

A Pilot Study Concerning Students With
Learning Disabilities, Self-Concept,
And Fly Fishing

by

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Abstract

Outdoor education can provide an opportunity for any student to learn more about their environment, and can be an essential developmental tool for a child's mental, physical, and emotional well-being. The purpose of this pilot study is to determine whether an outdoor experience, such as fly fishing, improves the image of self of students identified with learning disabilities. The analysis reviewed literature on self-concept, outdoor education, and the effects of outdoor education on self-concept. A selected group of students identified as having a specific learning disability in a midwestern school district were asked to participate in Kids on the Fly, an after school fly fishing program. Local volunteers donated time and services to this after school program. Kids on the Fly met for three hours one day a week for eight weeks. During that time, members of the program were taught how to tie flies, specific casting techniques, and were able to fly fish on a

nearby trout stream. The researcher used the Tennessee Self-Concept Scale, Second Edition, anecdotal data, and a follow up survey to collect data regarding the effects of fly fishing on student self concept. The data results suggest that students with learning disabilities may benefit from an after school fly fishing program.

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Chapter I: Introduction

Many outdoor enthusiasts would agree that nature has a peaceful and relaxing effect on all those who take the time to enjoy it. Spending time outside can be an escape from modern stressors and a place one can go to enjoy solitude and reflection. For some, they find their sanctuary hiking among the trees of the Red Wood Forest, kayaking down winding streams of the Grand Canyon, camping in the Colorado Rocky Mountains, or fly-fishing the rushing rivers in Montana. For others, the great outdoors is yet to be discovered, and some may need assistance in accessing and appreciating what it is like to partake in one of the many offerings nature has provided.

Many agree there is no other sport quite like fly fishing; it is a form of human artistic expression, an adventure, a spiritual cleansing, and a release from reality within nature. Often, fly fishers will describe their experiences of fishing as spiritual or enlightening, due in part to what they learn about nature, but also what they learn about themselves. No matter who you are or what you believe in, nature has a very powerful way of teaching those who are willing to listen and learn.

A classroom can be seen as a very different environment when compared to the outdoors. In school students are expected to listen and learn all the while remaining in their seat. Whereas in nature, one is constantly using his/her senses and exploring the drama and suspense that nature has to offer. By extending classrooms out into the wilderness a passion is ignited. According to Schoel (cited in Hlasny, 2000), the concept of nature as the classroom can often be referred to as adventure based counseling or experiential education. Experiential education is one of the many ways that students can

learn about the goings on in the wilderness, and how best to explore it. One way to keep the fire lit is to spark the idea of experiential education into the hearts of today's youth, especially in those who find it difficult to learn in the traditional classroom setting.

Teaching does not always have to exist solely inside a traditional classroom. By taking children into the outdoors, experiential education can be a more engaging, and less predictable. Yet at the same time, provides them with skills that they can use inside and outside of the traditional classroom. One way to do so is to teach a child to fish, in this case fly fish.

Fly fishing is a form of fishing that involves hand made flies, a specific casting technique, and a quiet ambiance to lure a fish to bite. On top of that, many fly fishing men and women prefer to tie their own flies that can be made out of many materials. For instance, hides of animals such as deer hair and elk hair, feathers from birds as in peacock hurl or pheasant tail; natural threads and dubbing, which is a material that creates the body of the insect, and bee's wax are all you need to create a life-like imitation of an insect.

Fly fishing also requires a specific casting technique where an individual must find his or her own rhythm, one that intrigues a fish to feed. Most fly fisher's get right into the water and slowly make their way upstream, behind the feeding fish. Upon entering a stream, one must be quiet and observant. The cast is upward into the water and they watch their fly drift slowly back down toward them, unless a fish has decided to feed. Through time, a fly fisher learns how to read a stream and predict where the fish are. Time also allows a fly fisher to learn about stream ecology and what the fish prefer to eat and when.

Teaching fly fishing can be particularly difficult, and requires patience and practice. That is why experiential education is extremely important, According to Hlasny (2000), it “has been proven to produce many positive effects for individuals engaging in this type of learning (p. 8). According to Dr. Phillip Brunquell (1994), author of Fly-Fishing with Children,

the most ardent anglers harbor some hidden, profound grief.

Fishing offers a recompense for their unhappiness and a release from the remitting twin onslaughts of work and responsibility. This does not presuppose that such anglers need to be as proficient as they are arduous. They may be to put it bluntly, the clumsiest casters in the pool, but this does not faze them in the slightest, for they are there out of a need, a need for absolution and rebirth. I doubt very much that kids look upon fishing this same way. A feisty bluegill or perch (dare I say trout?) skittering at the end of their line can deliver what they’re looking for. If you can direct them to this pleasure, if they see you as the one responsible for it, and if they learn some personal responsibility along the way, then the entire family reaps the reward. (p. 17)

Outdoor Education

The wilderness can be seen as one of the greatest classrooms of all. For those who are fortunate to experience it, learning about nature can be just the ticket that is needed for individuals to learn about themselves, what they are capable of achieving, and their future goals. Many students go to camp for this very reason. They learn about the great outdoors and the variety of activities used to enjoy it, as well as how to appreciate it.

Some after school programs that focus on outdoor education, also known as adventure based activities can have a similar effect. It is an approach that permits students to actively engage in outdoor activities and trigger insight about life (Chapman, McPhee, & Proudman, 1992). Nature can be a very powerful educational instrument that gives students the opportunity to be active and learn new skills. In the opinion of this author, if knowledge is power, then outdoor education can open many doors of opportunity, and with that comes respect for nature, respect for others and respect for self.

Educators can use outdoor education to teach anyone who is willing to learn about plants, insects, rock formations, forest preservation, and stream restoration, to list a few. This particular information is taught and passed on by people who are passionate about these topics. Many activities that embrace the outdoors require just that, knowledge and passion. One such activity that has caught the hearts of many around the world is fly fishing. Not only can one learn how to catch a fish, he or she can learn about the stream, river or lake, the surrounding habitat, food sources, and predators.

Fly fishing is a unique outdoor experience that enables all individuals to embrace nature and learn about themselves. Spending time outside and learning how to appreciate nature can provide an individual with the necessary tools to create a strong sense of self concept, also known as how an individual perceives himself or herself (Ewert, 1989). When individuals start to appreciate and respect their surroundings, they start to respect themselves.

Self Concept and Disability

For a student with any type of disability it can be very difficult to succeed academically, which ultimately affects that students' self worth, self-respect, and self-

confidence. Research has shown that it can be very difficult for students with disabilities to form and maintain friendships. In a study conducted by Vaughn, Haager, Hogan and Kouzekanani (1992), early peer rejection can contribute to difficult adult adjustment, school competence, or future success in the workplace. This study will focus primarily on individuals with learning disabilities, who have also been known to struggle in the areas of academic performance. Though many studies have shown that “self perceptions of LD children have been found to be more negative than those of non-LD children” (Durrant, Cunningham, & Voelker, 1990, p. 657), it is possible that an outdoor activity such as fly fishing could increase his or her overall self-concept. Since it has been reported that students with learning disabilities have been known to have a lower general and academic self-concept when compared to students without disabilities, learning about life and one’s self through the outdoors can help students with learning disabilities to gain confidence. Outdoor activities such as fly fishing can greatly improve self worth and a sense of accomplishment in students with low self-concept as developed from Durrant, Cunningham, and Voelker (1990).

