in reducing problem behavior. The program also increased family adaptability and increased adolescent self-perception score perceptions (Homier, 1994).

❖ Another example of a study that looked at the correlation between a form of outdoor therapy and its effects on self constructs is entitled: “The Effects of Ropes Course Therapy on Interpersonal Behavior and Self-Esteem of Adolescent Psychiatric Inpatients”. This study wanted to determine the effects of the ropes course on the inpatients’ self esteem levels as well as their interpersonal behavior. The sample included two groups of psychiatric inpatients: the experimental group (n=20) participated in a ropes course for three weeks. The control group (n=20) did not participate in the ropes course. Tests used to measure effects were the Coopersmith Self-Esteem Inventory, the Child Behavior Checklist Teacher Report form, and the California Psychological Inventory. It was concluded from the results found that the participation in this ropes course did improve the adolescent patients’ levels of self-esteem as well as their interpersonal behavior (Blanchard, 1993).

❖ A study titled “The Effects of Adventure Based Counseling and Levels of Sensation seeking on the Self-Efficacy of Chemically Dependent Males” was conducted with the purpose being to determine the effects of adventure based counseling and the levels of sensation seeking on the development of self-efficacy in chemically dependent males. The
participants included 60 males (ages 18-65) that were chemically
dependent based on DSM-III criteria. The design of this particular study
was a randomized post-test only control group design. The cells included
traditional treatment with adventure based counseling/high sensation
seekers, traditional treatment with adventure based counseling/low
sensation seekers, traditional treatment/high sensation seekers, and
traditional treatment/low sensation seekers. The results found that there
was a significant difference between the two groups (low sensation
seekers vs. high sensation seekers). The instrument used to determine this
was a 2x2 ANOVA. This evaluation showed that low sensation seekers
had statistically significantly higher self-efficacy scores than high
sensation seekers (Hughes, 1993).

❖ A study titled “Adventure Based Counseling As a Therapeutic
Intervention With Court-Involved Adolescents” explored whether or not
the application of Adventure Based Counseling (ABC) significantly
increased court adjusted adolescents’ self concept, and self esteem. The
population included 31 court adjudicated adolescents (23 males and 8
females). Three groups were created: 2 intervention groups, and 1 non-
intervention group. The Tennessee Self Concept Scale and the Battle
Culture Free Self Esteem Inventory were used to collect quantitative data.
Results showed a significant improvement in improved physical, moral,
and social self-concept; self-satisfaction; total self-esteem, and total self-
concept (Maizell, 1988).
In summary, the various individual studies conducted looking at the effects of wilderness therapy programs in relation to the development of one’s self-constructs the following was discovered:

- Allen (1991) found overall positive results in increased self-esteem and teacher-rated behavior between the pre-test and the post-test measures.
- Allen (1990) found overall positive response in the areas of communication, cooperation, as well as the relationships with the counselors. They also felt that the physical challenge activities were very effective.
- Wick (1997) found positive results in social relationships, self-esteem, and impulse control. Results yielded significant improvement in the following areas: behavior, and popularity.
- Homier (1994) found increased family adaptability and increased adolescent self-perceptions improvement in adolescent patients’ levels of self-esteem as well as their interpersonal behavior.
- Hughes (1993) discovered low sensation seekers had statistically significantly higher self-efficacy scores than high sensation seekers.
- Maizell (198) found significant improvement in improved physical, moral, and social self-concept; self-satisfaction; total self-esteem, and total self-concept.

Once again, every study that was reviewed in the area of wilderness therapy was not included in this paper due to the limitations of space. However, there is a plethora of evidence that supports positive effects of this type of therapy in various realms. In the
current field of Outdoor Education, the field of wilderness therapy seems to be the fastest growing as far as new programs and popularity. It seems that its value and positive effects is becoming more and more widely acknowledged. Even in Missoula, Montana in the field of Social work, these types of programs are being more widely utilized for troubled youth in our community. New programs continue to be developed in Missoula as well, which is exciting to see.

