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Participation in an adventure-challenge program and behavior change in emotionally impaired students

Freed, Donald F., Ph.D.
The Ohio State University, 1991
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PARTICIPATION IN AN ADVENTURE-CHALLENGE PROGRAM AND
BEHAVIOR CHANGE IN EMOTIONALLY IMPAIRED STUDENTS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate School of
The Ohio State University

By

Donald F. Freed, B.S., M.S.

* * * * *
The Ohio State University
1991

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Dr. Seymour Kleinman
Advisor
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To my children.

May your lifes' adventures be uplifting and fulfilling.
ACKNOWLEDGMENTS

There are a number of folks who have influenced me personally and professionally and have assisted me in this study who deserve special thanks.

I would first like to acknowledge the people and place in my life which led me to pursue outdoor education professionally, the Battle Creek Outdoor Education Center. I am particularly grateful to Ed Smith, Tim Weed, John Holtz and others for the lessons we learned through our adventures together.

My introduction to adventure education came while at the Battle Creek Center through Project BACSTOP, a program which, in my opinion, has provided the single greatest influence on adventure programming for public education in the Great Lakes region. The former Director of BACSTOP, Lee Snooks, has provided an example and a standard for me personally, as well as a number of other adventure education professionals. For his leadership and mentoring, we as a field are all indebted.
Next, my workmates: George Sarns, the encouraging boss; Stewart McFerran, who was the primary instructor for the groups examined in this study; Jay Alton and Kathy Knopf, who sometimes worked in my place so that I could work on this project.

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CHAPTER I
INTRODUCTION

“Education is not preparation for life, but life itself.”

--Earl Kelly

Some educational philosophers contend that the learning environments provided in today’s schools are ineffective for many of those we teach. They advocate the creation of real experiences as a means of giving value to the skills and concepts which are taught. This methodology has come to be termed experiential education. Experiential education is based on the premise that in real life situations, students will learn to recognize their successes and failures, their challenges and responsibilities, and the consequences of their actions or inactions. Life’s situations are real, as are the lessons it teaches. Outdoor education, as a learning methodology, is subsumed under the umbrella of experiential learning.
Adventure education is a component of outdoor education which uses meaningfully challenging activities to enhance social interactions, personal growth, and/or environmental awareness (Bagby and Chavarria 1980). This chapter traces the development of outdoor adventure programs from the organized camping movement to its current position in outdoor education.

Organized Camping

Though the earliest form of education likely took place in the out-of-doors, outdoor education as we know it today is linked to the early movements of organized camping. In 1823 George Bancroft and Joseph Cogswell provided hiking, camping and nature study experiences to students at the Round Hill (Mass.) School (Hammerman, 1980). Later, Fredrick Gunn and his wife established a summer camping program for boys enrolled in Gunn's private school at Washington, Connecticut, in the early 1860's, who had expressed a desire to imitate soldiers of the Civil War by marching, camping, and sleeping in tents. These outings were felt to be so beneficial that the Gunn's summer camp continued to provide organized camping trips for nearly thirty years. Dr. Joseph R. Rothrock, a physician from Wilkes Barre, Pennsylvania, organized the first private camp in this country in 1876. Dr. Rothrock's goal was physical development through conservation projects; he combined camping and education in the operation of his camp. The Reverend George Hinckley started the first church camp in 1880 at Gardiners Island, Rhode Island. Activities
centered around religious and educational activities in the morning, and recreational activities in the afternoon.

In 1910 W.D. Boyse brought the Boy Scout movement to this continent from Europe, followed two years later by Juliette Low and the Girl Scouts of America. The primary emphasis of these programs were development of citizenship, physical strength, camping skills, and nature study.

In 1912 the first school program was established in Dubuque, Iowa to provide educational opportunities and a healthful environment to undernourished children. Seven years later the Chicago public schools instituted a program which was jointly funded by the Department of War. This program, begun by Major Peale, was mandated to provide a summer camp school as well as serving as a training site for reserve officer training candidates.

By the mid 1920's the camping movement had developed to such an extent that the American Camp Directors Association was formed, which was the predecessor of the American Camping Association. It was in this period, too, (1925) that the Los Angeles Schools instituted the use of the out-of-doors in its curriculum.

By 1933, thirty-three city school programs nationwide had implemented camping activities into their curriculum.
Outdoor Education

"Camping is a series of purposeful, related experiences in real life situations, and is therefore educational."

--L.B. Sharp

Outdoor education is based on the premise that the natural laboratory can provide the most effective learning forum from which to teach many of the skills and concepts presented to students. Outdoor education is often used as a means to supplement the academic-core curriculum within our schools.

There is no limit to the choice of ordinary curriculum subjects applied to the outdoors other than the energy, confidence, and imagination of the teacher. The basic value is not merely a novel way to teach or present material to minimize motivational problems, but that provides a method of direct teaching introducing sensory stimuli to the learner as well as the traditional symbolic approach common to school situations (Mand, 1967).

With changing social conditions and the emergence of new leaders, organized camping moved from health and recreation centers and found its place in the schools' educational structure.

Many consider L. B. Sharp to be the father of outdoor education as it is known today. As a doctoral student at Columbia University, he was asked to develop outdoor programs for a local church group. Needing the money it would provide, he accepted the challenge and established the Life Camps. In 1935, Sharp called for outdoor programming to be included as adjuncts to the regular school
curriculum, and the period of "Inception" became recognized (Hammerman). In the summer of 1939, Mrs. Johnna Lindof, of the New York City Board of Education, started a camping program for children under the supervision of Sharp's Life Camps. The program operated for four years, at which time it was recommended that other classes be sent to camp during the months of September and June. This was viewed as an important milestone in outdoor education. At this time, "Captain" Bill Vinal, a biologist, formalized the teaching of the natural sciences in the "laboratory of life," and the "school of realism." With this new dimension, the period of inception drew to a conclusion, with a format established which catered to the educational goals of natural science, conservation, recreation/physical education and social welfare (Hammerman, D., 1961; Hammerman, W. 1980; Rillo, 1980).

In 1940, the period of "Experimentation" was ushered in by a National Workshop for the Development of School Camp Programs, sponsored by the W.K. Kellogg Foundation. Kellogg, a Seventh Day Adventist, was concerned about the health and nutrition of underprivileged children, and established three camps in south central Michigan. The primary focus of these camps was to enhance physical development and provide meaningful educational opportunities to area students. In the early 1940's, under the guidance of Hugh Masters, this experiment became a part of the Battle Creek Public Schools' regular curriculum, which operates today, at Clear Lake Camp, as the Battle Creek Outdoor Education Center. Outdoor education leaders Don Hammerman and George Donaldson, who
worked with the Battle Creek program, later spread the Clear Lake approach to other regions. This period witnessed a transition from a recreation-centered philosophy towards a closer relationship with existing school curriculums which operated during the regular academic year. During this time, educational journals began to recognize outdoor education for the first time (ibid).

The period of "Standardization" began in the early 1950's. Terms like "camp/camping" began to be replaced with words such as "outdoor laboratory" and "outdoor school." Manuals and guides were developed as aids for the classroom teacher to plan the "outdoor experiences" of their classrooms. This process led to a uniformity in camping programs and was in contrast to the original concepts of Dewey, Sharp, and others who believed that the subject matter should grow from the experiences in the out-of-doors. This decade saw the development of professional organizations such as the Outdoor Education Association (1951), and the Association of Outdoor Education (1954). In 1954 the American Association for Health, Physical Education and Recreation (AAHPER) appointed a task force to formulate, judge, and approve standards for public school camping. This study, known as The Outdoor Education Project, was headed by Julian Smith of Michigan State University. The report examined 3,500 school personnel in eighteen states, and was beneficial in the development of leadership training programs and the interpretation of what constituted outdoor education. The first national conference on
outdoor education met in Washington, D.C. in 1958 to address many of the conclusions of this report (Ibid).

In 1960, the period of "Resurgence and Innovation" began; a time in which writings, journals, conferences, and organizations became commonplace. Due to the success of the initial Outdoor Education Project conference, three follow-up conferences were held between 1960 and 1970. These meetings attracted outstanding leaders from the fields of conservation, recreation, industry, and outdoor education. In 1965 AAHPER established the Outdoor Education and Camping Council, which brought together services and disciplines under one operational base for outdoor educators. Also in 1965 the Elementary and Secondary Education Act was enacted, which provided Title III federal funding which resulted in a number of new and expanded outdoor education components. Programs were instituted for preschoolers through graduate students. In 1966, the *Journal of Outdoor Education* was published for the first time. This period also saw the advent of a new branch of outdoor education known as adventure education. In 1962, Outward Bound came to this country from Britain, and established the Colorado Outward Bound School.

Because of the emergence of new trends and responsibilities in Outdoor Education, Hammerman refers to the 1970's as the period of "New Direction." This period witnessed a changing national view regarding environmental issues and concerns, and led to the development of systematic educational approaches regarding the
conservation of our natural resources. The term "environmental education," though first coined by Liberty Hyde Bailey at the beginning of this century, rapidly gained acceptance after Earth Day was created in 1970. Bill Staff's "Spaceship Earth Approach to Environmental Education" and Steven Van Meter's "Acclimatization" process provided an educational approach to address these issues in public education. Adventure education programming found its way into public education with the advent of Project Adventure in Hamilton, Massachusetts and Project BACSTOP in Battle Creek, Michigan (Ibid).

Questions regarding certification, liability, and the definition of various aspects of the field are currently topics of debate. One theme regarding outdoor education remains clear: the changing needs and demands of society continue to cause changes and modifications in outdoor education.

**Adventure Education**

The average American child seldom comes into direct contact with nature. In school he learns a few dates from books, to press a button, to step on an accelerator; but he is in danger of losing contact with primitive realities—with the world, with the space about us, with fields and with problems of getting shelter and of obtaining food that have always conditioned human life and that still do.

-- John Dewey

Since its inception, outdoor education has always contained an element of adventure. Like Dewey, many contend that adventure is an instinctive component of the makeup of mankind (Mortlock, 1978).
The instinct of challenge manifests itself as children climb to the tops of trees, or explore a bog in search of "critters." Some maintain that society today provides few outlets in our quest for adventure, thus these needs manifest themselves in ways which are debasing to the human spirit—most notably through drug and alcohol abuse (Petzoldt 1974).

Adventure education professes to affect many areas for individuals and groups. It may be a catalyst for change or a vehicle by which individuals test themselves. It might build an individual's self-esteem or aid in the development of a greater appreciation for one's natural environment. Perhaps it makes individuals physically stronger or brings people within a group closer.

Many have constructed definitions which pertain to outdoor adventure education.

Collin Mortlock (1973) defines adventure education as "a state of mind with feelings of uncertainty, always ending in enjoyment or elation at its completion."

Ewert (1980) defines adventure in the educational sense as "activity, usually engaged in voluntarily and in the natural environment, that contains elements of real or apparent danger, in which the outcome, while uncertain, can be influenced by the actions of the participants."
Darst and Armstrong (1980) define outdoor adventure as “pursuits that provide an inherently meaningful human experience that relates directly to a particular outdoor environment.”

Bagby and Chavarria (1980) wrote that “adventure education refers to learning programs in which outdoor pursuits that are perceived as either physically or psychologically dangerous are used within a framework of safety and skill development to present meaningful challenges leading to increased satisfaction and personal, social, and environmental awareness.”

Though organizations like the scouts and school camps have traditionally used the out-of-doors and camping in an educational sense, the most influential adventure-based education programs have been the Outward Bound Schools. Begun in 1941 in Aberdovey, Wales, by Kurt Hahn, with the backing and assistance of Lawrence Holt and James Hogan, the program established its first school in this country at Marble, Colorado in 1962. Twenty years later there were over 300 public schools, private schools, and universities which had adopted the philosophy and methods of Outward Bound (Ewert, 1982). Other adventure-based programs, under a variety of names, have proliferated, as is evidenced by the more than 700 ropes courses now used across the country for adventure education purposes (Hale, 1984).

Recognizing the many potential benefits of adventure programming, public and private educational institutions began utilizing adventure challenge activities to meet specific needs of their
students. By the early 1970's there were school programs instituted for purposes of reducing racial incidents, enhancing academic performance, for physical development, as a means of orientation for new students, and to improve teacher-student relationships (Ratliff, 1972; Wilson and Martin, 1975; Hess, 1973; Rohnke, 1977).

Jenson and Young (1981) suggest a classification system to categorize adventure programs. They have determined that the rationale for adventure pursuits of any group would be for reasons of:

- **Personal Growth**—Provides "a platform for personal growth through physical and social challenges, which require the pooling of participants' physical, mental, and emotional resources for success."

- **Interdisciplinary Study**—"These programs use active learning in the outdoors as an instructional medium through which to approach various content disciplines. These programs provide experiences which enhance student interest and understanding which subsequently informs and enriches life pursuits."

- **Socialization**—The primary goal is the "transmission of cultural beliefs, attitudes and values. These programs emphasize the acquisition of normative behaviors more than the cultivation of individuality."

- **Recreation**—"Educational programs which provide the skills, attitudes, and knowledge required for participation in outdoor
pursuits...(and the) transmission of technical skills and knowledge at the beginning, intermediate, and advanced skill levels."

Jenson and Young point out that there is often overlap between the primary goals of a program, for as a result of the activities, secondary goals are formed and additional benefits are derived. For example, a participant might enroll in a course to acquire certain outdoor skills, and as a result of the activity, come to view himself as increasingly capable and competent—thus experiencing personal growth.

Adventure programs have developed to meet specific needs for a variety of populations and purposes. Though numerous claims are made about the benefits of adventure-challenge activities, the field needs to further investigate specific aspects of the adventure experience in order to provide more benefit to the populations they serve.