Just like traditional goals of education, nature’s classroom can furnish all individuals with the essential knowledge and tools to gain confidence, promote wellness and secure a positive sense of self. When fly fishing, a body of water, whether it is the ocean, lake, pond, stream or creek can be used as a classroom. Learning how to fly fish encompasses so much more than the act of catching a fish. It is about understanding one’s surroundings and working with nature to provide for one’s self. The ability to observe and interact with nature provides a unique connection to one’s environment. In order to catch a fish one has to know where the fish are, what they are eating, and how to present

a mouthwatering meal to a fish without spooking it. No matter who you are, learning a new skill provides the ability to confidently tackle new and exciting challenges.

Although there is no research that has been conducted to study the effects of fly fishing on self-concept, similar literature suggests that there are many positive effects of outdoor education. The goal of outdoor education programs, such as teaching fly fishing, is to provide students with the necessary skills to someday do the task independently. Fly fishing has long been viewed as a sport that can help individuals gain a greater sense of self-awareness, which in turn, can teach them how to respect themselves as well as their surroundings. If successful, students who engage in this type of learning will be able to be proud of their accomplishments and apply what they have learned to all aspects of their life. However, questions arise: Is it possible to learn about oneself by enrolling in an after school fly fishing program? Is it possible to positively increase ones self-concept through fly fishing? These questions will be the inspiration driving this study to investigate the effectiveness of fly fishing on a student's self-concept. This study is important and unique because it attempts to provide empirical support to determine the effects on self-concept in students with specific learning disabilities.

Statement of the problem

The problem to be investigated is the overall effectiveness of an outdoor activity such as fly fishing and its overall effect on self-concept in students with learning disabilities. Included in this investigation is whether learning to fly fish can affect an individual's overall self-concept. Research has proven the benefits of many outdoor education programs, but are the lessons associated with learning how to fly fish likewise beneficial?

Purpose Statement

The purpose of this pilot study is to determine whether an outdoor experience, such as fly fishing for students with learning disabilities, improves their image of self. The investigator will collect anecdotal data during the spring of 2010. Additional data will be collected using a pretest-posttest correlation of the Tennessee Self Concept Scale-Second Edition. Lastly, a survey will be sent to all students six months after participation of Kids on the Fly to assess his or her after thoughts of participating in the program.

Definition of Terms

To facilitate understanding, the following terms will be defined:

Experiential Education- A learning process in which a learner constructs knowledge, skill, and value from direct experiences (Association for Experiential Education, 2010).

Fly Tying- A craft that uses natural and synthetic materials to create life-like entomological creatures for fly fishing.

Fly Fishing- A method of angling that uses artificial flies, a rod and a reel to catch fish.

Self-Concept- A psychological attribute referring to an individual's perception of self. (Ewert, 1989). According to Byrne and Shavelson (1986), "self-concept is a multidimensional construct, having one general construct and several specific facets" (p. 427). Self-esteem, self-concept, self assessment, self worth, and self-perception are some of these terms," yet, "all referring to the same concept, the way we see ourselves inside and out" (Sze & Valentin, 2007, p. 553).

Students with Specific Learning Disabilities- Refers to students with disorders

in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. It does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (Wisconsin Department of Public Instruction, 2008, p. 1)

Assumptions

The assumptions are as follows:

1. It is assumed that all participants in the fly fishing program will successfully complete the entire program.
2. It is assumed that learning the many aspects of fly fishing will increase a student with a learning disabilities' self-concept.
3. The outdoor education instructor assumes that the students who are participating in the program will be internally motivated to apply what has been learned to other aspects of his/her life, such as a traditional classroom setting.

Limitations

The following limitations are acknowledged:

1. The effectiveness of the Fly fishing program may be limited by the small sample available in a rural Midwestern Wisconsin town.

2. The effectiveness of the fly fishing program may be limited by the restricted amount of time the program was conducted.

3. The type of subjects who participated in the fly fishing program may limit the effectiveness. The participants in the program may range from mild to severe in terms of his/her disability, thus affecting the ability to learn new tasks at a consistent rate.

4. The survey that has been selected was based on a Likert-type scale, and subjects may have been able to falsify results.

5. The role of the researcher in relation to the fly fishing process. This role may potentially limit the effectiveness of the program as well as the study.

Chapter II: Literature Review

In this chapter, a comprehensive overview of research regarding students with disabilities, self-concept, and outdoor education will be discussed. In addition, research contributing to the understanding of outdoor education on a student's self-concept will be provided. The topics covered will be in the following order:

- 1: Overview of self-concept discovered in students with disabilities;
- 2: Effectiveness of outdoor education, and;
3. Evidence of the effect of outdoor education on self-concept.

Self-concept discovered in students with disabilities

Children with learning disabilities represent a unique population of modern youth. They account for nearly half of the students with identified disabilities under the Individuals with Disabilities Education Improvement Act (Indiana Protection & Advocacy Services, 2010). According to Durrant, Cunningham, and Voelker (1990), these students experience a greater chance of repeated school failure, and “have been characterized as feeling more helpless than normally achieving children” (p. 659). According to experts in the field, academic failure has been linked to a “lowered sense of competence, as well as lowered expectations for future success” (Durrant, Cunningham, & Voelker, 1990, p. 661).

Feelings such as helplessness and failure have often been linked to a lowered sense of self-concept in students with learning disabilities. According to Elbaum and Vaughn (2003), “it is agreed that low self-concept is associated with poor school performance, higher risk of school dropout, and depressive symptomology” (p. 102). Therefore, these diminished attributes of self have been shown to result in low self-

concept for students with learning disabilities, and vice versa. In this investigator's opinion, negative self image is a cruel revolving door for students who struggle with learning disabilities in school. Poor self concept acts as a catalyst to keep those students from performing to the best of his or her abilities.

Without a well-developed sense of self, many students become disenfranchised from their school and society during an important developmental period in their lives. As noted by Shavelson, et al. (cited in Byrne & Shavelson, 1986), self concepts develop as a result of one's experiences with the environment, and ones perception of these experiences. Similarly, self-concept has been previously noted as a multidimensional construct due to the sum of its many facets. Ewert (1989) defined self-concept as not only the way in which an individual views himself or herself, but their "attitude, beliefs, feelings and personal expectations" (p. 49). These crucial components are typically related to school, family, and peers, which form an individual's general self-concept.

If one has a negative experience, let alone multiple negative experiences they are at greater risk of having a negative self-concept. Whitney-Thomas and Moloney (2001), confirm this understanding by stating, "students with disabilities were most likely to have low self-definition and experience high struggle" (p. 375). According to Sze and Valentin (2007),

children with negative self images believe academic achievement is unlikely, and give up quickly when faced with a difficult task. Therefore, children who experience poor academic performance in school are more likely to continue with learning problems because they do not believe they can do better. (p. 554)

Experts in the field agree that true self-concept serves a great purpose in life. According to Schiegel, Hicks, Arndt, and King (2009), “the more cognitively accessible self-concept is to the individual, the more the individual should benefit from the perspective it fosters” (p. 473). According to Sze and Valentin (2007), “a child’s perceived image of himself or herself will guide that child’s academic achievement” (p. 554). In a sense, increasing an individual’s self concept can provide hope, and allow that individual to create goals, and ignite an inner passion to be successful. According to experts in the field “the way we see ourselves will determine how others see us. For individuals with special needs, they need to see themselves as valuable and in a positive light so that others can see this and provide appropriate assistance and attitudes” (Sze & Valentin, 2007, p. 553). Many researchers believe that an individual’s behavior and self-concept interact and influence one another, which ultimately affects the decision making process.