**Meta-Analysis Results**

To date, five Meta-analyses have been conducted examining overall changes in individuals' self-concepts. These five studies have represented over 16,000 participants, and overall show that O.E has a low to medium impact on the following measured outcomes: changes in self concept, self confidence, and locus of control. Also, it has been found that these changes are retained over time, as well as increased over time (Neill & Richards, 1998). These Meta analyses haven been conducted by Cason & Gillis (1994), Hattie et al (1997), Hanns (2000), Marsh, (1999), and Bunting & Donley (2002) (Neill). Cason and Gillis conducted the first Outdoor Education meta-analysis in 1994. The focus of this Meta Analysis was to look at pre-post outcomes of adventure programming for adolescents. There were a total of 43 studies that were included in this study. This Meta Analysis was broken down into the following categories: behavioral assessment by others, academic, attitude, and locus of control, clinical scales, self-concept and self-esteem, and school attendance. The effect sizes were found to be statistically significant in all of the measured categories. This translates to mean that a significant change was found in all of the categories. Overall, the average effect size
was .31, which translates to show an overall improvement of 12.2% for adolescents participating in one of the programs (Cason & Gillis, 1994).

The meta-analysis conducted by Hattie, et Al (1997) is to date the single most conclusive study done in outdoor education research. The study itself is a combination of 96 different research studies on O.E, and included 12,057 participants. The focus of this Meta analysis is adventure education and Outward Bound programs. This Meta analysis is the only one to date that has looked at the long term effects of outdoor education programs. Overall, this Meta analysis found an average effect size of .34. This number translates into meaning that a statistically significant difference was found overall. This number also means that the change found is considered “small to medium amounts of change”. This figure can be further translated into meaning that 65% of participants in outdoor education programs were better off than those who did not participate in O.E programs. The study was broken down into the following categories: leadership, self-concept, academic, personality, interpersonal, and adventuresome. The description of leadership is conscientiousness, decision-making, leadership, time management, values, and goals. The description of self-concept is physical ability, peer relations, general, confidence, self-efficacy, family, self-understanding, well being, and independence. The description of academic is mathematics, reading, GPA, and problem solving. The description of personality is femininity/masculinity, achievement motivation, emotional stability, aggression, assertiveness, locus of control, and maturity. The description of interpersonal category is cooperation, interpersonal communication, social competence, behavior, and relating skills. The category adventuresome was measuring flexibility, physical fitness, and environmental awareness. In all of these categories that were
measured, all of the program effects were found to be statistically significant (p<.05). Consequently, the follow up study, which was given 18 months after the end of the program, showed a continued growth (Effect size of .17 which means that the overall effect size is .51). “It seems that adventure programs have a major impact on the lives of participants, and this impact is lasting” (Hattie et al, 1997). In conclusion, this large Meta analysis, through the compilation of 96 studies, analyzed the categories of leadership, self concept, academic, personality, interpersonal, and adventuresome, and found that the program effect in every category was statistically significant.

Three other Outdoor Education meta-analyses reviewed the pre-post outcomes for particular types of programs. The study conducted by Marsh, P. E. (1999) consisted of 22 studies, and focused on the impacts of American camping programs on children and adolescents. The results showed that outdoor programs have a positive influence on self-esteem in a program that had a focus on self enhancement. Also, it was found that an increase in self-esteem was most pronounced in pre-teens but was positive across all ages (Berman, D & Berman J, 1995). The study conducted by Hans (2000) consisted of 24 studies which consisted of over 1,600 participants. The focus of this study was the effects of adventure programming on locus of control outcomes. Overall, with an effect size of .38, small to moderate impact in the areas of overall self-concept, self-esteem, behavior problems, and teamwork was found (Neill, J.T., 11-13 January).

Lastly, the study conducted by Bunting and Donley (2002) focused on the effects of ropes challenge course programs on teamwork, more specifically the effects on self-concept and self-esteem outcomes. An effect size of .55 was measured. Out of the five meta-analyses conducted, that is the highest effect size measured. In summary, amongst
the five outdoor education meta-analyses that have been conducted, outdoor education programs have a "small to moderate impact for typically measured outcomes such as self concept, self-esteem, behavior problems, and teamwork". The largest follow up effects appear to be in the area of self-concept. The overall effects seem to suggest enhancement of self related constructs (Neill J.T, 11-13 January).