**Claims Made for Adventure Education**

1. Adventure Education offers a forum for personal decision-making and risk-taking, and offers an immediate and real consequence for the participants’ actions or inactions.

2. Adventure Education provides a common ground between participants which can enhance student-teacher and peer relations.

4. Adventure Education increases physical and emotional stamina.

5. Adventure Education provides an opportunity to acquire skills in leisure pursuits which enhance the quality of life.

6. Adventure Education contributes to creativity and expressiveness.

7. Adventure Education encourages participants to go beyond perceived ideas of their abilities, giving them a truer understanding of their actual limits.

8. Adventure Education helps develop an increased understanding of our natural world.

**Adventure-Challenge Activities**

Ewert (1980) claims, "The integration of adventure activities with learning became a logical evolution, particularly when based upon the philosophies of such notables as Socrates, Rousseau, Locke, and Dewey....These philosophers/educators laid a sound foundation from which the essence of adventure and education could blend into what we know as Adventure Education."

Mortlock (1973) continues, "there is no more potentially dynamic form of education than adventure." He proposes four broad stages in outdoor pursuits and contends that people involved in these activities must be in one of these stages:
• Stage One: **recreation**—the level of participation is far below the individual's normal abilities. Fear of physical harm is absent.

• Stage Two: **skills learning**—the participant feels in control of the situation and is able to use his abilities and experiences to overcome technical problems. Though they may be in a strange environment or see the situation as potentially dangerous, fear does not exist. The problems are deliberately set as a means of personal challenge, which, with effort, will be overcome and lead to some satisfaction.

• Stage Three: **adventure**—the person has sudden fear of physical harm and no longer feels complete mastery of the situation. He feels, however, that with considerable effort and luck, he can overcome the situation without accident. If he succeeds, he has experienced adventure. The degree of satisfaction and pride is proportional to the scale and intensity of the adventure. As adventure is a state of mind, it is possible for students to experience adventure in an environment of apparent rather than real danger.

• Stage Four: **misadventure**—The challenge is beyond the control of the participant and there is a real possibility of physical and psychological damage. Fear tends to be of an extreme nature in misadventure and will normally lead to panic and terror.
The New Campus adventure-challenge program would be classified in the stage two and three of Mortlock's scale, as perceived rather than actual risk activities are utilized.

Darst and Armstrong (1980) address the level of risk issue in adventure activities, and cite the following examples:

- **Low Risk**: outdoor photography, fishing, nature walks, orienteering, family camping, cycling and ice skating.
- **Medium Risk**: swimming, backpacking, horseback riding, cross-country skiing, hunting, boating and snowshoeing.
- **High Risk**: Sky diving, hang gliding, mountaineering, winter camping, spelunking, rock climbing, whitewater canoeing, kayaking, sailing, skin and SCUBA diving.

Though the New Campus program has elements from each of the levels in Darst's and Armstrong's definitions, the primary components used are best represented by the medium and high-risk categories.

Adventure-based counseling programs have been used as a therapeutic tool to develop group skills, to enhance self-esteem, to modify behavior, and to teach life-long leisure pursuits activities, which foster positive risk-taking. As professionals seek to gain new understandings regarding the value and meaning of adventuresome activities to emotionally impaired populations, specific information needs to be investigated more thoroughly. If behavior is modified through the use of adventure programming, professionals must have a
clearer picture as to what level of involvement and age these programs appear to be the most effective.

Statement of the Problem

As the field of adventure education continues to develop, professionals need to gain new understandings as to what course might be prescribed in order to obtain a desired end. It is essential that adventure educators further investigate the relationships which may exist between adventure challenge activities and behavioral changes in severely emotionally impaired students and to explore possible avenues which may be factors on the impact of program implementation. When exploring the effects of outdoor adventure on emotionally impaired populations, most studies have focused on single outings of varying lengths. As adventure programming continues to gain support as a treatment for special needs students, further investigation is needed related to the effects of programs which are designed and implemented during the traditional school year.

Purpose of the Study

The purpose of this study was to investigate the relationships which may exist between adventure challenge activities and behavioral changes in emotionally impaired students. The further intent of this
work was to gain insights, from students and staff who have participated in the Traverse Bay Area Intermediate School District (TBA-ISD) outdoor programs, which can be used to determine areas of impact as well as learning their recommendations for change and program implementation.

Quantitative and qualitative techniques have been employed as the means to gather data for this study. These complementary methods constitute a meaningful form of triangulation, in that individual perceptions of what occurred and actual behavior changes are examined. It is felt that if these two research methods are used in tandem, they give the investigator a clearer understanding of the scope and meaning of behavioral changes in these severely emotionally impaired students.

Research Questions

The following questions were examined in this study:

1) Will there be a significant change in pre and post scores for New Campus students, as measured by the Behavior Evaluation Scale (BES), between years in which outdoor programs were a part of the curriculum and years when it was not?
2) Will there be a significant difference between pre and post test scores for New Campus and Center Program students, as measured by the BES subscale Interpersonal Difficulties, before and after their winter outdoor experience?

3) Will there be a significant difference between pre and post test scores for New Campus and Center Program students, as measured by the BES subscale Interpersonal Difficulties, before and after their spring outdoor experience?

4) What are students' and staffs' perceptions of the outdoor program, as gleaned from participant interviews?

5) What are students' and teachers' perceptions of the outdoor program, as indicated in questionnaires?

Limitations

1. The student participants of the study are between 10 and 19 years of age.

2. The student participants of the study are diagnosed as being emotionally impaired.
3. All of the participants of this study are students and staff in the TBA-ISD's Emotionally Impaired programs.

4. There are nine program days and four overnight experiences for each group each year.

5. There are four outings between September and June for each group each year.

6. A curriculum guide was developed to assist teachers which included goals, assessments, activities and other pertinent information.

7. Outdoor education is a part of the basic curriculum for all New Campus and Center Program students.

8. The instructors for each outing consist of Bay Area Adventure School and New Campus personnel.

9. The Behavior Evaluation Scale is a standardized rating of student behaviors, as observed by their teacher at the beginning and end of each academic school year.

10. Outings between September and June in northern Michigan include a variety of weather conditions.
11. Each class had different teachers, and different teachers have taught certain grade levels in the 1987-88 and 1988-89 school years.

Assumptions of the Study

1. The subjects of the study are representative of the Traverse Bay Area Intermediate School District’s Emotionally Impaired programs.

2. Different instructors for various activities will not affect the study.

3. The behaviors of the course instructors and the subjects are representative of behaviors that occur with emotionally impaired populations on adventure education outings.

Definition of Terms

Traverse Bay Area Intermediate School District (TBA-ISD) provides vocational and special education services to sixteen local school districts in a five-county area in northwest-lower Michigan.

TBA-ISD Emotionally Impaired programs include New Campus and Center Programs (see Figure 3). These programs provide services
to students in TBA-ISD who, because of their severe emotional impairments, cannot be educated in their local schools.

Emotionally Impaired (E.I.) refers to an inability to control strong feelings and impulses in a normal manner. In this case, due to the environmental and inherent make-up of New Campus and Center Program students, expressions of anger and fear are displayed excessively (TBA-ISD E.I. Handbook, 1988).

Bay Area Adventure School (BAAS) is a part of the Traverse City Area Public School (TCAPS) outdoor programs. BAAS provides outdoor and adventure education opportunities to groups and schools throughout the region.

Outdoor Education program, for purposes of this study, refers to a cooperative effort between TBA-ISD E.I. programs and TCAPS BAAS. The outdoor program aims to implement a series of adventure education activities into the New Campus and Center Program curriculum.

Adventure is defined as a state of mind that begins with feelings of uncertainty about the outcome of a journey and always ends with feelings of enjoyment, satisfaction, or elation about the successful completion of that journey (Mortlock, 1973).
Adventure Education refers to learning programs in which outdoor pursuits, that are perceived as either physically or psychologically dangerous, are used, within the framework of safety and skill development, to present meaningful challenges leading to increased satisfaction, and personal growth, social, and environmental awareness (Bagby and Chavarria, 1980).

Affective Structure is feelings members experience, consciously or unconsciously, including the emotional responses to events that occur and the configuration of feelings among members (TBA-ISD E.I. Handbook, 1988).

Personal Growth is the promotion of self-awareness, interpersonal effectiveness, and increasing maturity as evidenced by self-reliance and self-confidence (Mortlock, 1973).

Physical Challenge Therapy is a therapeutic modality which has as its cornerstone the belief that a person's behavior can be changed through the use of kinetic physical activity (Williams, 1984).

Skills Acquisition refers to the development of the technical skills in a variety of outdoor pursuits, including: basic first aid, ropes and initiative activities, camp living, canoeing, backpacking, and cross-country skiing.
Summary

Chapter I traces the history of organized camping and outdoor education in this country. Specific information is presented regarding that aspect of outdoor education known as adventure education, as well as the methods and values it promotes. This chapter includes a statement of the problem to be studied, the purpose of the study, research questions, limitations, assumptions, and a definition of relevant terms.
CHAPTER II

REVIEW OF LITERATURE

The purpose of this study is to investigate the relationship between behavior changes in emotionally impaired students and their participation in an outdoor education and adventure-challenge program. The intent of this review is to demonstrate a logical reasoning which ties behavior change to outdoor adventure programming. Numerous studies have examined the effects of adventure education on a variety of populations. This review focuses on a theoretical framework for outdoor adventure programs and behavior changes and research which pertain to educational and therapeutic adventure programs.

Adventure and Behavior Change: A Theoretical Framework

There are many theories, models, and concepts related to outdoor adventure education which provide support to the notion that adventure programs are enhancing to groups and individuals behaviors.

Abraham Maslow (1968) contends that perceived risk situations heighten perceptions which aid an individual in realizing his potential. Maslow describes these as "peak experiences" and maintains that they allow people to become fully functioning as they bring about positive feelings and unify participants (Miles 1978).
Optimal arousal is the condition which maximizes the outcome in a state of high emotion or excitement. The freshness or novelty of that condition impacts the extent of arousal in that past experiences aid in understanding of the cognitive process necessary for the self-activation of the condition. As an event or condition presents itself, sensory stimuli is transmitted from the receptor organ to the central nervous system to the muscles, which in turn respond to the stimulus. The system which mediates this response is known as the reticulated arousal system (RAS). Higher level organisms are arousal seeking. Because previous experiences aid in processing information, more complex interactions with the environment are necessary in order to achieve optimal arousal. As the novelty of an experience is diminished, so is the arousal potential. In the context of adventure, individuals may seek out greater challenges based on their past experiences. The steps into higher levels of arousal are known as pacers. Shultz (1965) first combined the notions that an optimal level of arousal exists, and that information from past experiences provides a reliable estimate of what an outcome of the arousal-producing situation may be. An individual will then respond to the situation by avoiding it, or proceeding with some caution by testing various attributes of the situation. As the dissonance and uncertainty of a situation is uncovered, information is gathered which increases knowledge. Social animals also use the existence of others to develop arousing stimulation, as they direct signals and interpret responses. Many contend that higher level animals are arousal-seeking because of their intrinsic desire to know and control their environment (Ellis). When competence is
demonstrated, the resulting feeling (effectance) increases the probability that an individual will again test the effects of situations which are of an uncertain outcome. The uncertainty of a situation is the attribute which stimulates arousal-seeking behavior.

Yerkes-Dodson’s Learning Curve addresses Shultz’s concept of optimal arousal as it relates to learning. According to this model, certain anxiety levels enhance the learning process. When anxiety exceeds optimal levels, learning is impaired. Graphically represented, the model is a bell curve:

![Yerkes-Dodson's Learning Curve](image)

**Figure 1**
Yerkes-Dodson’s Learning Curve

Bandura’s (1975) self-efficacy theory outlines methods an individual learns about and evaluates performance during a specific activity so that they can achieve an intended result. Self-efficacy provides a framework for explaining and predicting psychological change based on the expectations of efficacy influence behaviors, effort and sustainment of effort. This is consistent with social learning
theory, which was developed to account for human behavior in complex social situations. Social learning theory states that a person's actions are predicted on the basis of actions, expectations and situations. Reinforcement acts to strengthen the expectancy that a behavior will be followed by reinforcement in the future (i.e. reward and gratification).

Victor Walsh's and Gerald Gollins' Outward Bound model relates social learning theory more specifically to outdoor adventure education. Given a learner who is placed in an unique physical and social environment and then introduced to a set of problems which demand resolution, a state of dissonance occurs. As the learner resolves the incongruities and begins to master his environment, his self-efficacy is raised. This transfer of self-efficacy helps the learner to reorganize and modify behavior (Ewert, 1984).

Weiner, Nierenberg, and Goldstein's attribution theory describes potential impacts of adventure education approaches. Attribution theory predicts that future behavior is in part determined by perceived causes of past events. Success and failure are perceived as chiefly caused by ability, effort, the difficulty of the task and luck.

Fishbein and Aizen's Model of Attitude and Behavior contends that attitudes are predisposed and affect behaviors and beliefs. Behavior can be impacted by an individual's intention. Intention can in turn be influenced by persuasive communication and through active participation, which are the antecedents to change in an individual's attitudes and beliefs.
Csikszentmihalyi's flow model draws a relationship between raised levels of challenge, reward, and ability to the self-efficacy, skill levels and competency of individuals. The contention is that as we practice and become better in activities/situations, we can expect a greater reward through participating in it. As reward and skills grow, individuals are said to be in a state of "flow."