Researchers report that “children with disabilities often experience negative feedback more so than their classmates,” and these experts in the field suggest that improved self-esteem can improve a child’s academic, social and behavioral problems (Sze & Valentin, 2007, p. 553). Ergo, self-concept is important to the meaning of life, and in the opinion of this author, students with disabilities would have a greater chance at academic success if they were provided with more opportunities to increase personal self-concept. Since experts in the field suggest that children with learning disabilities tend to feel that “academic outcomes are beyond their control,” it could be beneficial for educators to focus concern on the self-concepts of these children (Durrant, Cunningham, & Voelker, 1990, p. 657). Each student has the ability to perform well academically, yet

failure can be dangerous for students with learning disabilities. Failure can become a “self-perpetuating cycle” that can contribute to lowered self competence, achievement effort, lowered expectations for one’s future, as taken from Durrant, Cunningham, and Voelker (1990, p. 657).

Enhancing self-concept is a desirable goal for all individuals, especially for students with learning disabilities. “Exploring feelings of legitimacy, importance, and value to other aspects of life” are ways in which an individual can perceive his or her own image of self (Schlegel et al., 2009, p. 474). It is possible that all one need do to obtain a healthy image of self is to peer inside his or her own behavior in relationships. As Stated by Fitts and Hamner (1969), “the way one interacts with the world is merely an extension of how that individual sees himself or herself.” According to Schlegel, et al. (2009), achieving a true and accurate sense of self leads to an enhanced meaning of life. If a healthier image of self leads to self discovery of one’s own meaning in life, it is this investigators opinion that he or she will learn to apply that knowledge to many areas of life such as, academics, relationships, and future aspirations. Many professionals in the field of education would agree that there is a direct correlation between self-concept, academic achievement, relationships, and future goals.

Self-concept is a multifaceted construct that is a necessary quality to create self-respect, self-assurance, and happiness. The investigator will use the Tennessee Self-Concept Scale: Second Edition (TSCS: 2) to gauge the effects of how an individual with a disability feels before and after participating in an after school fly fishing program. The Tennessee Self-Concept Scale: Second Edition (TSCS: 2) provides an obtained self-concept score based on an individual’s reported measure of self-concept and level of self-

esteem. It is an assessment administered to gain a better understanding of one's physical, moral, personal, social, family, academic, and work related self concept domains (Fitts & Warren, 1996). Scores on these specific subscales will help identify areas that may be of special importance to said individuals, as well as provide insight to help students with disabilities understand how they learn best.

Effectiveness of Outdoor Education

Outdoor education is a promising alternative that could encourage individuals to enjoy learning. For the past thirty years outdoor education has been used as a means to improve the self-concept of many adolescents. According to Ewert (1989), an outdoor educational model can improve self-concept because it requires a student to depend on him or herself for success in a unique and unfamiliar rehabilitative atmosphere. Literature reveals the effectiveness of outdoor education and adventure based learning programs such as Outward Bound, Project Adventure, Project Choices, Youth Challenge, and Project Challenge for those who enroll in this kind of learning environment (Hlasny, 2000, p. 2).

Investigation, exploration, experimentation, responsibility, creativity, and self-development are a few of the skills that are acquired by individuals when they participate in outdoor education. For instance, Outward bound was founded by Kurt Hahn in Wales in the 1940's, and was originally intended "to enable young men to realize their potential, develop a stronger character, and develop a will to survive" (Cavanaugh, 2000, p. 10). Outward bound has come a long way since then; it is used around the world for a variety of reasons, one among them is to improve self-concept. Many of the skills that are taught during these types of programs are very similar to those taught in fly fishing. In this

authors opinion, when a student is encouraged to look outside the box and see the world for its possibilities, he or she is allowed to find answers and find ones self.

Most experiential education or adventure based learning programs were specifically created to help adolescents confront and control one's thoughts and behaviors. For example, Cindy Simpson created a program called Project Adventure, where her Adventure Based Counseling field work blossomed, and the concept of Behavior Management Through Adventure (BMTA) became a reality as well as a success (Walsh & Aubry, 2007, p. 36). Project Adventure and BMTA work primarily with first time juvenile offenders with the intention of challenging youth to practice good decision making, improve social skills, be responsible for themselves as well as others, and set goals that are linked to self-efficacy or self-esteem (Walsh & Aubry, 2007).

Outdoor education experiences allow an individual to approach education with an open mind. In nature, individuals are encouraged to challenge themselves physically, mentally, and emotionally in order to gain insight about themselves as well as their surroundings (Ewert, 1989). According to Dr. G. Borger, "Oftentimes, having a challenge in something that really appeals to a person will stimulate his or her lives in other areas" (personal communication, February 26, 2010). Outdoor education creates the perfect bridge between self exploration and learning. Nature provides individuals with an opportunity to challenge him or herself physically, mentally and emotionally. Ewert (1989) referred to physical, mental, and emotional experiences as talents, and the combination of these talents used in outdoor education "can provide positive experiences which have the potential to transform an individual's personal and social growth" (Cavanaugh, 2000, p. 2).

According to Dr. G. Borger (personal communication, February 26, 2010), “anyone eager to learn can learn and do.” In a personal email, he goes on to state that he has taught many individuals with disabilities how to tie flies and to fly fish. Dr. Borger states that though there are limits, “fly fishing is such a vast area of knowledge that most people can find some area that interests them, and in which they can participate.” Dr. Borger has worked with intellectually and physically disabled children, and it is his impression that “if they get really interested in some topic then that enthusiasm reflects into other areas of their lives.” In 2009, the state of Wisconsin issued a statute in Wisconsin Act 28 stating that “the legislature finds and determines that studying the environment and connecting children and their families to the outdoors enhances the quality of life in Wisconsin” (Wisconsin Act 28, 2009, p. 3). Not only does research show that there are many benefits related to outdoor education, but the state of Wisconsin also feels that learning about nature, in nature can enhance one’s quality of life.

Enhancing self-concept in students with disabilities may lead to positive changes such as independence and self-reliance, which might ultimately have a positive effect on how he or she interacts with other students. Improving self-concept is an important factor one must consider when trying to rehabilitate an individual’s image of self, which could possibly have a profound effect on academic performance. According to Cavanaugh (2000), there is a general consensus supporting the use of outdoor education to improve self-concept, and “it appears that outdoor education interventions have the potential to result in an improved self concept” (p. 10).

Evidence of the Effect of Outdoor Education on Self-Concept

Students with disabilities may find it difficult to participate in a club or join an after school activity due to the fact that they are afraid to fail or may not be accepted by peers. Many outdoor education or adventure based learning programs are taking the initiative to create more inclusive programs that work with both typically functioning and individuals with disabilities. Creating a more inclusive environment and taking precautions, or making adjustments for certain individuals can greatly increase the way others view an individual as well as the way he or she see themselves, thus creating an opportunity for people to see an individual for who they are rather than the fact that they have a disability.

According to Dillenschneider (2007), people with disabilities “desire the same opportunity for adventure,” as those who are not labeled with a disability (p. 63). Sharing common interests can also spark ones ignition to learn something new. “One of the most caring acts that educators can do is to apply current and forthcoming research-based assessments and interventions to identify and teach individuals with learning disabilities to read, write, problem solve, socialize, communicate, and be independent” (Bradley, Danielson, & Hallahan, 2002, p. 52). An outdoor educational experience could be the key that unlocks potential for students who struggle in a traditional classroom setting.

One such form of an adventure based outdoor education is the act of fly-fishing. History has revealed that fly-fishing is not only related to the outdoors, but to literature as well. Who knows which story about the ‘one that got away’ could capture an adolescents heart, and open the door to a fondness for reading, a love of biology, an appreciation for physics, and ultimately the security in one’s self. The determination to think

independently, a willingness to learn patience and perseverance, and confidence in each decision made is the backbone of a healthy self-concept. According to Dr. P. Brunquell (1994), “for many disabled children, the foremost obstacle of fly fishing is not physical or geographic, but psychological,” and by this he refers to fear (p. 143). Overcoming fear can be an even greater challenge than catching a fish. Instead of thinking “here is another thing I can’t do,” children should be encouraged to overcome fear, and be guided to find pleasure in the challenge of what they will be able learn and do. Children with disabilities should be allowed the opportunity to find pleasure in overcoming fear, thus creating a healthier image of self.