After five decades of modern day outdoor Education, the empirical outcome research reveals that on average, Outdoor Education programs appeared to have small to moderate effects on participants' self-perceptions of personal qualities and capabilities (Hattie et Al, 1997). Additionally, it has been shown that Outdoor Education programs that have a focus on self-enhancement as part of their philosophy actually increases the contribution to the youth's development of a positive self. Overall, the analysis of research in the Outdoor Education field finds positive and significant results in the enhancement of childrens' and adolescents' various self constructs through the privation of various outdoor education programs. The results are significant enough to show that the changes are not due to chance alone. Furthermore, it has been discovered that the effects of Outdoor Education programs do have a lasting effect (Hattie et Al, 1997). In the study conducted by Hattie et Al., (1997), long term effects of outdoor education programs were studied utilizing a longitudinal study. An additional effect size of .17 was reported for assessments done up to 18 months after the end of the program. Combined with the original effect size of .17, the average effect size of the program was .34, with a continued average ongoing improvement of .17. The combination of those numbers gives an average overall effect size of .51. Therefore on average, it was found that
participants’ experienced continued growth upon returning back their home environments (Neill, 11-13 January).

In this relatively new field of study, it is no longer adequate for Outdoor Education advocates to simply “believe” in the benefits of O.E. The importance of continuing research to seek more knowledge of why these certain effects occur is absolute. Currently, there are several Meta analyses studies being conducted in the field of O.E continuing to examine the effects of O.E in various real
Chapter III

Summary and Suggestions for Further Research

You must live in your school. Your house and land you live on must be your school. You are always the teacher and always the student. You must do everything possible to educate yourself about life, the world, yourself, and most importantly the connections between everything. You must have many people visit the school, and much solitude and silence to reflect on things. It must be your life – (Neil, 2001).

The research that I reviewed on the effects of outdoor education overall supports evidence that outdoor education has positive effects in various areas of an individual’s life. These areas included psychological, psychosocial, and behavioral areas. Overall, it was also shown in the research that participation in outdoor education programs did result in measured increases in the following areas: self-esteem, self-confidence, overall self-concept, improved behavior, and growth in interpersonal as well as intrapersonal skills. The five Meta analyses that have been conducted in the field thus far have shown that outdoor education programs make a measurable difference in areas such as self-esteem, and overall behavior problems. Other areas that were discovered to make a difference include leadership, self-concept, academic, personality, interpersonal and intrapersonal skills, adventuresome, behavioral assessment by other, school attendance, and attitude towards the outdoors. Currently, there are several Meta analyses being conducted to discover the current effects that O.E programs are having on individuals.

The concept of Outdoor Education, as well as its noted importance on many levels is growing at an extremely rapid pace. Outdoor Education is being implemented more and more into our school programs, as well as work settings in our society. Despite this fact, there is still very little known about what exactly happens “in between” the
program to yield these found results. In other words, there is very little evidence identifying the reasons why these effects of outdoor education occur. This concept could be compared to the following example: discovering a cure for a rare disease, however not having scientific evidence to show how the disease is being cured. Currently in the field of O.E research, the goal is to discover the answers to the burning question: what happens to cause these changes that are being measured? What aspects, or dynamics, of a program affect these measured changes? It is imperative at this point of O.E research to discover what happens to cause these changes. It is no longer sufficient to simply measure positive effects. In order for continued growth to occur in this field, certain answers need to be discovered.

Suggestions for Future Research

As the field of Outdoor Education continues to develop and grow, the need to be able to give an exact explanation of what the effects of outdoor education are, as well as why and how they occur is greatly needed. There are a plethora of studies that show what the effects of O.E. are. However, as mentioned with the “black box” theory, very little is known about what exactly occurs from the start of a program to the end of a program to cause these effects. “In essence, we have discovered an educational black box; we know something works but we don’t know why or how” (Ewert, 1983 p 83). It is becoming widely acknowledged and understood that more research is needed to examine the exact psychological processes, which lead to the outcomes of O.E programs. A suggestion for a possible research project would be to design a way to measure what internal thoughts an individual goes through within a program. This could possibly be done through the administration of certain psychological tests. It has been proven through single studies
that outdoor education programs can possibly increase areas such as self-confidence and self esteem. However, to date, it has not been discovered how to measure the exact processes that occur within individuals to cause these possible positive effects.