![Flow Model Diagram](image)

**Figure 2**
Csikszentmihalyi's Flow Model

Allen's Paradigm of Risk Recreation is tailored to seek optimal arousal opportunities by placing the learner in situations in which he has control and can take satisfaction. This is an important consideration for adventure educators as it illustrates the need to utilize a building-block progression with participants (Meier et. al., 1980).
Numerous articles in popular magazines report that adventure activities help bring about positive changes in delinquent youth, benefit corporate managers, enhance participants' physical health, and are a valuable treatment for numerous personal and social disorders. Consequently, adventure-based programs have proliferated, as is evidenced by the National Safety Network's Alan Hale's estimate of over 700 ropes courses now spread across the country for adventure education purposes (Hale, 1984). Adventure education has made a favorable impression on educators and psychologists alike and the list of organizations utilizing adventure challenge activities as a tool for individual and group change is growing. This growth appears to be justified as Harris (1976) reported that 70% of the fifty studies he examined indicated positive change in individuals and groups when using a pre test/post test format (McBride, 1984).

Physical action has long been theorized to have a relationship with psychological health. Piaget indicated that "therapeutic efforts designed to improve or repair one's self-image or increase interpersonal trust are very accessible to a strictly physical intervention" (Winn, 1982). An individual's social adjustment, self-esteem, and self-reliance are, firstly, highly important in the psychotherapeutic treatment process and, secondly, directly affected by any physical efforts designed to enhance self-image (Lowen, 1967). The core of the physical challenge experience is the presence or illusion of risk and vulnerability to an individual's physical, as well as emotional,
well-being. Jung (1973) concludes that experiences offering high risk appear to offer simultaneously a confrontation with fundamental human issues and a context for resolution of those issues which is essential to personal growth. Self-concept treatments which utilize physical activity contribute in psychological improvements beyond self-image. Adventure challenge as a therapeutic treatment denotes risk to individuals in both physical and emotional ways. It is an emotional risk in that individuals must commit themselves to participating and being members of a group. The rigors of the new experience coupled with an unfamiliar environment can leave participants with a sense of vulnerability as well as perceived physical risk (Williams, 1984).

Though organizations like the scouts and schools have traditionally used the out-of-doors and camping to develop citizenship, camping skills and leadership, the most influential adventure-based education programs are the Outward Bound Schools. Begun in 1941 in Aberdovey, Wales by Kurt Hahn, with the backing and assistance of Lawrence Holt and James Hogan, the program established its first school in this country at Marble, Colorado in 1962. Twenty years later there were over 300 public schools, private schools and universities which had adopted the philosophy and methods of Outward Bound (Ewert, 1982).

Granek classifies research in adventure education into two broad categories: empirical, that seeking to establish a relationship between two or more variables; and non-empirical, which assume a more subjective posture in attempting to analyze the phenomenon (1981). It
was suggested that examination of both categories of research would provide "a more holistic perspective toward trends in adventure education."

Early studies were generally described as survival training programs; a term which, for a period of time, came to be used interchangeably with adventure programming. Jerstad distinguishes between the two treatment models however, indicating that "adventure programs immerse individuals in nature rather than pitting them against the natural environment" (Granek, 1981). Programs described in this review as "survival training" are included, as this term was the predecessor to the more common current term, "outdoor adventure education."

Educational Programs

Educational philosopher William Kilpatrick stated that: "In comparison with most schools, especially most secondary schools, the camp can, hour for hour, be more successfully educative" (Hammerman, 1972). Recognizing the many potential benefits of adventure programming, public and private educational institutions began utilizing adventure-challenge activities to meet specific needs of their students. By the early 1970's there were school programs instituted to reduce racial tensions, enhance academic performance, develop physical fitness, orient new students, and improve teacher-student relationships (Ratliff, 1972; Wilson and Martin, 1975; Hess, 1973; Rohnke, 1977).
For the purposes of this review, "educational programs" are those which are used to enhance academic performance, fill the needs of special education populations and prevent students from dropping out of school.

**Academic Enhancement**

Early studies by Sharp, Evans and Hoeksema all demonstrate the effectiveness of outdoor education upon the academic growth of students (Childs, 1986). The intent of the outdoor programs was to supplement the academic-core curriculum by bring to life concepts which had been taught in the classroom. As an example, math concepts were given meaning as students practiced orienteering skills.

Buell contends that most of the major research specific to adventure education has occurred since 1975, thus researchers have only begun to examine the potential impact of adventure programs on academic growth (Childs, 1986). A multitude of studies indicate a significant positive relationship between self-concept and academic performance. As adventure education is linked to enhancing self-concept, it follows that if these experiences could also have a positive benefit on academic achievement (Ewert, 1983).

In 1970 Moses and Peterson examined grade point averages for students diagnosed as "low achievers." A control group (n=45) was compared to students who received sensitivity training (n=14) and
students who participated in a survival training program (n=44). The sensitivity training group had a .76 increase in GPA which was maintained over one semester. The outdoor survival group's GPA increased by .47 over three semesters. The control group indicated a slight increase of .07 over two semesters (McBride, 1984). Encouraged by these results, Moses conducted a second study examining the impact of a thirty-day survival program upon Brigham Young University students who had been suspended from the university for academic reasons. The survival group participants showed an increased grade point of .67 over two semesters. When compared to other students who had been readmitted to the university, the survival group was less likely to return to academic probation (McBride, 1984).

Student and teacher evaluations for emotionally handicapped adolescents in a residential treatment facility indicated positive academic growth after outdoor-oriented summer classes. More information regarding this study can be found in the section on emotionally impaired (Rigothi, 1974).

Project BACSTOP was a federally funded program in the Battle Creek, (MI) Public Schools primarily intended to reduce racial incidents. Activities used included backpacking, canoeing, caving, cross-country skiing, high ropes and initiatives, and rock climbing/rappelling. As a result of reduced tensions, it was hoped that students would improve scores on the California Achievement Test, reduce absenteeism, and increase grade point averages. Students participating in the outdoor adventure program did show a slight
increase in overall grade point average (.2) and reported higher achievement test scores. Absenteeism remained constant with eighth and ninth grade students. Seventh graders, however, had a slightly higher rate of absenteeism which was attributed to participation in winter outings. The program was determined to be successful and was thus distinguished as a model program to be disseminated to other schools throughout the state (Snooks, 1976).

Two hundred fifty entering freshmen at Wheaton College were placed into five treatment groups: 1) wilderness challenge, 2) encounter, 3) football, 4) special advisee, and 5) control. The wilderness challenge group performed significantly better in academic success and classroom performance, and on a composite score measuring academic success, physical strength and endurance, social competence, extracurricular involvement, and psychological and interpersonal factors (Sullivan, et. al., 1974).

Drop-Out Prevention

Naches and Roberts examined the effects of an Outward Bound adaptive program "Dare to Care," and triangulated their study by using a High School Personality Questionnaire, a Student Attitude Survey, and a Staff Rating Scale. The students were divided into three groups: top students, volunteers, and potential drop-outs. The results indicated a number of positive changes in the students, with the most significant change being in the self-control of those defined as potential drop-outs (Marshall-Liebing, 1985).
In 1967 the Atlanta Public Schools sponsored an “Operation Upstream” program for the personal development of high school students. The outdoor experience consisted of 26 days of adventure-challenge activities. Eighty-four males were divided into two groups which participated in the same activities on separate occasions. The California Test of Personality was administered and a pre test/post test design was used to measure change. Factors shown to have a significant positive change at the .01 level included: self-reliance, personal adjustment, social skills, antisocial tendencies, community relations and total adjustment. Personal worth was found to be of significant positive change at the .05 level (McBride, 1984).

In the early 1970’s, Wetmore examined the effects of Outward Bound on adolescents between 15-19 years of age from varying socio-economic backgrounds. Six months following the experience there was no statistical difference in the program’s effectiveness. He determined the activity to be equally valuable to participants having various socio-economic backgrounds.

Nye examined self-concept in high school students who had either gone to summer school (control group) or had participated in Outward Bound. In nine of the ten components comprising the Tennessee self-concept scale, the Outward Bound group showed significant gain following the experience (Ewert 1983).

Another important use of outdoor adventure programs has been in drop-out prevention. When comparing males between the ages of 16-21 years of age in Austin, Texas, Curtis (1983) found that drop-outs had an unemployment rate of 48.3% compared to graduates’ 18.4%.
Though high school drop-outs may find jobs, they are typically low paid, low skilled and are offered very little opportunity for advancement (Marshall-Liebing, 1985).

Recognizing the personal and societal cost of high school drop-outs, numerous prevention programs have developed. Behavior rating scales and regression equations have been developed to assist school personnel in identifying potential drop-outs (Johnson and Hopkins, 1972; Mink and Barker, 1968; Minnesota State Department of Education 1981; Kahn and Ribner, 1982). Studies indicate that the primary reasons for dropping out of school include: lack of interest, personality adjustment difficulties, and educational problems (Minnesota, 1981); peer influence, low self-esteem and aspirations, basic needs unmet, and no long-term goals (Glasser and Kley 1982); poor grades, did not think graduation was a realistic goal, not being taught what they needed to know, and disagreement with school policy (Martin, 1981); irrelevance and insensitivity of the curricula, teacher indifference and lack of help, and home problems (Coladarci, 1983). Potential drop-outs tend to share certain characteristics: Low self-esteem, low problem-solving skills, low adaptability, low self-reliance, and alienation from adults and peers. Counseling groups and outdoor programs have been found to strengthen the characteristics which seem to contribute to students remaining in school (Marshall-Liebing, 1985).

Marshall-Leibing (1985) examined the effects of six-day outings in the canyon country of Southern Utah, comparing the results to counseling groups. Though labeled survival trips, the activity was
described in the study as a "vigorous backpacking trip." Students who were identified as "high risk" drop-outs were subjected to group counseling and survival trips as a drop-out prevention treatment. The outdoor survival participants showed reduced paranoid ideation when compared to a matched control group. Interpersonal sensitivity, depression and hostility reached near significant levels. In comparison with the counseling group intervention, the survival program met more of the goals of student enhancement through increased self-concept (measured by the Tennessee Self-concept Scale) and social bonding as measured by the SCL-90 (Ibid 61 and 92). Questionnaires lent validity to the quantitative findings as participants reported "feeling more involved with others, and expressed positive feelings about their ability to get along with others and about their own future." The researcher recommended that survival outings be used with counseling groups to most benefit those identified as high risk potential drop-outs.

Special Populations

The benefits of outdoor adventure have not been restricted to "normal populations." In his book, Camping for Special Students, Shea (1977) states that, "outdoor programming can assist with diagnosis, placement, and remediation particular to physical, social and emotional concerns." Rob, Havens, and Whitman (1978) go on to indicate that outdoor programming can assist teachers with meeting
the goals of the I.E.P. especially in regard to self-help skills, motor skills and social skill development.

Idaho State University provides outdoor adventure programming specifically for disabled people with activities including backpacking, mountaineering, kayaking, and whitewater rafting (Whittaker and Brashear, 1984).

In May of 1977, Outward Bound initiated a pilot project of able-bodied and disabled persons. The formal evaluation utilized an interview instrument designed for the program. Interview information was collected at three points in time: pre-course, post-course, and at six months following. Patterns which emerged were that the disabled seemed to experience personal growth and change in the areas of knowledge and feelings. They also demonstrated more lasting changes in the dimensions of feelings, attitudes, and behaviors (Plourde via Granek, 1981).

In Englewood, Colorado, Craig Hospital has developed an aquatics program designed to rehabilitate individuals with spinal cord injuries. This program includes sailing, swimming, and whitewater rafting. The intent of the program is to help individuals regain a feeling of control in their lives.

Hartman refers to adventure programs for the mentally retarded as offering "a unique medium for personal growth and development. It is an additional, not a competitive, tool whose integration into an existing activities therapy program can be invaluable." Increased intellectual and physical knowledge and skills, as well as personal
growth are viewed by Hartman as the major benefits of adventure programs (Granek, 1981).

In 1986 Childs compared outdoor and classroom environments for teaching math and vocabulary concepts to four students with learning disabilities using applied behavioral analysis techniques. She determined that three out of four students responded correctly for a longer period of time and retained a greater number of concepts while learning more quickly through the outdoor activity-based educational environment (Childs, 1986).

**Therapeutic Programs**

Programs with the primary intent of healing or treating individual or group disorders are described as “therapeutic programs” and include delinquency and emotional impairments.

"In consideration of altering children's behavior through planned social relationships, the organized summer camp deserves an important place" (Rogers, 1939—from Krieger pg 3).

"A comparison of adventure education programs with traditional methods (in treatment programs for juvenile delinquents) show that at the very least it is more cost effective and in a majority of studies shows a lower recidivism rate" (Golins, 1980).
Delinquency

A common use of outdoor adventure has been in the area of preventive and corrective treatment. Corrections is the treatment of offenders for prevention or rehabilitation rather than penal custody. Glueck & Glueck (1970) contend that programs and personnel must take into account the characteristics and preference of adventure-hungry boys who dislike routine supervision and tend to delinquency as an exciting or congenital outlet. As juvenile delinquents are generally thought to have poor self-images, a widely used measure for evaluating adventure programs for delinquent individuals has been changes in self-concept. Numerous studies attest to positive change in the self-concept of delinquents through outdoor adventure programming (Naches and Roberts, 1976; Koepke, 1978; Risk, 1976; Heaps & Thornstenson, 1974; Robbins, 1976; Ewert, 1977; Gaston, et. al., 1978; Cytrynbaum and Ken, 1975). Noldi and Wilpers (1975) emphasize the relatively high success of Outward Bound programs and adaptations in reducing recidivism. They call for a process of selection, orientation, and continuity procedures in maximizing the benefits of delinquents in Outward Bound programs. Barcus and Bergeson (1972) stated that research possibilities in this area are enormous and seem potentially fruitful in determining a powerful method for both remedial and preventive mental health work.