Directing a child to seek pleasure outdoors may greatly increase the chance that he or she will experience a greater sense of self-worth, or self-concept. A Scottish philosopher by the name of Sir Patrick Geddes believed that there is a holistic approach to education, one that is based on heart, hand, and head more so than the traditional reading, writing, and arithmetic; he believed that affective, physical, and intellectual development were the main building blocks of education (Higgins, 2009). Experiential education provides just that, a chance to step outside of the traditional classroom. According to Higgins (2009), “our individual success in surviving the many developmental challenges of our early years by guided discovery of the world through our senses is testimony to the power of experiential learning” (Higgins, 2009, p. 47).

Outdoor education actively engages students by presenting them with challenges, and encourages individuals to look around, and view the environment as a different type of classroom. According to Passarelli, Hall, and Anderson (2010), “outdoor and adventure education has been shown to result in positive psychological outcomes” (p.

120). These types of education have been linked to personal growth, enhanced interpersonal skills, such as social skills, and group development. For instance, Project Adventure's Behavior Management Through Adventure program was evaluated in 1991, and the following results were found to be statistically significant in a pretest/posttest design: Gains in positive perceptions of family, decrease in feelings of depression, and an increase in feelings of social extroversion (Walsh & Aubry, 2007, p. 38). It is this authors opinion that any adolescent, whether he or she has truancy issues, is delinquent, physically handicapped, or has a learning disability can make gains in exploring one's image of self in nature. Kaplan and Talbot (cited in Fletcher & Hinkle, 2002) investigated psychological benefits of a wilderness experience, of which they found an increase in self-confidence and tranquility, increased awareness of one's surroundings, and self discovery.

The ultimate goal of any outdoor or adventure-based learning experience is to provide an opportunity that allows an individual to challenge him or herself physically, mentally, and emotionally. By doing so, an individual may experience a positive change not only the way he or she perceives others, but also how they view themselves. There are a number of studies that have been conducted to measure the effect of outdoor education on self-concept, especially in students with disabilities. Outdoor education programs convert the traditional classroom setting into a wide-open field of educational possibilities. "Adventure based learning is able to promote individual responsibility and to strengthen independence and lend further proof to the possible potential of adventure based learning to enhance self-development and increase self-confidence," thus influencing self-concept (Gatzemann et al., 2008, p. 147).

Chapter III: Methodology

This chapter will describe the purpose of this pilot study, how the subjects were selected, the instruments that were used in this pilot study, as well as how the data was collected and analyzed. The conclusion of this chapter will include a discussion of the limitations that are present in this pilot study.

Pilot Study

A pilot study is a small study that allows a researcher to create the foundation for a larger, more concrete study (Arain, Campbell, Cooper, & Lancaster, 2010). A pilot study is also a preliminary study that is conducted to assess the feasibility of the design, as developed by Arain, Campbell, Cooper and Lancaster (2010). Fly fishing can easily develop into a costly sport. Fortunately, volunteers donated time, a variety of companies donated fly tying and fishing materials, and the school provided transportation for this program. This study was designed as a pilot study to assess the cost ratio of an after school program such as Kids on the Fly. It is also considered a pilot study due to the limited number of eligible participants as well as the inability to randomize the participants.

Approval Authority

To gain participants the investigator first had to seek approval from school administration in a rural midwestern town in Wisconsin. A request was also submitted to the Middle School's After School Program Director. Upon receiving a letter of approval from the school to initiate the Kids on the Fly after school program, the investigator had to submit a proposal to the Internal Review Board (IRB) at the University of Wisconsin-Stout. The program was then approved by the IRB, and the investigator was able to find

possible participants for this study. Upon approval from the IRB, participants and legal guardians were issued a permission form from the school as well as from the University of Wisconsin- Stout.

Participants

The targeted participants for this study included students identified with specific learning disabilities according to the definition provided by the Department of Public Instruction. Although, any students that were interested in the after school program were encouraged to join. Three students identified with specific learning disabilities and three typically developing adolescents 11-13 years old participated in this after school fly fishing program called “Kids on the Fly.” The students with disabilities made up the specific target group for this study. This particular target group was made up of 1 female and 2 male participants from the Middle School. The participants were referred to this program by the school’s speech pathologist, and the remaining members of the program expressed interest and were allowed to participate. A permission form and informational letter was then sent home to the parents of all possible participants requesting parent/guardian approval to participate in this after school program. The permission form included information regarding approval from the Internal Review Board, possible risks, the purpose of the program, and tentative dates and times of when Kids on the Fly would be meeting.

Instrumentation

The main instrument used to assess each students self concept before and after participation in the after school program Kids on the Fly, was the Tennessee Self Concept Scale, Second Edition (TSCS: 2; Fitts & Warren, 1996). The TSCS: 2 is a self

administered rating scale that can be used to understand the relationship between individual self concept and human behavior (Fitts & Warren, 1996, p. 3). The Child Form was used for these particular students and is comprised of 76 items which allow the individual to “portray his or her own self-picture using five response categories- always true, mostly true, partly false and partly true, mostly false, and always false.” A Conflict score will be used to assess each individual’s ability to accurately identify oneself for the purposes of validity and reliability. Six other self-concept scales will be used to assess Physical, Moral, Personal, Family, Social, and Academic self-concept. The score of the Total Self-Concept scale will provide insight on the participant’s general self-concept.

The child form is designed for individuals who can read at approximately a second grade reading level or higher, and is standardized on 1,784 children aged 7-14 (Fitts & Warren, 1996, p. 3). “The Flesch Reading Ease Score for the Child Form is 93%, indicating very easy reading” (Fitts & Warren, 1996, p. 5). This rating scale is easily administered and scored by a trained technician, taking approximately twenty minutes to complete both tasks.

One subscale score that is considered to be important is the Conflict (CON) scale. The Conflict score compares how an “individual differentiates his or her self-concept by assertion through agreement with positive items, or negation through disagreement with negative items” (Fitts & Warren, 1996, p. 22). As stated in the manual, “ individuals whose CON scores within the range of 40T-31T are focusing on who they are not rather than who they are,” scores that fall within the range of 30T or below may be extremely defensive, and present as oppositionally defiant (Fitts & Warren, 1996, p. 22). When the CON score falls within the range of 60T-69T, the individual focuses on agreeing with

positive attributes and admits rather than denies negative characteristics, which may indicate a balanced self-view or emergence of conflict. When a CON score that falls within the range equal or greater to 70T tends to be associated with ambivalence or high level of conflict (Fitts & Warren, 1996, 1996, p. 22).

There are a total of six self-concept scales that will be further investigated to determine the effects of a fly fishing after school program on the self-concept of students with learning disabilities. For every scale there is a mean score of 50T and a standard deviation of 10T; these scores are based on a representative sample in the United States, and scores between 40 and 59 are considered to fall within the average range (TSCS: 2 Manual, 1996, p. 46). The manual states that individuals who obtain a score within the range of 40T-31T, or especially below 30T, indicates a specific disturbance in self-concept. Individual's who obtain a t-score that falls within the range of 60T-69T on the total self-concept scale identify him or herself as "generally competent and tend to like themselves" (Fitts & Warren, 1996, p. 21). Scores obtained that are equal to or greater than 70T are deviant and tend to indicate serious psychological distress or disturbance, such as a "sense of failure and unhappiness" (Fitts & Warren, 1996, p. 21). Below, the Physical Self-Concept (PHY), Moral Self-Concept (MOR), Personal Self-Concept (PER), Family Self-Concept (FAM), Social Self-Concept (SOC) and Academic/Work Self-Concept (ACA) will be described to provide insight to what each scale purports to measure.