Another area of research that could be further examined to enrich the understanding of O.E includes analyzing which factors of an outdoor program affect the outcomes that are measured. Through the review of literature, there were no studies found specifically looking at the effects of the various factors of an individual O.E program. There are many factors that go into the physical make up of an outdoor program. These factors include the following: the dynamics of the program; the philosophy of the program; the leaders and directors of the program; the make up of the individuals of the program; the size of the program; and the overall structure of the program. Gaining more insight and understanding of which factors of a particular program affected the possible outcomes found in an individual would be highly beneficial for O.E programs to have insight on. A possible method for gaining this information would be to conduct a survey asking specific questions regarding the effect of different components of a program. The survey could ask program participants to rank the different factors in terms of importance of influence on his/her outdoor education experience. In addition to this, it seems that it would be beneficial to the body of literature on O.E programs to compile an in depth spread sheet of all of the various outdoor programs that are available. A possible spread sheet would include the following: the name of the program, their location; their philosophy; the length of their program; the demographic make up of the individuals attending the program; the demographic make up of the staff; any specific principles the program primarily focuses on; the physical
setting of a program; what type of program: day or over night. It would be an incredible resource to have access to in order to determine what type of program may be most beneficial to an individual dependent on his/her specific needs. For example, if an individual is looking to possibly increase their self esteem levels in a specific area, and is wanting to also increase their team building skills, a resource such as this would significantly help narrow their choice of programs. There are a lot of programs out there which can be overwhelming, especially to parents who are attempting to find a program that would fit their child’s needs. To take this further in the research realm, having this compilation of data, and paralleling the data to gathered data from single studies would be able to possibly discover what aspects of a program affected the possible changes found, such as increased self esteem or increased interpersonal skills.

In the existing body of O.E literature, longitudinal studies are very limited in number. It would be beneficial to the body of literature to conduct a study that measured one’s growths in all areas every 6 months for a period of 5 years, for example. It has been shown in the body of O.E research that there are statistically significant results in various areas directly after an outdoor program. However, very little is known about the long-term effects of programs. An important question to ask would be if a program continues to positively affect an individual’s self-confidence long term if this growth ended the day the program ended. Perhaps the individual’s self confidence did increase directly after the program. Yet, when they returned to their original environment, their self-confidence regressed. An example of this type of study would be the following: targeting a camp program with a total population of at least 100 individuals. At the beginning of camp, a pre- test with questions specifically targeting psychological (aspects
You can discover more in an hour of play than you can in a lifetime of conversation – Unknown

self esteem, self confidence, etc) as well as psychosocial aspects (interpersonal/intrapersonal skills, etc) of potential growth. At the 6th month mark, administer another test. Have this process continue every 6 months for at least 5 years.

Important aspects to keep in mind for this type of study would be to ask the participants if they were continuing to participate in outdoor programs. Another aspect would be to look at teachers' as well as parents' perceptions of any effects they had noticed in the participants.

Another possible research avenue to pursue would be to examine and measure the effects of journaling during an O.E experience. Journaling is a wonderful way to do introspective work on one's self. Many wilderness therapy programs include journaling as part of their program. It aids in the growth of perhaps understanding one's self, and therefore may affect one's self-concept growth, for example. Nowhere in the research does it specifically measure the possible effects of this type of introspective work in relation to the growth of one's self-concept. Journaling as well as other introspective work may be a fascinating venue to explore specifically looking at how these tools may influence growth in various areas in an individual.

The absolute beauty of the Outdoor Education field is that it is so vast and in many ways, unexplored. It is a young field with lots of opportunities for growth and continued research. From conducting a literature review, it seems there is a plethora of research that demonstrates positive effects of O.E. However, due to the field being relatively young combined with the constant evolution of O.E., there are some crucial "gaps" in understanding the process of O.E in relative terms to the positive effects discovered. It seems that through continued research of fine-tuning methods to discover
this “black box” theory of knowledge, many unanswered questions revolving around O.E will be solved. Therefore, it seems that the next step to furthering O.E research would be to discover methods to measure and discover the how’s and why’s behind Outdoor Education.