Outward Bound has extensively examined the effects of adventure programming. The largest study looked at more than 3,000 graduates of the British Outward Bound School. Ninety-eight per cent
of the participants and their sponsors who responded to the questionnaire indicated that the Outward Bound experience had a positive effect on the participants. Fifty-six per cent of the sponsors and 64% of the participants felt the experience enhanced their maturity, self-concept, self-esteem, and personal growth (Fletcher via Ewert, 1983).

One of the first studies examining outdoor adventure's effects on delinquent youth was conducted by Kelly and Baer. Without realizing it, the Massachusetts Youth Services sent a group of delinquent youth to a summer camp, which turned out to be the Colorado Outward Bound School (COBS). The participants of this experience had a much lower recidivism rate than other young offenders. With this understanding, a special population was sent out the following summer. Again, similar results were obtained. The following year, the Youth Services Division ran a more extensive course in conjunction with COBS, with Kelly and Baer examining the effects. One hundred twenty youth were divided into experimental and control groups. The experimental group was then split into three groups, each receiving treatment from different Outward Bound schools (Minnesota, Colorado, and Hurricane Island). The recidivism rate was less than half for the experimental group as compared to those who received traditional treatment (i.e. detention homes, parole, etc.), as measured one year after the Outward Bound experience. There was little difference reported between the Minnesota O.B. and the control group recidivism rate, which investigators attribute to the fact that all the participants in this group were from the same "home" school. This was felt to be a confounding
variable, detracting from the concept of creating an unique social setting. Others reasoned that the Minnesota experience was less physically and emotionally demanding than the other O.B. schools, thus diminishing the effectiveness of the experience (Kelly and Baer, 1966). Because of this program's success, the Massachusetts Youth Services developed Homeward Bound in effort to serve more troubled youth in their state. Soon programs developed utilizing adventure challenges for troubled youth in Ohio, Michigan, Pennsylvania, Florida, and Ontario (Kelly, 1974; Castle, 1975; Childs, 1980).

Collingwood (1971) used varying behavioral rating scales in his examination of the behaviors of troubled boys who had participated a "rugged three-week camp program." Pre-post behavior rating percentages on the participants with Quay's *Behavior Problem Checklist* indicated an overall reduction in behavior problems, as rated by the participants' parents and counselors. A second measure, the *Behavior Rating Inventory*, demonstrated a trend towards increased frequency of positive emotional-interpersonal functioning (3.21 to 4.11) of participants. A Camp Opinion Questionnaire and a Camp Perception Scale indicated that participants viewed the program as a positive experience and worthwhile therapeutic tool.

**Emotionally Disturbed/Impaired**

Adams' (1969) work is perhaps the classic study for emotionally disturbed adolescents and adventure programming/survival training as a therapeutic tool. An in-depth analysis investigated the relationship
between the individual's self-concept and behavior, which considered
the potential value of outdoor survival activities on rehabilitation.
Nineteen male and female volunteers, ranging from 15 to 19 years of
age, who had been hospitalized an average of eleven months, were
administered the Tennessee Self Concept Scale and the Personality
Factor Questionnaire prior to a 30-day survival training course. Upon
completion of their course, the participants were again given the same
test, with history follow-up examinations conducted between sixteen
to 28 months after the course.

Adams concluded that:

...improved self-esteem, feelings of physical adequacy,
reduced general maladjustment, and less personality
disorder. Subjects gained greater enthusiasm, increased
ego strength and self-reliance, adaptability, and tranquility.
Of thirty-eight measured variables, only one failed to
change in a positive direction. Additional findings have
since reinforced the feasibility of adapting non-
professional intervention methods to assist the emotionally
disturbed through a survival experience. Empirical support
for previous findings of self-concept in emotional
disturbance was also found (Adams via Robbins, 1976).

Rhinecliff High School is a residential school for students with
emotional and drug-related problems. Students live on the Holy Cross
Campus in upstate New York and are required to be in residence for a
minimum of eighteen months after detoxification. They are typically
referred to the campus through the courts, various
agencies/institutions or voluntary placement. In the summer of 1974,
Rhinecliff students took part in an outdoor education pilot program.
The major objectives of the project were academic growth, enhanced
self-concepts, and a reduction of antisocial tendencies through seven-week modular programs of one-week courses including: camping, horsemanship, photography, and academic-core subjects. All courses had outdoor-oriented activities and included work projects such as constructing a log cabin, clearing trails, and building wooden walkways through a swamp.

Pre/post Wide Range Achievement Test (WRAT) scores were used to measure achievement in reading, spelling and math skills, while students and staff were interviewed to garner insights as to the students' adjustments. Using the Bond-Singer historical regression analysis, comparisons were made which looked at achievement growth with growth which would have been anticipated on the basis of the students' previous achievement prior to the implementation of any special program. WRAT scores exceeded the anticipated test scores for students in grades nine, ten and eleven in reading, spelling, and math, while the twelfth grade (N=2) scores were less than anticipated.

The students' self-concept, attitudes toward school and the learning process were assessed with a pre/post test administration of the What Do You Think Rating Scale (AQE 1). The AQE 1 is a self-reporting device which examines self-concept, physical self-perceptions, social-ethical and psychosexual self-perceptions, attitude towards school, and perceptions of self and their teachers. Analysis of the data indicated favorable post test scores, though no differences were determined to be statistically significant. The Teacher Rating Scale (AQE II) is a teacher rating of the students' adjustments, and is intended to examine the same criteria as the AQE I from a different
perspective. Students in the outdoor program obtained more positive ratings from the teachers in all five sections of the AQE II in the post test scores (Rigothi, 1974).

Porter (1975) used an experimental design when examining the effects of an eight-day camping program on emotionally disturbed youth. Twenty students who did not take part in the program were used as the control. Using instruments of self-concept and behavior change, Porter found that the experimental group was significantly higher in self-control and social acceptance than the control group. Six weeks following the program, the experimental group showed significantly higher scores on self-concept, social acceptance, self-control, and anxiety than the control group (Granek, 1981).

**Problems In Adventure Education Research**

Despite laudable claims, problems in research designs and techniques have led many to question to what extent change can be attributed to outdoor adventure activities for individuals and groups. The most common charges against objective data in adventure education research are that it lacks control groups for comparison, researchers often examine too few subjects, and they use weak measures in testing strategies (McBride, 1984; Young, 1981; Ewert, 1983). Others report problems of inadequate analysis of data and follow-up studies (Rife, 1984). Allen (1982) suggests that self-selected groups seriously limits generalizing research findings to
other populations, because of the nature of those who chose to participate in perceived risk activities.

Recidivism studies have suffered from several problems including: lack of uniform definition and interpretation of recidivism, varying lengths of study time, different follow-up periods, laws of the states/provinces differ for return to institutionalized settings, the severity of the crimes are not differentiated, and assumptions are based on post-experience judicial findings. Project DARE was responsible for five of six studies on recidivism which were found to have shortcomings. Key issues in establishing alternative evaluation measures lie with demonstration of personal growth and social and physical functioning in a program that is replicable. Needed are target behaviors, processes of acquiring new skills/attitudes, logical reasons why it should work, desired outcomes and expected duration of the effect, and expected level of success (Cardwell, 1978).

Despite its shortcomings, the preponderance of research studies indicate adventure challenge programs have a variety of positive impacts on the individuals and groups who participate in them.

Summary

Research literature supports the belief that adventure challenge activities are enhancing to groups and individuals. Models relevant to adventure learning are presented.
Adventure challenge studies are examined which relate to educational programs including: academic achievement, special populations and drop-out prevention. Studies are discussed which utilize outdoor adventure activities for therapeutic purposes with delinquent youth and emotionally impaired students.

Common problems associated with research in adventure education are presented as well.
CHAPTER III

METHODS

The Traverse Bay Area Intermediate School District (TBA-ISD) serves sixteen local school districts in a five-county area in northwest-lower Michigan. The Traverse City Area Public Schools (TCAPS) is the largest member of TBA-ISD, accounting for nearly half of the 21,604 public school students within the TBA-ISD.

TCAPS' Bay Area Adventure School (BAAS) is a regional center for experiential learning, offering outdoor adventure activities for purposes of environmental awareness, personal growth, physical development, and enhanced group interactions. BAAS has provided programs for a number of groups throughout the state and region, including nearly all of the school districts in the TBA-ISD.

Population

In the Fall of 1987, TBA-ISD E.I. programs contracted with the Bay Area Adventure School to lead adventure outings for the purpose of helping students “understand and manage their own behavior.
enhance their self-esteem, develop independence and to gain expertise in a variety of leisure pursuits." TBA-ISD's E.I. programs include New Campus and Center Programs, which serve students who, because of their severe emotional impairments, cannot be educated in their local schools. New Campus and Center Programs represent an organizational plan to serve emotionally impaired populations needing treatment capabilities beyond those available through the local schools, yet not demanding placement in a 24-hour facility.

The following continuum represents an organizational chart for placement of emotionally impaired students, with the TBA-ISD programs represented in bold script:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[Reg. Ed.] [soc. work support]</td>
<td>room</td>
<td>classroom</td>
<td>Center Prog.</td>
<td>Campus</td>
<td>facility</td>
</tr>
</tbody>
</table>

Figure 3
TBA-ISD's E.I. Students Organizational Continuum

Students who attend New Campus and Center Programs meet the state requirements for special education programs and are defined as emotionally impaired (see Appendix B). New Campus and Center Program students generally reflect the normal population in cognitive abilities, but due to major disturbances of environment, their abilities and skills are not fully developed. Students' behaviors are usually counterproductive to acquiring basic academic, vocational, and physical skills or developing trusting relationships. Students'
noncomplying behaviors are often reinforced by those around them, as they are able to obtain desired results through inappropriate means such as throwing tantrums or making physical threats.

The goal for the TBA-ISD E.I. programs is to get students functioning at a level which allows them to attend regular classrooms in their home school district.

Participants/Subjects

The subjects of this study are upper elementary, junior high and high school students placed in the Traverse Bay Area Intermediate School District's New Campus and Center Programs. Early elementary students were omitted from this study because the outdoor component developed for that level revolves primarily around environmental education and is considerably different than those activities presented to the rest of the TBA-ISD E.I. programs.

Specific measures examined various populations including:

The Behavior Evaluation Scale (BES) data included New Campus students for which pre and post assessments had been taken in the 1986-87, 1987-88, and the 1988-89 school year.

The BES subscale Interpersonal Difficulties component was used to evaluate all New Campus and Center Program students who attended the 1990 winter and/or spring outings.

Interviews were conducted with all New Campus late elementary, junior high, and high school students who attended
school on the day their class was scheduled to be interviewed in the Spring of 1989. Staff interviews were also conducted at that time.

Questionnaires were completed by all New Campus and Center Program teachers, the New Campus junior high classroom, as well as the Center Program junior high and Center Program senior high students.

Curriculum ratings were completed by New Campus staff, while the Needs Priority Assessment was completed by New Campus and Center Program staff.

Table 1 gives information regarding the number of participants and the dates various measures were taken.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Population</th>
<th>N</th>
<th>Measure Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>BES</td>
<td>NC students</td>
<td>16</td>
<td>1986-87</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21</td>
<td>1987-88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22</td>
<td>1988-89</td>
</tr>
<tr>
<td>BES Subscale</td>
<td>NC &amp; CP</td>
<td>35</td>
<td>Winter 1990</td>
</tr>
<tr>
<td>Interviews</td>
<td>students</td>
<td>29</td>
<td>Spring 1990</td>
</tr>
<tr>
<td>Inter. Difficulties</td>
<td>NC Students</td>
<td>20</td>
<td>Spring 1989</td>
</tr>
<tr>
<td>Interviews</td>
<td>NC Staff</td>
<td>6</td>
<td>Spring 1989</td>
</tr>
<tr>
<td>Questionnaires</td>
<td>NC/CP Teachers</td>
<td>6</td>
<td>Spring 1990</td>
</tr>
<tr>
<td>Curriculum Ratings</td>
<td>NCJH, JH-HS CP</td>
<td>23</td>
<td>Spring 1990</td>
</tr>
<tr>
<td>Needs Assessment</td>
<td>NC Staff</td>
<td>6</td>
<td>Spring 1989</td>
</tr>
<tr>
<td></td>
<td>NC &amp; CP Staff</td>
<td>11</td>
<td>Spring 1989</td>
</tr>
</tbody>
</table>

NC= New Campus
CP= Center Program
JH= Junior High
SH= Senior High
Students= Upper Elementary, Junior High and Senior High
The TBA-ISD emotionally impaired program's handbook defines the characteristics of its students as follows:

The majority of our students have been emotionally, physically, and/or sexually abused, and come from socially inadequate, fragmented family backgrounds...and have a history of involvement with the courts and other social agencies. Many of our students have experienced numerous changes in their home placements, ranging from foster care to residential treatment centers (TBA-ISD Handbook, 1989).

Many of these students must learn to cope with their environment rather than expecting it to become less harsh. Most have deprived backgrounds including: substandard housing, inadequate family income, fragmented family relationships, as well as physical, mental and sexual abuses.

Treatment Given to Subjects

The TBA-ISD E.I. outdoor program has used several outdoor pursuit activities since its inception in the fall of 1987 including: ropes course, initiatives and 45-foot climbing wall; canoeing; backpacking; camping; cross-country skiing; and whitewater rafting. Supplemental components such as environmental education, orienteering and fishing were often incorporated into the various outings. An extensive curriculum guide was developed by TBA-ISD E.I. supervisor and psychologist and the BAAS supervisor. This guide was
created to assist teachers by outlining goals for the outdoor program, as well as providing lesson plans for specific skill acquisition learning objectives. It was felt that if a complete resource were made available to teachers, they would be more inclined to treat the outdoor component as they do other academic programs within the New Campus and Center Programs’ curriculum. Outdoor program curriculum components included: basic first aid, ropes and initiatives guide, camp living, canoeing, backpacking, cross-country skiing, classroom initiatives, as well as articles pertaining to outdoor/adventure education.