The Physical Self-Concept (PHY) scale examines how one perceives his or her own body image, health, physical appearance, and skill. For this scale, a very high t-score at or above 70T indicates a defensive stance in response to a physical disfigurement or

serious health threat. A high t-score within the range of 60-69T represents a person with a positive self image. Individuals who obtain a low score within the range of 40T-31T may indicate a person with a distorted body image, or unrealistic expectation of how one should look. A very low score of 30T or less may be at risk for depression, mood disorders, “internalizing” syndromes, or somaticizing disorder (Fitts & Warren, 1996, p. 23).

The Moral Self-Concept (MOR) scale examines moral worth, and according to the manual, an individual’s feelings if being “good” or “bad” (p. 23). For this scale, a very high t-score at or above 70T indicates an individual’s ability or lack thereof to learn from his or her own behavior. A high t-score within the range of 60-69T indicates that individuals who score in this range are “satisfied with their conduct,” value personal ethics, and have the ability to forgive themselves and others. Individuals who obtain a low score in the range of 40T-31T, or a very low score of 30T or less may perceive one’s self to be impulsive, which may override the ability to make moral considerations (Fitts & Warren, 1996, p. 23).

The Personal Self-Concept (PER) scale assesses an individual’s sense of self-worth, feelings of adequacy, and content with one’s own personality. For this scale, a t-score greater than or equal to 60 represents a well-adjusted individual. Any score within the range of 40T-31T, may indicate an individual who experiences a fluctuation in how they define and identify him or herself compared to others. A very low score of 30T or less may identify an individual with feelings of self hatred or self-destructive behaviors (Fitts & Warren, 1996).

The Family Self-Concept (FAM) scale measures an individual's perception of self in relation to family, immediate friends, and teachers. For this scale, a very high t-score at or above 70T possibly indicates an individual's fear of family conflict or loss. A high t-score within the range of 60-69T indicates a sense of satisfaction pertaining to relationships held with family, friends, and teachers. Individuals who obtain a score that falls within the low range of 40T or less may feel alienated or disappointed with one's family (Fitts & Warren, 1996).

The Social Self-Concept (SOC) scale also measures how an individual perceives him or herself self in relation to others, how one feels about their ability to communicate effectively with others. For this scale, a very high t-score at or above 70T indicates an individual may often have grandiose ideas about the self, or an inflated self image. A high t-score within the range of 60T-69T usually indicates that an individual views him or herself and current relationships with others to be friendly and easy going. Individuals who obtain a low score in the range of 40T-31T and less may represent the feeling of social awkwardness, and a very low score of 30T or less may be perceived as social avoidance, feeling alienated, or incapable of forming meaningful relationships (Fitts & Warren, 1996).

The Academic/Work Self-Concept (ACA) scale measures how students perceive themselves in school and how others see them in school. For this scale, a very high t-score at or above 70T indicates a student may be overinvested in school or work, and threatened by failure. A high t-score within the range of 60-69T indicates the feeling of confidence and competence within one's self. Individuals who obtain a low score of 40T-31T have expressed difficulty with academic performance, and a very low score of

30T or less may have impairments that interfere with the ability to perform across a variety of academic settings (TSCS: 2, 1996, p. 24)

The combination of the previous scales listed will be used to measure the Total Self-Concept (TOT) of each individual being assessed. The purpose of the TOT is to gain a well-rounded understanding of an individual's view of their own self-concept. An individual's Total Self-Concept (TOT), "the single most important score" that reflects an individual's overall self concept (Fitts & Warren, 1996, p. 21). A score of 70T or greater may be a warning that a student is experiencing a threat to the ego. Scores that fall within the range of 60T-69T often represent an individual who tends to define themselves as genuinely competent, and like themselves. Any score that falls below the 40T-31T range indicates doubt in self-worth, and scores that fall at 30T or below are at risk to experience long term difficulties with the image of self in general.

Six months after the termination of the program, a survey was sent to all participants to gain insight to the overall perceptions of Kids on the Fly. The students also provided demographic information such as age, grade, and gender. The parents of the participants were given contact information for the investigator, research advisor, school contacts, and IRB administrator in case they had any questions or concerns about the study, survey, or any data that was collected.

Data Procedure

The names of the participants were obtained by the speech pathologist from the middle school. All individuals identified with learning disabilities who participated in "Kids on the Fly" were given the self-concept scale upon admission to the program. The group met on average for two and a half hours a day, one day a week for two months.

During the first meeting only the three students with identified learning disabilities were present. The club meetings were held in the middle school's art room. A teacher had heard about the program and was very interested in participating as an additional support/instructor/photographer to the members of Kids on the Fly. After introductions, the students were administered the Tennessee Self Concept Scale- Second Edition (Fitts & Warren, 1996).

After administration of the TSCS: 2, the students were introduced to fly fishing with a hands-on experience of learning about the angling equipment. For the first hour, they learned about artificial flies, rods, reels, polarized sunglasses, waders, nets, and storage options such as a vest or a pack. Then, members of Kids on the Fly watched a video entitled "The essence of fly casting" by Mel Krieger (1987) to see what casting with a fly rod looked like, and were allowed to flip through fly fishing magazines that were provided by the instructor. Students were allowed to ask questions at anytime and were encouraged to handle the equipment that was displayed in front of them. During the second hour, the students were given their own rods and taught how to handle, care, and cast their rods in the school gymnasium.

During the second club meeting, three additional students that had expressed interest in the club presented the necessary permission forms, and were able to participate in Kids on the Fly. On that day, the president of the Eau Galle Sportsman's Club, and two fellow members came to teach students about basic entomology, the materials used to tie artificial flies, and specific fly tying techniques. The students were then given the opportunity to tie some flies of their own; in this case flies known as Woolly Buggers. While some students were selected to tie flies with an instructor, the other students' were

taken to the school's gymnasium to work on his/her casting technique with the president of the Eau Galle Sportsman's Club, and a school teacher. The president of the sportsman's club then reinforced the students understanding of casting a fly rod through one-on-one instruction, and was able to assist the teacher in providing instructive feedback.

The third club meeting consisted of the original three club members (the target group) and the day was spent making thank-you cards for the members of the Eau Galle Sportsman's Club, Scientific Anglers a part of 3M corporation, for their donation of 12 fly rods, reels, backing and fly line, as well as to Cabela's for their generous donation of flies for the club.

The fourth meeting was Kids on the Fly's first official day out on the water. The club traveled to a nearby lake where they were able to practice casting on open water. The club members were instructed to wear personal floatation devices, and the investigator discussed the importance of safety near the water. With special regard to casting, the students learned to be aware of his/her surroundings, and to account for elements such as wind, trees, weeds, and proximity to fellow students who are also casting. For approximately one hour the members of Kids on the Fly were allowed to practice specific casting techniques they learned in the school gymnasium on open water. While driving back to the middle school from the lake, the students expressed that they would like to extend the program by an additional hour. The next day, a request form was sent out to all parents/guardians asking permission to extend the program from 3-5pm to 3-6pm. Permission was granted from all parents/guardians, and from that point on Kids on the Fly met from three until six pm.