A Personal Note

The author of this paper feels passionate about the importance of the incorporation of Outdoor experiences and education into the everyday life of individuals, whether it is a simple walk around the block, or climbing a peak in South America. Whether it is taking a quick jog with a friend, or participating in a 5-week outward bound intensive program. The impact of any O.E experience is immeasurable on many levels. Having worked in many different areas of social work with mentally ill children and adults, I have seen the impact of giving these individuals the experience of the outdoors, and how it affected their overall well being well beyond any therapy that was seen. Notable areas of growth from outdoor education included increased self-confidence, an increased positive self-concept, a better overall attitude, and decreased symptoms of depression. Also, having worked on many different levels with children and adolescents, whether it is an outdoor camp setting, or a teacher setting, observing the growth of these children on many levels is outstanding. It goes far beyond the growth you would see in a traditional school classroom setting, for example. The following is my definition of the philosophy of education.

My Philosophy of Outdoor Education

The definition of the Philosophy of education includes thinking about what is both possible and desirable in education. I personally believe that education should and can
be both creative and dynamic. Education should cater to all different learning types, not just one specific type. Traditionally, in the public school system, only one learning type is catered to. I believe that catering to a variety of learning types is both possible and also highly beneficial. I think one reason public schools do not always cater to all learning types is because it takes too much time. It also would take more teachers, and more money. In addition, public schools need to think about time management as well as crowd control. It is much easier for the teachers to simply lecture, and have the students regurgitate what they have taken notes on, then for example, to have various approaches to learning the same information.

For me personally, school was a challenge for me, and often times I was very frustrated and bored. I had a lot of energy, which was a great thing. But in our society, that is often viewed as a “not so great thing” in the classroom. You are viewed as that “hyper” child that cannot sit still and pay attention. When really, I was just very bored and not nearly stimulated enough. I am also a hand on, physical learner. I learn by physically seeing a concept, etc. I am referred to as a kinesthetic learner. It is very hard for me to hear things or read things, and absorb 100% of it immediately. Therefore, for me, school was often frustrating until they put me in the alternative classroom where my specific learning type was approached successfully. That is when I fell in love with school and learning because I was no longer frustrated and bored. I was able to express my creativity.

I believe that in the big picture, it would be beneficial to students and society in general if all learning types were catered to; therefore educating every person to his/her fullest potential.

Along with my thoughts on the importance of catering to all learning types, is that all learning spaces be dynamic. Specifically, classrooms should be both indoors and outdoors, as well as have friendlier, more inviting lighting instead of sterile lighting. Instead of uncomfortable desks all in a row, there should be comfortable chairs in a circle, inviting a more relaxed environment that may cater more to creativity. The teacher should be seated within the students. This allows the students to feel like they are
You can discover more in an hour of play than you can in a lifetime of conversation – Unknown

...all working together as a team, to learn something together. The teachers’ role should not be that of a dictator, but rather that on an interpreter- Jennifer French Thompson.

The importance of having the experience of an outdoor education experience is both educational as well as therapeutic. The impact of having such an experience is immeasurable on so many different levels. My philosophy on overall health and well being is that in order to be healthy and well balanced; you must have both physical as well as mental health. They go hand in hand. If you don’t have one, chances are you don’t have the other. The incorporation of outdoor experiences and education into one’s life is essential to being well.

A recent interactive study conducted in Boulder Colorado, (Jan 30th, 2004) found that approximately 80% of outdoor participants feel that outdoor activities promote a feeling of accomplishment, decrease stress, and make them feel younger (www.outdoorindustrty.org). This New Harris Interactive study also discovered that “Americans who participate in at least one outdoor activity on a regular basis reap mental and physical health benefits” (www.outdoorindustrty.org).

I plan on eventually conducting outdoor education research investigating what dynamics influence the effects of a program on an individual. In addition to this research, my goal would be to conduct a longitudinal study to look specifically at long term effects of outdoor education in the area of the growth of one’s self constructs. Eventually, I plan to own an outdoor adventure camp in Montana for children and adolescents. Currently, there are plans in the works to make this plan happen!
Appendix A

The Outdoor Education Tree, and Outdoor Education Quotes
You can discover more in an hour of play than you can in a lifetime of conversation – Unknown

The Outdoor Education Tree

adapted from Priest 1986

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Appendix B

Definitions of Outdoor Education
Professor John Passmore was the member of the Faculty of Education at the University of Toronto responsible for outdoor education. He suggests that:

"Outdoor education can:

Offer meaningful learning situations which should be an important part of every child's education.