Outings varied between one-day sessions at Camp Buffalo Springs, home of the Bay Area Adventure School, to a five-day trip through Michigan’s Upper Peninsula and northeast Wisconsin. In the 1987-88 and the 1988-89 school years, program outings consisted of a total of nine days throughout the school year. At the request of teachers and staff, an additional day of initiative and ropes course activities was included in the 1989-90 schedule. Further differences between program years include spending winter overnights in a lodge versus in tents, as well as changing fall trips from two- to three-day and winter trips from three- to two-day outings. The difference in the number of program days between 1989-90 and the previous years of programing was not examined in this study.

The Bay Area Adventure School assigned one primary staff member to each TBA-ISD emotionally impaired program’s outings. Their functions included teaching outdoor skills, insuring proper use of the resource base and equipment, providing assistance with
discipline and logistical considerations, and, along with the teachers and counselors, giving meaning to the activities through debriefing exercises. The same instructor was assigned to most TBA-ISD emotionally impaired outings since the program was implemented. This instructor spent over ninety days each school year working exclusively with New Campus and Center Programs students and staff. It is fair to state that he was considered an important member of their "team." This individual met with each classroom and teacher for pre-trip planning and submitted post-activity evaluations to TBA-ISD and BAAS administrators.

As TBA-ISD staff gained experience in providing outdoor learning opportunities for their students, they assumed a more active role in teaching outdoor skills. Further, BAAS staff gained insights as to the problems associated with severely emotionally impaired populations, and came to know the needs and idiosyncrasies of individual students. A minimum staff-to-student ratio of 1:3 was established for all outings. Aside from the classroom teachers, aides, and the BAAS staff member, others who led or assisted on trips included: parents, New Campus security specialist, the TBA-ISD supervisor of Emotionally Impaired programs, TBA-ISD psychologist and social workers, and the BAAS supervisor.
The Behavior Evaluation Scale (BES) was developed by Stephen McCarney, James Leigh, and Jane Cornbleet for Educational Services, in response to "numerous requests from school personnel who were experiencing difficulty in reaching and documenting decisions regarding diagnosis, placement, and programming for children and adolescents with behavioral disorders/emotional disturbances" (McCarney et al., 1983).

In his review of the BES, Jeffrey Grill indicates the instrument provides:

a simple-to-use, yet sophisticated and carefully developed tool for screening, evaluating, or charting the progress of students in grades K through 12 who are suspected of being behaviorally disordered. Clearly, the BES is state-of-the-art instrumentation. Based on its careful development, both its wide applicability, and its reliability and validity, the BES should become the instrument of choice for those who evaluate children's classroom behavior (Mitchell, 1985).

The BES consists of 52 descriptive statements, which are assigned values ranging from 1, "never or not observed," to 7, "continuously throughout the day." Five subscale ratings which represent characteristics of seriously emotionally disturbed students were developed including: Learning Problems, Interpersonal Difficulties, Inappropriate Behaviors, Unhappiness/Depression, and Physical Symptoms/Fear. A weighting system, ranging from 1 to 3, was designed which is based on the severity and intensity of each subscale item. Raw scores are then translated into a standard score.
Behavior quotients represent a composite of the standard scores from the five subscales, which are converted to a sum quotient provided in the test packet. The Behavior Quotient represents an index of students' behavior in all the areas measured in the total scale. A mean of 100 with a standard deviation of 15 (85-115) is considered to be statistically average. The degree of concern generally increases as the Behavioral Quotient decreases, with scores less than 70 representing extreme statistical deviance.

The authors contend that "three levels of analysis are possible when interpreting results of the BES: total score analysis, subscale profile analysis, and item analysis." Further they indicate that subscale raw scores, when converted into standard scores, establish "a clear and consistent basis for making comparisons." Standard scores from 7 through 13 are considered to be statistically average. Scores less than 7 indicate the student exhibits negative or inappropriate behaviors frequently enough to cause concern. Standard scores less than 4 represents extreme statistical deviance. Subscale data is used in this study as a pre and post activity measure.

Norms for the BES are based on a sample of 311 teachers who rated 1,018 randomly selected students from ten states who approximated national demographic characteristics. Test-retest reliability is reported at .97 or greater for each subscale. Internal consistency coefficients are all reported to exceed .80 except Unhappiness/Depression (.76) and Physical Symptoms/Fear (.77). In validating the BES, the authors judge content validity to be evident because of careful selection of the items and field testing. Criterion-
related validity was demonstrated through using the BES with the Behavior Rating Profile, reporting a statistically significant (.64) correlation. Construct validity (at the p< .001) was derived for the subscales, when the sample was compared to 49 randomly selected students from a normative group.

The BES takes ten to twenty minutes to administer per student, and is based upon teacher observations obtained from daily classroom contact. The instrument is easy to score and provides clear objective items which result in reliable and valid data. The BES provides a valuable tool for gathering information to help determine a course of action for emotionally impaired students and for research purposes.

Procedures

The TBA-ISD E.I. psychologist, the TBA-ISD E.I. program's supervisor and the BAAS supervisor meet monthly to discuss the Outdoor Education program. Meetings focus on problems, successes, concerns, budget, and future program considerations. At one of these meetings it was determined that an examination of BES scores would provide insights as to the relationship between the outdoor program and behavior change in New Campus students.

Since its inception, the Leelanau/Grand Traverse Community Mental Health has conducted three assessments on New Campus Students at the beginning and end of each school year: the Behavior Evaluation Scale (BES), the Child and Adolescent Adjustment Profile (CAAP), and the Self Evaluation Scale (SES). Of these three measures,
TBA-ISD administrators recommended the BES be used as the indicator of changes in students' behavior for reasons which include:

- The BES is a standardized student behavior rating, as observed by their teachers.
- The New Campus teachers are trained professionals accustomed to the evaluation process.
- Class size is small (8-10 students), allowing for daily observation over a long period of time.
- The CAAP and the SES are parent and student instruments. In many cases, these evaluations have never been completed nor have they been returned to New Campus.

A teacher priority ranking (Title 1 Needs Assessment) and a staff curriculum rating provide additional indicators which give further information as to the perceived value of the program's effectiveness. It was determined that further measures could be used to gain a better understanding of the program's effectiveness. This was seen as useful in that information could be used for grant requests. Also, information gleaned from the evaluations can be used not only to enhance the TBA-ISD E.I. Program, but could also provide valuable information for others developing adventure-challenge programs for severely emotionally impaired adolescents.

In an article presented to Parks and Recreation, Ewert (1985) offered several recommendations for future research efforts in Adventure Education. Paramount to his discussion was a call for better
communications between practitioners and researchers. This would allow practitioners to be in a position to have some control in the research process while allowing researchers to gain access to research topics. Specific recommendations included:

- Use of triangulation techniques.
- Utilize new measuring devices.
- Formulate cooperative effort between practitioners and evaluators.
- Integrate research findings with practitioner orientations.
- Greater use of qualitative methods.

These items were considered when a formal evaluation plan was being developed for the TBA-ISD E.I. Programs. Implementation of the plan began during the 1988-89 school year, when BES scores were examined and interviews conducted. In effort to acquire a more significant understanding as to the outdoor program's role, the BES subscale Interpersonal Difficulties was used as a pre and post activity assessment during the 1989-90 school year. Responses to a questionnaire were also gathered in the spring of that year. It was expected that by gathering multiple quantitative and qualitative data a truer picture of the outdoor program's effectiveness would result.

**BES Assessments**

Expost facto research design represents a "naturally occurring experiment." For example, an investigation might look for a
relationship between smokers versus non-smokers and the incidence of lung cancer. Researchers propose explanations of phenomena by examining varying outcomes (dependent variables) of intact groups which have sought out various levels of an independent variable. Findings usually measure the relationship between the dependent variable and the independent variable(s) which have been hypothesized as factors explaining the variabilities of the outcome. Expost facto methods are appropriate for this study, as a naturally occurring experiment took place which gave an indication as to the effectiveness of the outdoor program in modifying behavior in New Campus students.

New Campus was formed in 1986 and initiated programming with BAAS the following year. Since 1986 New Campus has provided several therapeutic services including: Music Therapy, Art Therapy, Individual Counseling, and Group Counseling. Behavior Evaluation Scale scores recorded from New Campus' first year (1986-87) serve as a comparison to subsequent years' scores. Independent one-way analysis of variance (ANOVA) procedures were performed to determine the level of significance (p>.05) on any change in the data.

**BES Subscale Interpersonal Difficulties Assessments**

Recognizing the potential benefits derived from gathering information about the outdoor program, the TBA-ISD E.I. psychologist and supervisor asked teachers to conduct pre and post activity
assessments on their students, using the BES subscale Interpersonal Difficulties. As indicated in the earlier discussion regarding use of the BES, subscale profile analysis provides "a clear and consistent basis for making comparisons." Scores were obtained for both New Campus and Center Program classrooms. Assessments were taken for both the winter and spring outings one week prior to the outdoor experience. Post activity data was collected two days after the experiences. Fall trips were omitted from evaluation as there was inadequate time to pre-test some students before their first outing.

Qualitative Measures

Interviews and questionnaires were used to gain insights as to student and staff perceptions of the outdoor program. These complementary methods were used together so that they could be examined for consistencies in responses, which enhances the quality of the information derived from these measures.

Interviews

Interviews were conducted with New Campus students and staff who had participated in the outdoor program. Interviews were used to gain understandings of participants' perceptions as to the effects of the outdoor program. Unstructured interview techniques are thought to be most appropriate for gaining insights into individual perceptions and for debriefing purposes (Guba, 1981). Interviewers represent a neutral medium through which questions and answers are
transmitted. The interviewer made every attempt not to influence the respondents' answers with his personal biases.

Interviews were scheduled in one-half hour blocks, and included perceptive exchanges between the interviewer and the participants. The interviews were conducted the last week of May and the first week of June of 1989 at New Campus. Twenty students representing the three levels (upper elementary = 8, junior high = 7, high school = 5) were interviewed. Three teachers, two teacher's aides, and the security specialist were interviewed as well (staff = 6). Interviewees were asked if the process could be tape recorded so that interviews could be transcribed and recurring themes examined. All participants consented to allowing the interview to be recorded.

The content of the interview guides was critiqued by New Campus administrators and BAAS staff before interviews were conducted in effort to weed out inappropriate or useless questions. Practice interviews were conducted to develop a natural conversational tone in the interview process. The interviewer wore casual clothing, similar to what the respondents typically wore.

Interviews sought answers to the following questions:

- Would the participants continue to include the outdoor program as a part of the New Campus curriculum?
- What were the most and least favorite programs of the participants?
- What changes would participants make to the outdoor program?
- What have the participants gained or learned because of the outdoor program?
• Do the participants expect to participate in outdoor activities as adults?

Interview questions were phrased in such a way as to obtain the desired information in a consistent manner for the entire set of interviews.

Because the nature of the interview solicited open-ended responses, a tape recorder was used to clarify and record the respondents' answers for coding purposes. In some cases the respondents had problems articulating verbal responses. In this situation the interviewer noted gestures or tones which were felt to help in interpreting the intent of the response, though the transcripts used for coding purposes were exact responses. When answers were inappropriate, the interviewer asked the question again in the original manner. When no appropriate response could be elicited, it was coded as such.

The interviewer obtained an elaboration when necessary by using a variety of probes, such as: "In what ways did it affect you?" "What do you mean by 'pretty cool'?" "Anything else?" or by remaining silent and waiting for elaboration. The interviewer used neutral probes so as not to affect the nature of the subsequent response. As a probe was used it was noted on the interview sheet. The same probe would be used in other interviews in effort to maintain consistency in the interview process.

Interviews were analyzed individually, and then integrated into the larger set of interviews. Transcripts and notes were examined for
communalities which appeared to be consistent between the subjects' responses. Recurring messages from participants were deemed the most significant phenomena to the subjects. For example, fourteen of the twenty subjects interviewed expressed that the outdoor program enhanced their outdoor skill level. As this response was the most repeated, it is deemed the most valuable component of the outdoor program, as viewed by students. On the other hand, six students indicated the program gave them insights which were interpreted as enhancing to personal growth, thus this component is considered to be of lesser value to the participants.

**Questionnaires**

Questionnaires were developed by the TBA-ISD E.I. psychologist to further examine participants' perceptions of the effects on the outdoor program. Teachers were requested to have students complete questionnaires at the end of the school year. They were also requested to complete one themselves. All the responses were to be turned in to the TBA-ISD supervisor no later than June 6, 1990. Specific questions include:

- I feel more self confident as a result of outdoor education.
- I feel I am more able to work more cooperatively in a group as a result of outdoor education.
- I feel more comfortable in the out-of-doors as a result of outdoor education.
- I feel better about my teacher as a result of outdoor education.
• I feel better about my class as a result of outdoor education.
• I feel I want to do more outdoor education activities.
• I feel better about myself as a result of outdoor education.

New Campus and Center Program teachers and students were asked to respond to questions by placing a mark along a 6.5-inch line which most closely identified their feelings about the effectiveness of the outdoor program. A score marked at the left end of the continuum received a score of 0, indicating "a great deal more," while a mark at the right side of the continuum, at 6.5 inches, indicated "not at all." Values were labeled "much more" at 2.25 inches and "a little more" at 4.25 inches. Responses were measured with a ruler and comparisons were made between various subgroups.