The following three sessions consisted of all members of Kids on the Fly riding in a van with the investigator to the nearby river, located twenty minutes away from the students' school. Limits were set before the students were allowed to walk down to the water with the investigator, a teacher, a volunteer from the University of Wisconsin-Stout, and two student volunteers from the local High School, limits were set. The students were reminded of the importance of safety for self and for others, to treat the environment with respect. The students were allowed to spend two hours on the water with nearly a one-to-one instructor to student ratio.

On the last Day of Kids on the Fly, the students went to the Rush River for one final opportunity to fly fish with the after school program. That same day, the president of the Eau Galle Sportsman's club hosted a cookout on the stream for the students, volunteers, and instructors of the Kids on the Fly after school fly fishing program. Teachers, friends, and family of the students were invited to join the cook out and learn how to fly fish from the students.

Data Analysis

A variety of data was collected before, during, and after the Kids on the Fly after school program, to assess the effects of experiential outdoor education on self concept, particularly in students identified with learning disabilities. A Pretest and posttest program administration of the Tennessee Self Concept Scale, Second Edition was administered to assess a students overall self concept before and after participation in this experiential program.

Anecdotal data was collected throughout the duration of Kids on the Fly. The investigator will describe information based on collected notes, etc.

A survey was sent out to each participant six months after the termination of the after school program.

Six months after Kids on the Fly, the investigator sent a survey to each participant asking 14 yes or no questions about the program along with a section to leave comments, suggests, and/or recommendations.

The investigator consulted with Susan Greene of the UW-Stout office of Budget, Planning, and Analysis for assistance with the analysis of the data collected.

Limitations

One of the limitations of this study was the size of the sample for this pilot study, only 3 students with learning disabilities fully participated in this study. Subjects volunteered to participate based on subject matter of the activity versus random selection. All of the participants were from the same midwestern middle school. Therefore, the results are not generalizable outside of this school district.

Chapter IV: Results

The problem to be investigated is the overall effectiveness of an outdoor activity such as fly fishing and its overall effect on self-concept in students with learning disabilities. Included in this investigation is whether learning to fly fish can affect an individual's overall self-concept. Research has proven the benefits of many outdoor education programs, but are the benefits associated with learning how to fly fish likewise beneficial?

This chapter will consist of an overview of the research participants, data analysis, and research objectives. The Tennessee Self Concept Scale, Second Edition was given to all students in Kids on the Fly who were previously identified as having a learning disability. Anecdotal data was collected throughout the duration of the study, and an additional survey was sent out six months after termination of the study to assess the participant's perceptions of this after school program. The purpose of this study was to examine the effects of an outdoor after school program on self-concept in individuals with learning disabilities.

Tennessee Self Concept Scale, Second Edition (TSCS: 2; Fitts & Warren, 1996)

The Tennessee Self-Concept Scale, Second Edition was administered to gauge the effects on the participant's perceptions and attitudes related to self-concept in a pretest and posttest fashion. The questionnaire was estimated to take ten to twenty minutes to complete. It is a Likert-type scale that measures nine general aspects of overall self-concept: physical, moral-ethical, personal, family, social, identity, self-satisfaction, behavior, and self-criticism. The results will be reported using T-scores, which have a mean of 50 and a standard deviation of 10. Scores that fall within the range of 40 through

59 tend to be considered average when compared to same-aged peers on the child form. All scores reported are based on a normative sample of 1,095 subjects (Fitts & Warren, 1996), and purport to be an accurate representation of a sample population stratified by age.

The Conflict (CON) scale compares how an “individual differentiates his or her self-concept by assertion through agreement with positive items, or negation through disagreement with negative items” (Fitts & Warren, 1996, p. 22). The average mean score obtained for children between the ages of 9 to 11-years-old was 49.5 with a standard deviation of 9.8, and a mean score of 49.6 with a standard deviation of 10.3 for 12-year-old students (Fitts & Warren, 1996).

TSCS: 2 T-Scores	Student A	Student B	Student C
Pre Test	54	39	61
Post Test	55	29	50

The Physical Self-Concept (PHY) scale examines how an individual perceives his or her own body image, physical appearance, skills, abilities, and health (Fitts & Warren, 1996). According to a normative sample based on more than one-thousand students, the average mean score obtained for children between the ages of 9 to 11-years-old was 50.8 with a standard deviation of 10.0, and a mean score of 50.6 with a standard deviation of 10.3 for 12-year-old students (Fitts & Warren, 1996).

TSCS: 2 T-Scores	Student A	Student B	Student C
Pre Test	75	55	62
Post Test	64	51	62

The Moral Self-Concept (MOR) scale examines an individual's feelings of moral worth, or self-image of being "bad" or "good" (Fitts & Warren, 1996, p. 23). On the moral self-concept scale the average mean score obtained for children between the ages of 9 to 11-years-old is 50.2 with a standard deviation of 10.2, and a mean score of 49.8 with a standard deviation of 10.0 for 12-year-old students (Fitts & Warren, 1996).

TSCS: 2 T-Scores	Student A	Student B	Student C
Pre Test	56	51	51
Post Test	56	56	53

The Personal Self-Concept (PER) scale measures an individual's sense of self-worth, or feelings of adequacy with one's own personality (Fitts & Warren, 1996). On the personal self-concept scale the average mean score obtained for children between the ages of 9 to 11-years-old is 50.7 with a standard deviation of 10.0, and a mean score of 49.5 with a standard deviation of 9.7 for 12-year-old students (Fitts & Warren, 1996).

TSCS: 2 T-Scores	Student A	Student B	Student C
Pre Test	72	50	72
Post Test	62	48	62

The Family Self-Concept (FAM) scale measures an individual's perception of self in relation to family, friends, and even teachers (Fitts & Warren, 1996). On the family self-concept scale, the average mean score obtained for children between the ages of 9 to 11-years-old was 51.1 with a standard deviation of 9.6, and a mean score of 49.6 with a standard deviation of 10.4 for 12-year-old students (Fitts & Warren, 1996).

TSCS: 2 T-Scores	Student A	Student B	Student C
Pre Test	53	45	53
Post Test	49	36	61

The Social Self-Concept (SOC) scale examines how an individual perceives himself or herself in relation to others, as well as the effectiveness of his or her ability to communicate with others (Fitts & Warren, 1996). On the social self-concept scale, the average mean score obtained for children between the ages of 9 to 11-years-old was 50.6 with a standard deviation of 10.0, and a mean score of 51.0 with a standard deviation of 9.2 for 12-year-old students (Fitts & Warren, 1996).

TSCS: 2 T-Scores	Student A	Student B	Student C
Pre Test	56	48	59
Post Test	56	54	48

The Academic/Work Self-Concept (ACA) scale examines how a student perceives himself or herself in school, as well as how other students in school view that individual (Fitts & Warren, 1996). On the academic/work self-concept scale, the average mean score obtained for children between the ages of 9 to 11-years-old was 50.7 with a standard deviation of 10.0, and a mean score of 48.4 with a standard deviation of 9.6 for 12-year-old students (Fitts & Warren, 1996).

TSCS: 2 T-Scores	Student A	Student B	Student C
Pre Test	45	50	54
Post Test	61	41	61

The Total Self-Concept (TOT) scale is an important measure that is used to examine an individual's overall image of self (Fitts & Warren, 1996). The average mean score obtained for children between the ages of 9 to 11-years-old was 50.9 with a standard deviation of 10.1, and a mean score of 50.4 with a standard deviation of 10.0 for 12-year-old students (Fitts & Warren, 1996), based on a normative sample of 1,095 subjects (Fitts & Warren, 1996).