Provide an opportunity for direct learning experiences, which can enrich the school curriculum in all subject areas.

Stimulate students' curiosity and permit them to discover the excitement and satisfaction of learning out-of-doors.

Enable pupils to develop new interests and skills, which can provide a basis for a lifetime of creative living.

Help them discover the important relationship that can and should exist between classroom instruction and outdoor learning.

Give them a much broader knowledge of ecological principles and their relationship to our quality of life.

Provide excellent opportunities to examine through personal experience many of our present social and cultural values.

Help pupils to develop a better understanding of themselves, their teachers, and their total education." (1972 p 14)

**Psychosocial Definitions**

Outdoor education...

"appeals to the use of the senses - audio, visual, taste, touch, and smell - for observation and perception".

- C. A. Lewis, 1975, the Administration of Outdoor Education Programs. Dubuque, IA: Kendall-Hunt

Outdoor education is...

"when small groups of people participate in organized adventurous activities in natural settings and primarily use themselves as the resource for solving problems". (Neill, 2003)
You can discover more in an hour of play than you can in a lifetime of conversation – Unknown

Outdoor education is...
"a learning climate for the things which can be learned best outside the classroom".
- Julian Smith, 1955, Outdoor Education and Youth, Washington, DC: AAHPER

Environmental definitions

Outdoor education is...
"Education in, for, and about the outdoors”.
- Donaldson & Donaldson, 1958, Outdoor Education: A definition. JOPER, 29(17), 63

Outdoor education is...
"A matter of many relationships. These relationships concern not only the natural resources, but also people and society”.

Outdoor education is...
"an experiential method of learning with the use of all senses. It takes place primarily, but not exclusively, through exposure to the natural environment. In outdoor education, the emphasis for the subject of learning is placed on relationships concerning people and natural resources”.
- Lund, 2002

Outdoor education is...
"often synonymous with environmental education and outdoor recreation”.
- Priest, 1988
Appendix C

Personal Definition of Outdoor Education

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Personal Definition of Outdoor Education

There are many definitions of Outdoor Education in existence. Examples of Definitions include the following: education in, about, and for the outdoors; an experiential method of learning that utilizes the outdoors as an educational tool; education emphasizing relationships involving people and natural resources; and education about sense of place. It is important to remember that Outdoor Education is an extremely broad field and it encompasses many different fields. The definition that I have created through the compilation of several definitions is the following: Outdoor Education is an education with the primary focus on the development of the person as a “whole”; academically, cognitively, emotionally, physically, as well as intra and inter-personally. Outdoor Education is also the education about life skills that one needs in the real world; far beyond any knowledge that one could learn out of a book.
Appendix D

Meta Analytic Summary
Table One

Overall Results from Five Meta-analyses related to Outdoor Education (Neill, J.T., and 11-13 January).

<table>
<thead>
<tr>
<th>Study</th>
<th>Focus</th>
<th>d</th>
<th>N studies</th>
<th>N effects</th>
<th>N participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cason &amp; Gillis (1994)</td>
<td>Adventure programming for adolescents</td>
<td>.31</td>
<td>43</td>
<td>147</td>
<td>~7,030</td>
</tr>
<tr>
<td>Hattie et al. (1997)</td>
<td>Adventure education and Outward Bound programs</td>
<td>.34</td>
<td>96</td>
<td>1,728</td>
<td>12,057</td>
</tr>
<tr>
<td>Hans (2000)</td>
<td>Adventure programming locus of control outcomes</td>
<td>.38</td>
<td>24</td>
<td>30</td>
<td>1,632</td>
</tr>
<tr>
<td>Bunting &amp; Donley (2002)</td>
<td>Ropes Challenge programs Courses</td>
<td>.55</td>
<td>15</td>
<td>na</td>
<td>na</td>
</tr>
</tbody>
</table>

This is a summary of the overall results from the five Meta-analyses that have been conducted in the field of Outdoor Education. Each Meta-analysis depicts what the main focus was in that particular group of individual studies researched. The d represents the effect size measured. If an effect size is .33 for example, that number indicates that an individual in a measured group with a higher mean score whose score is at the 50th percentile would be at the 63rd percentile of the other group’s score distribution. The term “N studies” represents how many individual studies were compiled and measured in that particular Meta-analysis.
Appendix E

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