**Additional Sources of Information**

Other information was gathered which gives additional insights as to the role and effectiveness of the New Campus and Center Program's adventure education program.

**Staff Curriculum Survey**

A survey asked New Campus teachers and aides to rate ten components which could impact their students' personal and social growth. A continuum line was drawn for each of the ten categories with rankings of each component which ranged from "no help" to "some benefit" to "great benefit." The staff was then asked to place a
mark along the continuum which most closely identified their perceptions as to the impact each component had upon their students. The components included: Academic/Classroom Programs, Art Therapy, Computer Education, Family Environment, Group Counseling, Individual Counseling, Music Therapy, Outdoor Programs, Peer Influence, and Vocational Education.

Continuum lines were five inches long. Scores were measured by placing a ruler under each of the marks and assigning the item’s value in accordance to its point on the continuum. For example, a teacher feels that Group Counseling assists his students somewhere between “some benefit” (2.5 inches on the continuum line) and “great benefit” (5 inches on the continuum line), and thus marks the line accordingly. As the investigator tallies the score, a ruler is placed under the Group Counseling line which indicates the mark is 3.75 inches along the continuum. The value of that component then is scored at 3.75. This method allows for a more concise interpretation of the data, yet offers a relatively simple scoring procedure. Responses are then tallied and divided by the number of teachers and aides to derive a mean score. The higher the score, the greater the perceived benefit of the component to New Campus students as rated by classroom teachers and aides.

Title 1 Needs Assessment

In the Spring of 1989 the New Campus Director asked staff members to prioritize needs assessments for state Chapter I funds for the following school year. The categories of this assessment included:
Computer Hardware, Outdoor Education, Driver's Training, Art Instruction, Music Instruction, Student Activities, Professional Staff Conferences, Conferences for Aides, Local Inservices, Supplemental Supplies/Materials, Security Specialist, and Other. Options were numbered with one (1) being the highest priority and then returned to the Director. Total scores were divided by the number of responses to derive a mean score. The lower the score, the higher priority it held for Chapter 1 monies by New Campus professional staff members.

**Summary**

Adventure challenge activities, when used to modify individual behaviors, are said to be an effective agent of change. As the field of adventure education continues to develop, professionals need to gain new understandings as to what course might be prescribed in order to obtain a desired end. The purpose of this study is to investigate the relationships which may exist between adventure challenge activities and behavioral changes in severely emotionally impaired students. The further intent of this work is to explore possible avenues, within adventure-based programming, which may be factors on the impact of program implementation.

Qualitative and quantitative research methods are used in this study in effort to give a clearer understanding as to the scope and meaning of behavioral changes in severely emotionally impaired students.
CHAPTER IV
ANALYSIS AND DISCUSSION OF THE DATA

Data regarding the Traverse Bay Area Intermediate School District's (TBA-ISD) New Campus and Center Programs' effectiveness in the treatment of emotionally impaired students has been gathered since the programs were instituted in the 1986-87 school year. The effects of these programs have been examined by Grand Traverse/Leelanau Community Mental Health (CMH), a TBA-ISD psychologist, the New Campus and Center Program supervisor, and by the supervisor of the Traverse City Area Public Schools Bay Area Adventure School. Some measures have been specific in their endeavor to understand the role of outdoor programming in influencing students' behavior, while some insights regarding the effectiveness of the outdoor program have been gleaned from measures which were used to evaluate the overall New Campus program.

Data for this study were collected between the 1986 and 1990 school years. Quantitative measures include an examination of the Behavior Evaluation Scale (BES) scores collected for New Campus
students at the beginning and the end of each school year since 1986. During the 1989-90 school year, a subscale of the BES was also administered before and after the winter and spring outdoor experiences by New Campus and Center Program classroom teachers.

Qualitative measures include interviews and questionnaires. Interviews were conducted with New Campus staff and students during the spring of 1989. Questionnaires were completed by students and teachers from New Campus and Center Programs at the conclusion of the 1988-89 school year.

Staff curriculum effectiveness ratings and a teacher priority ranking on how state Chapter 1 funds should be spent are also presented.

Research Questions:

1) Will there be a significant change in pre and post scores for New Campus students, as measured by the Behavior Evaluation Scale, between years in which outdoor programs were a part of the curriculum and years when it was not?

2) Will there be a significant difference between pre and post test scores for New Campus and Center Program students, as measured by the BES subscale Interpersonal Difficulties, before and after their winter outdoor experience?
3) Will there be a significant difference between pre and post test scores for New Campus and Center Program students, as measured by the BES subscale Interpersonal Difficulties, before and after their spring outdoor experience?

4) What are students' and staffs' perceptions of the outdoor program, as gleaned from participant interviews?

5) What are students' and teachers' perceptions of the outdoor program, as indicated in questionnaires?

Quantitative Measures

Behavior Evaluation Scale Pre and Post Test Data

Grand Traverse/Leelanau Community Mental Health researchers began collecting BES data on New Campus students when the program began in 1986. With the exception of the outdoor program, all other treatment and curriculum components were in place during the first year. In the 1987-88 school year, the outdoor program was introduced. Comparing 1986-87 BES scores to subsequent years gives indications that the outdoor program may have a role in modifying students' behaviors (see Table 2).
Table 2
Mean Pre and Post BES Scores for New Campus Students

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>pre test mean</th>
<th>post test mean</th>
<th>change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986-87*</td>
<td>16</td>
<td>75.125</td>
<td>73.375</td>
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</tr>
<tr>
<td>1987-88</td>
<td>21</td>
<td>67.238</td>
<td>70.429</td>
<td>+3.191</td>
</tr>
<tr>
<td>1988-89</td>
<td>22</td>
<td>65.182</td>
<td>70.273</td>
<td>+5.091</td>
</tr>
</tbody>
</table>

*no outdoor program for this school year

Pre and post BES mean scores were examined and subgroups were compared which include male and female, as well as class levels: upper elementary (grades 4-12), junior high (grades 7-9), and high school (grades 10-12).

Scores were obtained for sixteen New Campus students in the 1986-87 school year which indicated an overall decrease from pre to post BES measures, falling from a mean score of 75.125 to 73.375. Two subgroups showed a slight increase in BES scores including girls (N=3), which improved from 69 to 73.33, and high school students (N=10), with a slight 77 to 77.5 increase.

The 1987-88 school year (N=21) shows a difference in pre and post mean scores rising from 67.238 to 70.429, with each subgroup reporting raised scores. The outdoor program was initiated in the fall of this year.

The largest increase was measured in BES scores in the 1988-89 school year (N=22), growing from a mean score of 65.182 to 70.273. The high school students showed a slight decline in 88-89, from 70.125 to 70.00. All other groups measured positive growth on
the BES. Pre test scores for this year were at their lowest, nearly ten points below those of 1986-87.

Figure 4 illustrates the mean scores, standard deviation and test dates of the groups. Table 3 presents subgroup data.

![Mean Scores and Standard Deviation for New Campus BES Scores](image)

**Figure 4**
Mean Scores and Standard Deviation for New Campus BES Scores
Table 3
Mean of Pre and Post BES Scores
Comparing Grade Levels and Gender

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Pre Test X</th>
<th>Post Test X</th>
<th>Difference</th>
</tr>
</thead>
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<tr>
<td><strong>High School</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986-87*</td>
<td>10</td>
<td>77 (15.535)</td>
<td>77.5 (15.087)</td>
<td>+.5</td>
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<tr>
<td>1987-88</td>
<td>11</td>
<td>70.727 (21.55)</td>
<td>73.455 (17.143)</td>
<td>+2.728</td>
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<tr>
<td>1988-89</td>
<td>8</td>
<td>70.125 (10.426)</td>
<td>70.00 (8.718)</td>
<td>-.125</td>
</tr>
<tr>
<td><strong>Junior High</strong></td>
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<td></td>
</tr>
<tr>
<td>1986-87*</td>
<td>1</td>
<td>83 (n/a)</td>
<td>75 (n/a)</td>
<td>-8.0</td>
</tr>
<tr>
<td>1987-88</td>
<td>3</td>
<td>57.667 (14.012)</td>
<td>63.333 (12.858)</td>
<td>+5.666</td>
</tr>
<tr>
<td>1988-89</td>
<td>6</td>
<td>61.333 (8.066)</td>
<td>74 (10.621)</td>
<td>+12.667</td>
</tr>
<tr>
<td><strong>Upper Elementary</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986-87*</td>
<td>5</td>
<td>69.8 (7.497)</td>
<td>64.8 (8.758)</td>
<td>-5.0</td>
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<tr>
<td>1987-88</td>
<td>7</td>
<td>65.857 (15.159)</td>
<td>68.714 (15.381)</td>
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<td>1989-90</td>
<td>8</td>
<td>63.125 (11.37)</td>
<td>67.75 (9.004)</td>
<td>+4.625</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986-87*</td>
<td>3</td>
<td>69 (8.888)</td>
<td>73.333 (9.866)</td>
<td>+4.333</td>
</tr>
<tr>
<td>1987-88</td>
<td>5</td>
<td>67.6 (9.127)</td>
<td>69.6 (2.608)</td>
<td>+2.0</td>
</tr>
<tr>
<td>1988-89</td>
<td>4</td>
<td>67.25 (6.076)</td>
<td>71 (11.747)</td>
<td>+3.75</td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986-87*</td>
<td>13</td>
<td>76.538 (13.962)</td>
<td>73.385 (15.003)</td>
<td>-3.153</td>
</tr>
<tr>
<td>1987-88</td>
<td>16</td>
<td>67.125 (20.823)</td>
<td>70.688 (18.128)</td>
<td>+3.563</td>
</tr>
<tr>
<td>1988-89</td>
<td>18</td>
<td>64.722 (11.318)</td>
<td>70.111 (9.016)</td>
<td>+5.389</td>
</tr>
</tbody>
</table>

() = Standard Deviation
* There was no outdoor program in the 1986-87 school year.
** Mean normative sample BES scores are reported by the test authors to be 100 with a standard deviation of 15.
Recognizing the number of influences which could impact upon BES scores, TBA-ISD administrators and psychologist asked teachers to conduct pre and post activity assessments using the BES subscale Interpersonal Difficulties. Scores were obtained from New Campus and Center Program classrooms for the winter and spring outings of 1990.

The three-day winter outings focused on cross-country skiing, with additional activities of ice fishing, shelter building, winter camping, snowshoeing, environmental education, clogging (dancing), and sledding. The primary spring activity was a three-day canoe trip. At the request of several students and teachers, additional climbing wall and high ropes experiences were added.

TBA-ISD administrators requested teachers to evaluate each of their students using the BES subscale “Interpersonal Difficulties” one week prior to the outdoor experience, and within two days after the winter and spring outings. Fall trips were omitted from evaluation as there was inadequate time to pre test some students before their first outing. As indicated in Chapter 3, BES subscale profile analysis standard scores are appropriately “used for documenting behavioral areas of strength and concern for students” and are appropriate for research purposes.

Figure 5 illustrates the grand mean BES subscale “Interpersonal Difficulties” scores for New Campus and Center Program students recorded in the winter and spring of 1990.
Pre and Post BES Subscale Standard Scores

Figure 5
Pre and Post BES Subscale Standard Scores
Figure 6 represents the mean and the standard deviation of individual Interpersonal Difficulties scores.

There was no post test follow-up of the Center Program junior high group's winter outing; thus they were omitted from the data analysis of that trip. There also was no pre test assessment for the New Campus junior high classroom's spring outing; thus, they have been excluded from that analysis.

Of the ten outings in which pre and post assessments were administered, nine groups measured growth on the BES subscale Interpersonal Difficulties. The remaining group consisted of only two
members (see description of the population). When analyzing pre and post trip scores, the winter group (N=35) showed an increased mean of 1.783. The spring outing (N=29) yielded a similar increase of 1.586.

Table 4 indicates BES subscale mean scores and standard deviation for the various grade levels.

Table 4
New Campus and Center Program Pre and Post Subscale Data

<table>
<thead>
<tr>
<th></th>
<th>Winter Pre</th>
<th>Winter Post</th>
<th>N</th>
<th>Spring Pre</th>
<th>Spring Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.514</td>
<td>7.257</td>
<td>29</td>
<td>5.621</td>
<td>7.207</td>
</tr>
<tr>
<td></td>
<td>(2.005)</td>
<td>(1.755)</td>
<td></td>
<td>(1.916)</td>
<td>(1.612)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Winter Pre</th>
<th>Winter Post</th>
<th>N</th>
<th>Spring Pre</th>
<th>Spring Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5.25</td>
<td>7.5</td>
<td>7</td>
<td>6.714</td>
<td>7.571</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.053)</td>
<td>(1.69)</td>
<td></td>
<td>(2.289)</td>
<td>(1.512)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.333</td>
<td>8.667</td>
<td>2</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.528)</td>
<td>(2.082)</td>
<td></td>
<td>(.707)</td>
<td>(.707)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Winter Pre</th>
<th>Winter Post</th>
<th>N</th>
<th>Spring Pre</th>
<th>Spring Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5.428</td>
<td>5.571</td>
<td>7</td>
<td>no pre test</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.512)</td>
<td>(1.902)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Winter Pre</th>
<th>Winter Post</th>
<th>N</th>
<th>Spring Pre</th>
<th>Spring Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>6.857</td>
<td>7.0</td>
<td>5</td>
<td>5.2</td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.952)</td>
<td>(1.414)</td>
<td></td>
<td>(.837)</td>
<td>(2.387)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.3</td>
<td>8.0</td>
<td>5</td>
<td>4.0</td>
<td>7.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.767)</td>
<td>(1.054)</td>
<td></td>
<td>(2.236)</td>
<td>(1.304)</td>
</tr>
</tbody>
</table>

* NC = New Campus; CP = Center Program.