TSCS: 2 T-Scores	Student A	Student B	Student C
Pre Test	59	50	60
Post Test	60	47	59

Anecdotal Data

After each Kids on the Fly meeting, the students were given a short form that said, “one thing I learned today is...” The students were asked to make a general opinion, statement, or comment on what they had learned that day, or even what they might like to learn during the next meeting. This sheet was optional to fill out, and many students preferred to talk about what had been learned, or what he or she would like to be taught instead of writing it out.

Below you will find some examples of the anecdotal data that was collected throughout this after school fly fishing program:

“Be respectfull of the stream.”

“To have fun.”

“To be quiet.”

“I learned how to fish in a form I dint know how to.”

“What I learned is how to cast and how to respect the bugs and stuff like that”

Survey

Six months after the completion of the Kids on the Fly program, each student was sent a pre-stamped, and self-addressed return envelope containing a questionnaire regarding personal opinions from members of Kids on the Fly. This anonymous survey was sent to gain insight and understanding not only of each students experience of being

in the program, but of how each individual feels now that the program has been completed. Kids on the Fly consisted of six members total, and of those six members, five students filled out and returned the survey to the investigator. Following are the questions and responses of the five students who returned the questionnaire.

Questions Asked	Total number of YES responses	Total number of NO responses
Did you like learning how to Fly Fish?	5	0
Did you like learning how to tie flies?	5	0
Were you proud to be a member of Kids on the Fly?	5	0
Did you learn more about yourself?	4	1
Did you learn more about how you learn?	5	0
Would you join a group like Kids on the Fly again?	5	0
Would you recommend Kids on the Fly to a friend?	5	0
Would you like to teach your classmates how to Fly Fish?	4	1
Can you see yourself Fly Fishing in the future?	5	0
Did you feel better about yourself after participating?	5	0
Do you have more self-confidence after being a member of Kids on the Fly?	5	0
Were you excited to go to Kids on the Fly during school?	5	0
Do you enjoy being outside more now that you have learned how to fly fish?	5	0

Kids on the Fly- Anonymous Questionnaire

Each student was also asked if he or she had anything to share with the investigator now that Kids on the Fly is over. In addition to the questionnaire, each student was asked to write any recommendations, suggestions or comments that he or she

had regarding Kids on the Fly. The following statements are from three students who chose to respond to this section of the questionnaire.

Student 1: “please have it again!!”

Student 2: “do it this year.”

Student 3: “I’m so sad that it is over with. To have it at a different school because I think they will in go it.”

Chapter V: Discussion

This chapter will summarize the study results of the Tennessee Self-Concept Scale, Second Edition, as well as the questionnaire that was sent out six months after the termination of Kids on the Fly. The limitations will be discussed, as well as conclusions based on the data collected. Lastly, this chapter will conclude with recommendations for future educators, and fellow researchers.

Summary and Discussion

Due to recent research in regard to students with disabilities, self concept, and outdoor education, parents and educators need to consider the benefits of outdoor learning experiences, especially for children who have difficulty learning in a traditional classroom setting. Children with disabilities, and in the specific circumstance, individuals with learning disabilities may benefit from an experiential outdoor program much like Kids on the Fly. It is important to understand how a student with a disability views his or her image of self, as well as how he or she feels it could relate to an overall increase in general self-concept. The main purpose of this pilot study was to determine whether an outdoor experience, such as fly fishing for students with learning disabilities, improves one's image of self.

This pilot study attempted to provide support to determine whether an after school fly fishing program could improve self-concept in students with learning disabilities. To measure the change in self concept, the Tennessee Self-Concept Scale: Second Edition (TSCS: 2; Fitts & Warren, 1996) was used in a pre and post test design. In analyzing the results, this investigator was particularly interested in changes that

occurred not only on the total self-concept subscale, but also on the physical, moral, personal, family, social, and academic subscales as well.

Tennessee Self Concept Scale, Second Edition (TSCS: 2)

Overall, all three students with learning disabilities who participated in Kids on the fly had total self-concept scores that fell within the average range on both the pretest and the posttest. Results indicate that all three students tend to be comfortable with his or her image of self. On the total self-concept scale, only one student had a posttest increase in total self concept from the average range to above average range, which indicates genuine competence and secure satisfaction in oneself.

The conflict subscale compares how individuals see his or her self concept in relation to agreeing with positive statements, or disagreeing with negative comments. On this scale, two students obtained scores that fell within the average range on both the pretest and posttest. Individuals who fell within the average range tend to focus on positive self attributes rather than denying negative ones. However, one student obtained scores that fell below 40 on both the pretest and the post test, which may indicate that this individual focuses more on “who they are not, rather than who they are” (Fitts & Warren, 1996, p. 22). It is possible that this individual tends to be highly defensive, or was simply oppositional when it came to answering questions about him or herself.

The assessment manual suggests that physical self-concept scale represents the way an individual views “his or her body, health, appearance, skills and sexuality” (Fitts & Warren, 1996, p. 23). One student obtained a pretest score above 70T, which may indicate a “defensive stance to a potentially disfiguring physical change or to a serious health threat” (Fitts & Warren, 1996, p. 23). The results indicate that one student fell

within the average range on both the pretest and posttest, suggesting that said individual did not experience a significant change in self image while participating in Kids on the Fly. The other two students obtained t-scores greater than 60T, which indicate that after participating in the after school program, these individuals have a positive image of self, and tend to use this information in a “self-enhancing” way (Fitts & Warren, 1996, p. 23).

According to the results on the moral self-concept scale, all three students fell within the average range. Scores indicate that moral self-concept stayed the same for one student, but increased slightly for the other two students. These results suggest that all three students believe he or she is aware of the differences between right and wrong, and are satisfied with “feelings of being either ‘good’ or ‘bad’” (Fitts & Warren, 1996, p. 22).

The personal self-concept scale reflects personal worth, and an individual’s feelings of adequacy with personality apart from personal relationships and accomplishments (Fitts & Warren, 1996). One student remained in the average range on both the pretest and the post test, which indicates that this individual has a good reflection of overall personality integration, as taken from the manual (Fitts & Warren, 1996,. However, the other two students obtained pre and posttest t-scores greater than 60T; these results indicate that these individuals maintained good reflection of overall personality, and are particularly well adjusted.

Results of the family self-concept score indicate that one student in particular appeared to experience a significant change in his or her view of family in relation to self from the pretest to the posttest. This student obtained a pretest score that indicated a sense of self worth, and felt valued as a family member. However, posttest scores indicate that this individual experienced a “sense of alienation from or disappointment in his or her

family” (Fitts & Warren, 1996, p. 24). Another student obtain pretest and posttest scores that indicated satisfaction with the relationships in his or her family. Whereas, another student obtained a pretest score that indicated satisfaction with family relationships, and the posttest score above 60T suggests that this student is not only satisfied with his or her family, but also feels supported and nurtured as well (Fitts & Warren, 1996).

All students obtained scores that fell within the average range on both the pre and posttest assessment of social self-concept. This scale reflects how individuals see themselves in relation to others. For instance, according to the TSCS: 2 manual, these students view him or herself as friendly, outgoing, and easy to be around (Fitts & Warren, 1996).

Most significantly impacted from the pre to the post test design was the academic/work subscale. On the academic/ work self-concept scale all three students reported feeling confident and competent on the pretest. One student’s posttest results indicate that he or she remained confident and competent in his or her academic abilities. Scores obtained on the posttest from the other two members suggest that Kids on the Fly may have helped them not only feel confident and competent in their abilities, but also feel “comfortable when approaching new tasks” (Fitts & Warren, 1996, p. 24). Though these results cannot definitively determine whether or not student’s image of self increased after participation in an outdoor education setting, it appears that Kids on the Fly was a positive experience in some way for all students involved.

Survey

In addition to the TSCS: 2, the investigator sent a questionnaire to all six members of the after school program six months after the termination of the program.

Five of the six members of Kids on the Fly returned this anonymous questionnaire. The purpose of this survey was to gain insight regarding the student's perceptions of the program, as well as thoughts, suggestions, and recommendations for the instructor. All students reported that they were excited and proud to be members of Kids on the Fly; they enjoyed learning how to tie flies and fly fish.

Every student claimed that through this after school program he or she was able to learn more about his or her learning style. Only one student reported that he or she did not learn more about him or herself as a member of this program. Likewise, only one student claimed that he or she would not be interested in teaching others to fly fish. However, all participants reported feeling better about themselves after participating in this program, and have more self-confidence thanks to Kids on the Fly. All members of kids on the fly reported that they enjoy being outside more now that they have learned how to fly fish, can see themselves fly fishing in the future, and would join a group like Kids on the Fly if the opportunity presented itself.

Should students with disabilities be encouraged to participate in extracurricular activities, or various forms of outdoor education to help increase one's image of self? Though the data of the Tennessee Self Concept Scale, Second Edition cannot support this claim, it is evident in the questionnaire that all of the students who participated in this after school program experienced gains as a result of Kids on the Fly.

Limitations

There are several limitations that must be noted regarding this study. First of all, this was a pilot study that focused on one specific school district in the Midwest. Therefore, these results do not apply to other school districts. Not only was there a small

subject pool; there may be a selection bias in that a faculty member of the school selected the targeted participants of Kids on the Fly. The participants in the program may range from mild to severe in terms of his or her disability, which may have had an impact affecting the ability to learn and perform new tasks. Subjects may have been able to falsify results due to the Likert-type scale that was selected to measure various categories of self-concept. Lastly, this researcher's role in the program was extensive; this role may have limited the effectiveness of the program as well as the study.

Recommendations

The following recommendations are for fellow researchers and educators based on this study. Since this is a pilot study concerning the effects of fly fishing in regard to self-concept of students with learning disabilities found by the researcher, further research is recommended. Further research could be done on a larger, less specific target population, or vice versa, a larger study could be conducted on this specific target population. This is the first study of its kind, and the only one conducted in the Midwest on fly fishing and its overall effects on student self-concept. This investigator recommends expanding the research to include multiple schools districts to incorporate at least 100 students with disabilities. Furthermore, it is recommend that a control group of non-disabled students be used and included in the administration of the Tennessee Self Concept scale to compare to regional counterparts with disabilities.

Students with disabilities, in this case, learning disabilities, need to be provided with opportunities and experiences that allow one to apply a hands-on approach to education. Outdoor educational experiences could positively contribute to the future success of these individuals both in and outside of the traditional classroom. Extending

classrooms out into the wilderness can spark passion and intrigue in students that might not typically succeed under different circumstances. Nature can be a powerful tool that provides students the opportunity to become engaged in education and learn new skills. If more educators took an experiential approach, researchers might be able to understand an educational model that works best for students with learning disabilities, inside the traditional classroom and out.

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Appendix A: IRB Approved Permission Form

University of Wisconsin-Stout

Menomonie, Wisconsin 54751-0790
Kids on the Fly- After School Program
Ellsworth Community Middle School

This research study is being conducted by Andrea Sommerfeldt, a student in the Masters of Education in School Psychology program at UW-Stout. This pilot study concerns the understanding of experiential education in the form of fly-fishing. You will be asked to complete the Tennessee Self-Concept Scale: Revised (TSCS:2) before and after the completion of this after school program. Upon completion of the program, you may or may not be asked to fill out an informational assessment of your experience in the after school program.

The results of this study will contribute to our knowledge about the effects of fly-fishing and how it relates to individual self-concept. All of your responses will be held confidential. All consent forms and assessment scales will be locked in a filing cabinet located in the After School Program Coordinator's Office. Her name is Amanda Foege; she is also a School Counselor as well as the supervisor of Kids on the Fly. A research paper will be written about the results of the study, but it will not contain any identifying information. There are a few risks to consider when fly-fishing. You will be on a river, and it is possible that you may fall in the water. To prevent this, you will be required to wear a life preserver. You are also at risk of being hooked by yourself or a fellow classmate. Please, be assured that there will be strict supervision and a first-aid kit available. Your participation in this research study is completely voluntary; you may stop participating at any time prior to the completion of the project without any penalty.

This study has been reviewed and approved by UW-Stout's Institutional Review Board (IRB). The IRB has determined that this study meets the ethical obligations required by law and University policy.

I will be pleased to answer any questions you may have now, or you may call me at any time with questions about the research. You may also contact my research advisor Dr. Robert Peters, Associate Dean of Education in the School of Health and Human Services, or Sue Foxwell, Director of Research Services.

Investigator: Andrea Sommerfeldt

715-212-1783 Sommerfeldta@my.uwstout.edu

Advisor: Robert Peters, Ph. D.

715-232-1983, Petersb@uwstout.edu

IRB Administrator

Sue Foxwell, Director, Research Services

715-232-2477

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I have read the above and give my consent to participate in the study about to take place. By signing this consent form you agree to participate in the project entitled, Kids on the Fly, an after school program.

Student signature

Date

Signature of parent or guardian

Date

Appendix B: Midwestern Middle School Permission Form



Ellsworth Community School District
FIELD TRIP PERMISSION SLIP

<p>“Kids on the Fly” After School Program Introduction to fly-fishing Hosted by: Andrea Sommerfeldt, UW-Stout Graduate Student Every Thursday during April 8th-May 27th from 3-5pm</p>	
NAME OF STUDENT:	GRADE:
<p>DESTINATION/ACTIVITY & DETAILS: A group of students will have the privilege to participate in a unique after school program where they will learn how to fly-fish. The purpose of this program is to develop skills such as: independent thinking, decision making and problem-solving on the stream that can be applied to all other aspects of learning in school. The goal of Kids on the Fly is to increase self-concept in all students and have fun in nature's classroom! @ school & on Rush River and other local area lakes. etc. Weekly destination will be posted on MS website.</p>	
DATE & TIME: Thursdays from 3-5pm	
TEACHER/SUPERVISOR: Ms. Sommerfeldt (715)212-1783 / Ms. Foege (@ MS)	
<p>I hereby give my permission for my son/daughter to participate in the above-referenced activity. I agree to indemnify, save, and hold harmless the Ellsworth Community School District and its respective employees and officers from all liability for any adverse results which may occur.</p>	
PARENT SIGNATURE:	DATE:
PARENT CONTACT NUMBER DURING TRIP: ()	
<p>I promise to follow all the school rules during the field trip or activity. Because there could be changes in schedules, rules, and information, I will listen to and follow the instructions of the teacher or supervisor on this field trip. I will be sure to bring anything that I need for the field trip. I will ask the teacher/supervisor before leaving if I have any questions.</p>	
STUDENT SIGNATURE:	DATE:

TABLE 1***TENNESSEE SELF CONCEPT SCALE, SECOND EDITION (TSCS: 2)***

T-Scores	Student A Pre Test	Student A Post Test	Student B Pre Test	Student B Post Test	Student C Pre Test	Student C Post Test
Conflict	54	55	39	29	61	50
Physical Self-Concept	75	64	55	51	62	62
Moral Self- Conflict	56	56	51	56	51	53
Personal Self- Concept	72	62	50	48	72	62
Family Self- Concept	53	49	45	36	53	61
Social Self- Concept	56	56	48	54	59	48
Academic/Work Self-Concept	45	61	50	41	54	61
Total Self- Concept	59	60	50	47	60	59

Key: T-scores between 40T-59T are considered to fall within the average range.