** BES subscale Standard Scores have a mean of 10 with a standard deviation of 3, as derived from a normative sample (see methods).
Analysis of Variance

Independent one-way analysis of variance (ANOVA) procedures were used to determine the differences in pre and post mean BES scores between 1986 and 1989 for New Campus students. Because of group size, no ANOVA was performed between the various class levels or gender. Table 4 indicates a significant difference between pre and post test scores at the .05 level.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F-ratio</th>
<th>F-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Group</td>
<td>801.68</td>
<td>1</td>
<td>801.68</td>
<td>5.024</td>
<td>.05=4.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.01=7.08</td>
</tr>
<tr>
<td>Within Group</td>
<td>9095.20</td>
<td>57</td>
<td>159.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Group</td>
<td>9896.88</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An ANOVA was performed on the change in subscale scores from pre test to post test before winter and spring outings with New Campus and Center Program students. There was a significant difference at the .05 and the more stringent .01 level, as indicated in tables 6 and 7.
### Table 6
**Winter Outing**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F-ratio</th>
<th>F-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Group</td>
<td>53.16</td>
<td>1</td>
<td>53.16</td>
<td>14.97</td>
<td>.05=3.98</td>
</tr>
<tr>
<td>Within Group</td>
<td>241.43</td>
<td>68</td>
<td>3.55</td>
<td></td>
<td>.01=7.01</td>
</tr>
<tr>
<td>Total Group</td>
<td>294.59</td>
<td>69</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 7
**Spring Outing**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F-ratio</th>
<th>F-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Group</td>
<td>36.48</td>
<td>1</td>
<td>36.48</td>
<td>11.62</td>
<td>.05=4.00</td>
</tr>
<tr>
<td>Within Group</td>
<td>175.59</td>
<td>56</td>
<td>3.14</td>
<td></td>
<td>.01=7.08</td>
</tr>
<tr>
<td>Total Group</td>
<td>212.07</td>
<td>57</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Qualitative Measures

Interviews were conducted with twenty New Campus students and six staff members in the spring of 1988-89. Answers sought from the staff members pertained to their perceptions of the outdoor program's effects on students, while students were asked for their personal impressions. Interviews were recorded and then transcribed so that recurring themes could be extrapolated. Categories were formed from the information gleaned from the interviews.
In the spring of 1990, a TBA-ISD psychologist developed a questionnaire in an attempt to gain a clearer understanding of the role of the outdoor program in modifying behavior in New Campus and Center Program students. All New Campus and Center Program teachers completed the questionnaire (N=6), as did both junior high groups and the Center program senior high students (N=23).

**Student Interviews**

Interviews were conducted in the last week of the 1988-89 school year after the outdoor program had been concluded. Interviews typically lasted between seven and fifteen minutes. Students were asked:

1) Should the outdoor program be continued? To what extent?
2) What were your favorite/least favorite activities?
3) What changes would you make in the program?
4) Have you gained or learned anything because of the outdoor program?
5) Do you expect to participate in these activities into adulthood?

Statements were categorized and tabulated so that a collective group value could be ascribed. The following tables and graphs illustrate how students responded to the questions. (See appendix A-1 for specific statements and their categories).
Question 1—Should the outdoor program be continued?

When asked specifically if the outdoor program should be continued, every New Campus student indicated that the program should be continued, with most indicating they would increase the amount of program involvement.

Table 8
Student Question 1 Responses

<table>
<thead>
<tr>
<th></th>
<th>EL</th>
<th>JH</th>
<th>HS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Question 2—What were your favorite/least favorite activities?

Answers to this question were strongly influenced by discrepancies between the activities of the various groups. For example, only one of the high school students interviewed had participated in a high ropes and initiatives course experience. Upper elementary students participated in low ropes course activities. Further, only high school students went on a whitewater rafting outing.

Of the twenty New Campus students interviewed, eight had participated in a high ropes experience, which made it the favorite activity when examined on the basis of participation. Whitewater rafting was mentioned by two of the three who had participated in that activity. Canoeing was mentioned by eight of the seventeen students
who had taken part that activity. Though all those interviewed had
camped on their outings, only six students indicated a favorite activity
was somehow camp-related.

Table 9
Student Question 2 Favorite Activity Responses

<table>
<thead>
<tr>
<th>Activity</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>=</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canoeing</td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>High/low ropes</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Camping</td>
<td>2</td>
<td>4</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>X-C skiing</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Whitewater rafting</td>
<td>n/a</td>
<td>n/a</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cooking</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Fishing</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Nature study</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Initiatives</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Hiking</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

total statements= 34

Most students indicated no "least favorite" activity. Two of the
younger students indicated that going to bed and sleeping out was
their least favorite part of the program. One student disclosed that he
was afraid in the woods, while another indicated the desire to stay up
later. Two junior high students objected to sledding because there was
no apparent purpose or reason for it. One student indicated it was "no
big deal."
Question 3—What changes would you make in the program?

When asked how they would change the program, older students in particular proposed adding new activities. The list that was developed through this interview process seems to concur with one student's assessment that "us kids like exciting, kind of scary stuff."

Table 10
Student Question 2 Least Favorite Activity Responses

<table>
<thead>
<tr>
<th>Activity</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleeping out/bed</td>
<td>2</td>
</tr>
<tr>
<td>Sledding</td>
<td>2</td>
</tr>
<tr>
<td>Clean up</td>
<td>1</td>
</tr>
<tr>
<td>Bugs</td>
<td>1</td>
</tr>
<tr>
<td>Sunburn</td>
<td>1</td>
</tr>
<tr>
<td>Trust Fall</td>
<td>1</td>
</tr>
<tr>
<td>Backpacking</td>
<td>1</td>
</tr>
<tr>
<td>Canoeing</td>
<td>1</td>
</tr>
</tbody>
</table>

Total statements = 10

Table 11
Student Question 3 Additional Activities Responses

<table>
<thead>
<tr>
<th>Activity</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock/Mt. Climbing</td>
<td>3 2 = 5</td>
</tr>
<tr>
<td>Downhill skiing</td>
<td>1 3 = 4</td>
</tr>
<tr>
<td>More intense/longer trips</td>
<td>4 1 = 4</td>
</tr>
<tr>
<td>Water skiing</td>
<td>2 1 = 3</td>
</tr>
<tr>
<td>Move BAAS to waterfront</td>
<td>1 1 = 1</td>
</tr>
<tr>
<td>Caving</td>
<td>1 1 = 1</td>
</tr>
<tr>
<td>Running/training</td>
<td>1 1 = 1</td>
</tr>
<tr>
<td>Kayaking</td>
<td>1 1 = 1</td>
</tr>
<tr>
<td>Swimming</td>
<td>1 1 = 1</td>
</tr>
<tr>
<td>Drag racing</td>
<td>1 1 = 1</td>
</tr>
<tr>
<td>Boat racing</td>
<td>1 1 = 1</td>
</tr>
<tr>
<td>Go carts</td>
<td>1 1 = 1</td>
</tr>
<tr>
<td>Motorcycle riding</td>
<td>1 1 = 1</td>
</tr>
<tr>
<td>Snowmobiling</td>
<td>1 1 = 1</td>
</tr>
<tr>
<td>Airplane rides</td>
<td>1 1 = 1</td>
</tr>
</tbody>
</table>

Total statements = 27
Rather than adding new activities, many students felt that they would like more participation in existing activities.

Table 12
Student Question 3 Amount of Programming Responses

<table>
<thead>
<tr>
<th>Activity</th>
<th>3</th>
<th>2</th>
<th></th>
<th>= 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-C skiing</td>
<td>3</td>
<td>2</td>
<td></td>
<td>= 5</td>
</tr>
<tr>
<td>Camping</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>= 5</td>
</tr>
<tr>
<td>Canoeing</td>
<td>2</td>
<td></td>
<td>1</td>
<td>= 3</td>
</tr>
<tr>
<td>Whitewater rafting</td>
<td>-</td>
<td>2</td>
<td>1</td>
<td>= 3</td>
</tr>
<tr>
<td>High ropes</td>
<td>n/a</td>
<td>1</td>
<td>1</td>
<td>= 2</td>
</tr>
<tr>
<td>Hiking</td>
<td>1</td>
<td>1</td>
<td></td>
<td>= 2</td>
</tr>
<tr>
<td>Fishing</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>= 2</td>
</tr>
<tr>
<td>Cooking</td>
<td>1</td>
<td>-</td>
<td></td>
<td>= 1</td>
</tr>
<tr>
<td>Initiatives</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>= 1</td>
</tr>
<tr>
<td>Nature Study</td>
<td>-</td>
<td></td>
<td>1</td>
<td>= 1</td>
</tr>
</tbody>
</table>

total statements=25

Only three of the twenty students interviewed indicated they would exclude or do less of specific activities.

Table 13
Student Question 3 Amount of Programming Responses

<table>
<thead>
<tr>
<th>Activity</th>
<th>1</th>
<th>1</th>
<th></th>
<th>= 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snowshoeing</td>
<td>1</td>
<td>1</td>
<td></td>
<td>= 2</td>
</tr>
<tr>
<td>X-C skiing</td>
<td>-</td>
<td>1</td>
<td></td>
<td>= 1</td>
</tr>
<tr>
<td>Canoeing</td>
<td>-</td>
<td>1</td>
<td></td>
<td>= 1</td>
</tr>
<tr>
<td>Backpacking</td>
<td>-</td>
<td>1</td>
<td></td>
<td>= 1</td>
</tr>
</tbody>
</table>

total statements= 5

Question 4—Have you gained or learned anything because of the outdoor program?
The interviews indicated that outdoor skill acquisition was the primary gain perceived by students. More than half the students felt their social skills developed as a result of the outdoor program. Environmental awareness and personal growth were also listed as benefits of the program by New Campus students.

Table 14
Student Question 4 Responses

<table>
<thead>
<tr>
<th></th>
<th>6</th>
<th>5</th>
<th>3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Skills</td>
<td></td>
<td></td>
<td></td>
<td>= 14</td>
</tr>
<tr>
<td>Social Skills</td>
<td></td>
<td></td>
<td></td>
<td>= 11</td>
</tr>
<tr>
<td>Environmental Awareness</td>
<td></td>
<td></td>
<td></td>
<td>= 9</td>
</tr>
<tr>
<td>Personal Growth</td>
<td></td>
<td></td>
<td></td>
<td>= 6</td>
</tr>
</tbody>
</table>

total statements= 40

Question 5—Do you expect to participate in these activities into adulthood?

Students expected to be canoeing, camping and skiing as adults. In a couple of cases, higher adventure activities (see Chapter 1--Darst) such as climbing and whitewater rafting were also mentioned. Several indicated they expect outdoor activities will be a part of their time spent with their families.

Two participants' responses were omitted, as they were not appropriate answers for the question which was asked.
Table 15
Student Question 5 Responses

<table>
<thead>
<tr>
<th></th>
<th>7</th>
<th>7</th>
<th>4</th>
<th>= 18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td></td>
<td>1</td>
<td>= 2</td>
</tr>
</tbody>
</table>

total statements= 18

Staff Interviews

Staff interviews sought information to the following open-ended questions:

1) Does the outdoor program have an effect on your students?
2) In what areas do they grow or regress?
3) In your opinion, what activities have a greater or lesser impact?
4) How would you change the outdoor program?

Question 1—Does the outdoor program have an effect on your students?

Five New Campus staff members indicated there was a definite positive effect. One staff member indicated it can have a “very positive” effect, implying that it doesn’t always happen.

Table 16
Staff Question 1 Responses

<table>
<thead>
<tr>
<th>Yes/positive</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>no/negative</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td>1</td>
</tr>
</tbody>
</table>

total statements= 6
Question 2—In what areas do students grow or regress?

Five New Campus staff members made positive statements regarding the outdoor program's effectiveness in developing teamwork. One staff member felt that teamwork should be involved in the activities. Four staff mentioned items which have been generally classified as personal growth, with descriptors such as building self-esteem, recognizing personal strengths, gaining insight and interest, and developing responsibility. Outdoor skill development was mentioned as a positive benefit in three interviews, with enhancing academic curriculum and increasing environmental awareness each being mentioned twice as areas of gain.

<table>
<thead>
<tr>
<th>Table 17</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Question 2 Responses</td>
<td></td>
</tr>
<tr>
<td>Teamwork/Cooperation Skills</td>
<td>5</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>4</td>
</tr>
<tr>
<td>Outdoor Skills</td>
<td>3</td>
</tr>
<tr>
<td>Environmental Awareness</td>
<td>2</td>
</tr>
<tr>
<td>Academic Program</td>
<td>2</td>
</tr>
<tr>
<td>total statements=16</td>
<td></td>
</tr>
</tbody>
</table>

- No staff member indicated students regressed in any manner; however, one teacher indicated that "social things are not coming as fast as I'd like."

Question 3—In your opinion, what activities have a greater or lesser impact?

When asked if there were activities which had a greater or lesser impact, one person indicated that all of the activities had different, yet equal, positive effects for students. Four interviewees stated that various camping trips made an important impact on New Campus
students. High ropes, initiatives and the 45-foot climbing wall were also mentioned in four cases.

Table 18
Staff Question 3 Responses

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ropes/Initiatives/Climbing Wall</td>
<td>4</td>
</tr>
<tr>
<td>Trips/overnight outings</td>
<td>4</td>
</tr>
<tr>
<td>total statements= 8</td>
<td></td>
</tr>
</tbody>
</table>

Question 4—How would you change the outdoor program?

Three staff members would like to stronger relate the outdoor experiences and academic curriculum. Logistical considerations were also mentioned in three cases. Three staff members felt that BAAS and New Campus staff should work more closely to present skills and prepare for backcountry travel overnight. Taking more extensive/intense trips, adding more ropes and initiative activities, and developing a selection process which would omit students who displayed inappropriate behavior from participation in outdoor activities were all mentioned twice as changes to be considered for future programming. One staff member felt more activities and dates should be added to the existing program, while another indicated that students benefit from determining their own destination and activity for their final outing.
Table 19
Staff Question 4 Responses

<table>
<thead>
<tr>
<th>Scheduling/logistical changes</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>More supplement to academic curriculum</td>
<td>3</td>
</tr>
<tr>
<td>More pre-trip planning</td>
<td>3</td>
</tr>
<tr>
<td>Additional ropes and initiatives activities</td>
<td>2</td>
</tr>
<tr>
<td>Longer trips/more challenging activities</td>
<td>2</td>
</tr>
<tr>
<td>Student selection process for trip participation</td>
<td>2</td>
</tr>
<tr>
<td>Students plan outing</td>
<td>1</td>
</tr>
<tr>
<td>More programs/different activities</td>
<td>1</td>
</tr>
</tbody>
</table>

Total statements= 17

*Specific comments extrapolated from the interviews are found in Appendix A.

Questionnaires

A questionnaire was developed by the TBA-ISD psychologist assigned to the New Campus and Center Programs. Four sets of questionnaires were completed at the end of the 1989-90 school year by the New Campus junior high (N=10), the Center program junior high (N=9), and Center program high school students (N=4). New Campus and Center program teachers (N=6) also completed questionnaires examining the same questions which were asked of their students. The total number of questionnaires examined was 29.

Table 20 illustrates mean scores of the various subgroups. Respondents were asked to place a mark along the 6.5-inch line which most closely identifies their feelings about the role of the outdoor program for modifying behavior.
Table 20

Subgroup and Grand Mean Scores

1. I FEEL MORE CONFIDENT AS A RESULT OF OUTDOOR EDUCATION.

<table>
<thead>
<tr>
<th>J</th>
<th>H</th>
<th>GN</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>A great deal more</td>
<td>Much more</td>
<td>A little more</td>
<td>Not at all</td>
</tr>
</tbody>
</table>

2. I AM ABLE TO WORK MORE COOPERATIVELY IN A GROUP AS A RESULT OF OUTDOOR EDUCATION.

<table>
<thead>
<tr>
<th>J</th>
<th>H</th>
<th>G</th>
<th>NT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A great deal more</td>
<td>Much more</td>
<td>A little more</td>
<td>Not at all</td>
</tr>
</tbody>
</table>

3. I FEEL MORE COMFORTABLE IN THE OUT-OF-DOORS AS A RESULT OF OUTDOOR EDUCATION.

<table>
<thead>
<tr>
<th>H</th>
<th>J</th>
<th>G</th>
<th>T</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>A great deal more</td>
<td>Much more</td>
<td>A little more</td>
<td>Not at all</td>
<td></td>
</tr>
</tbody>
</table>

4. I FEEL BETTER ABOUT MY TEACHER AS A RESULT OF OUTDOOR EDUCATION.

<table>
<thead>
<tr>
<th>J</th>
<th>GT</th>
<th>H</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>A great deal more</td>
<td>Much more</td>
<td>A little more</td>
<td>Not at all</td>
</tr>
</tbody>
</table>

5. I FEEL BETTER ABOUT MY CLASSMATES AS A RESULT OF OUTDOOR EDUCATION.

<table>
<thead>
<tr>
<th>J</th>
<th>H</th>
<th>GT</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>A great deal more</td>
<td>Much more</td>
<td>A little more</td>
<td>Not at all</td>
</tr>
</tbody>
</table>

6. I FEEL I WANT TO DO MORE OUTDOOR EDUCATION ACTIVITIES.

<table>
<thead>
<tr>
<th>J</th>
<th>G</th>
<th>H</th>
<th>N</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>A great deal more</td>
<td>Much more</td>
<td>A little more</td>
<td>Not at all</td>
<td></td>
</tr>
</tbody>
</table>

7. I FEEL BETTER ABOUT MYSELF AS A RESULT OF OUTDOOR EDUCATION.

<table>
<thead>
<tr>
<th>J</th>
<th>T</th>
<th>G</th>
<th>H</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>A great deal more</td>
<td>Much more</td>
<td>A little more</td>
<td>Not at all</td>
<td></td>
</tr>
</tbody>
</table>

T = TEACHERS; N = NEW CAMPUS JUNIOR HIGH; J = T.C. JUNIOR HIGH CENTER PROGRAM; H = T.C. HIGH SCHOOL CENTER PROGRAM; G = GRAND MEAN
Figure 7 illustrates mean scores and standard deviation lines for students' and teachers' responses to the different questions.

Figure 7
Mean Scores and Standard Deviations of Student and Teacher Responses

X1) I feel more confident as a result of Outdoor Education.
X2) I am able to work more cooperatively in a group as a result of Outdoor Education.
X3) I feel more comfortable in the out of doors as a result of Outdoor Education.
X4) I feel better about my teacher as a result of Outdoor Education.
X5) I feel better about my classmates as a result of Outdoor Education.
X6) I feel I want to do more Outdoor Education activities.
X7) I feel better about myself as a result of Outdoor Education.

*Low scores indicate items perceived as most impacting.
In Table 21 comparisons are made between grade level and teacher subgroups. No comparison was made between male and female participants as only two of the student population required to fill out questionnaires were female. Opinions differed between groups on specific items of the questionnaire. Junior high students tended to score the questionnaire more towards the extreme ends than did the teachers and the senior high students, as the standard deviation data indicates. In one case all the answers were one extreme (all 0), and there were three cases in which most of the answers tended to the extreme. There were also two cases in which junior high students answered with 0 or 6.5, but never in between those values. No respondents scored the program at the negative extreme (6.5) throughout the questionnaire.
Table 21
Subgroup Mean and Standard Deviation Group Scores

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self Confident</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Campus Junior High</td>
<td>10</td>
<td>3.5</td>
<td>2.395</td>
</tr>
<tr>
<td>Center Program Junior High</td>
<td>9</td>
<td>2.722</td>
<td>2.563</td>
</tr>
<tr>
<td>Center Program Senior High</td>
<td>4</td>
<td>3.188</td>
<td>1.505</td>
</tr>
<tr>
<td>Teachers</td>
<td>6</td>
<td>3.908</td>
<td>.965</td>
</tr>
<tr>
<td><strong>Cooperative</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Campus Junior High</td>
<td>10</td>
<td>3.5</td>
<td>2.491</td>
</tr>
<tr>
<td>Center Program Junior High</td>
<td>9</td>
<td>2.139</td>
<td>2.696</td>
</tr>
<tr>
<td>Center Program Senior High</td>
<td>4</td>
<td>2.562</td>
<td>1.519</td>
</tr>
<tr>
<td>Teachers</td>
<td>6</td>
<td>3.5</td>
<td>1.129</td>
</tr>
<tr>
<td><strong>Outdoor Skills</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Campus Junior High</td>
<td>10</td>
<td>3.55</td>
<td>2.330</td>
</tr>
<tr>
<td>Center Program Junior High</td>
<td>9</td>
<td>2.278</td>
<td>2.587</td>
</tr>
<tr>
<td>Center Program Senior High</td>
<td>4</td>
<td>2.0</td>
<td>1.658</td>
</tr>
<tr>
<td>Teachers</td>
<td>6</td>
<td>2.75</td>
<td>.908</td>
</tr>
<tr>
<td><strong>Teacher Relations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Campus Junior High</td>
<td>10</td>
<td>4.325</td>
<td>2.249</td>
</tr>
<tr>
<td>Center Program Junior High</td>
<td>9</td>
<td>2.444</td>
<td>2.579</td>
</tr>
<tr>
<td>Center Program Senior High</td>
<td>4</td>
<td>4.0</td>
<td>1.658</td>
</tr>
<tr>
<td>Teachers</td>
<td>6</td>
<td>3.667</td>
<td>1.114</td>
</tr>
<tr>
<td><strong>Class Relations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Campus Junior High</td>
<td>10</td>
<td>4.111</td>
<td>2.687</td>
</tr>
<tr>
<td>Center Program Junior High</td>
<td>9</td>
<td>2.611</td>
<td>2.472</td>
</tr>
<tr>
<td>Center Program Senior High</td>
<td>4</td>
<td>3.23</td>
<td>1.683</td>
</tr>
<tr>
<td>Teachers</td>
<td>6</td>
<td>3.533</td>
<td>1.114</td>
</tr>
<tr>
<td><strong>More or Less Outdoor Program</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Campus Junior High</td>
<td>10</td>
<td>3.125</td>
<td>2.585</td>
</tr>
<tr>
<td>Center Program Junior High</td>
<td>9</td>
<td>2.167</td>
<td>2.525</td>
</tr>
<tr>
<td>Center Program Senior High</td>
<td>4</td>
<td>2.75</td>
<td>1.744</td>
</tr>
<tr>
<td>Teachers</td>
<td>6</td>
<td>3.833</td>
<td>1.045</td>
</tr>
<tr>
<td><strong>Self Concept</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Campus Junior High</td>
<td>10</td>
<td>3.475</td>
<td>2.335</td>
</tr>
<tr>
<td>Center Program Junior High</td>
<td>9</td>
<td>2.389</td>
<td>1.888</td>
</tr>
<tr>
<td>Center Program Senior High</td>
<td>4</td>
<td>3.125</td>
<td>1.534</td>
</tr>
<tr>
<td>Teachers</td>
<td>6</td>
<td>2.833</td>
<td>.847</td>
</tr>
</tbody>
</table>
Additional Indicators of Program Effectiveness

Though it is not a stated purpose of this investigation, staff curriculum ratings and a priority ranking as to how state funds would best be spent were also examined. This information gives insights as to the staff perceptions about the role of the outdoor program in student development.

Staff Curriculum Ratings

New Campus teachers and aides (N=6) were asked to rate ten components of the curriculum pertaining to their impact upon students' personal and social growth. Six-inch continuum lines were drawn, and staff were asked to place a mark on the line where it most closely indicated their opinion. Table 9 illustrates the mean score of each item.
Table 22
New Campus Staff Curriculum Rating

<table>
<thead>
<tr>
<th>Category</th>
<th>No Help</th>
<th>Some Benefit</th>
<th>Great Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music Therapy</td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Art Therapy</td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Individual Counseling</td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Classroom/Academic program</td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Group Counseling</td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Outdoor Education Program</td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Family Environment</td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Peers</td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Vocational Education</td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Computer Education</td>
<td></td>
<td>•</td>
<td></td>
</tr>
</tbody>
</table>
Figure 8 and Table 23 give further indications of curriculum ratings and the standard deviation of New Campus staff responses.

![Mean Scores and Standard Deviations of Staff Responses](image)

**Figure 8**
Mean Scores and Standard Deviations of Staff Responses

**Table 23**
Mean Scores and Standard Deviations of Staff Responses

<table>
<thead>
<tr>
<th>Curriculum Component</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music Therapy</td>
<td>2.725</td>
<td>1.454</td>
</tr>
<tr>
<td>Art Therapy</td>
<td>1.567</td>
<td>2.048</td>
</tr>
<tr>
<td>Individual Counseling</td>
<td>4.3</td>
<td>1.047</td>
</tr>
<tr>
<td>Academic Program</td>
<td>4.733</td>
<td>.234</td>
</tr>
<tr>
<td>Group Counseling</td>
<td>3.708</td>
<td>1.329</td>
</tr>
<tr>
<td>Outdoor Program</td>
<td>4.733</td>
<td>.911</td>
</tr>
<tr>
<td>Family Environment</td>
<td>2.358</td>
<td>2.094</td>
</tr>
<tr>
<td>Peers</td>
<td>3.983</td>
<td>1.681</td>
</tr>
<tr>
<td>Vocational Education</td>
<td>4.05</td>
<td>.975</td>
</tr>
<tr>
<td>Computer Education</td>
<td>3.86</td>
<td>.799</td>
</tr>
</tbody>
</table>
Needs Priority Assessment

In the spring of 1989 the TBA-ISD New Campus and Center Program supervisor asked staff members (N=11) to prioritize how they felt State Chapter 1 monies should be spent for the 1989-90 school year. The highest priority was identified by number 1, with the second highest priority being listed as 2, and so on. Table 11 illustrates the mean scores in rank order.

Table 24
Mean Scores Rank Order

<table>
<thead>
<tr>
<th>Student Activity</th>
<th>3.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplemental Supplies/Materials</td>
<td>4.1</td>
</tr>
<tr>
<td>Outdoor Program</td>
<td>5.3</td>
</tr>
<tr>
<td>Music Instruction</td>
<td>5.6</td>
</tr>
<tr>
<td>Conferences for Professional Staff</td>
<td>6.7</td>
</tr>
<tr>
<td>Conferences for Program Aides</td>
<td>7.0</td>
</tr>
<tr>
<td>Computer Hardware</td>
<td>8.0</td>
</tr>
<tr>
<td>Art Instruction</td>
<td>8.3</td>
</tr>
<tr>
<td>Local Inservices</td>
<td>9.6</td>
</tr>
<tr>
<td>Driver’s Education</td>
<td>10.2</td>
</tr>
</tbody>
</table>

Other: additional program aide, computer software, physical education specialist, VCR, swim program at Civic Center.

Discussion of Data

The Behavior Evaluation Scale (BES) data indicates that New Campus students' behavior quotients declined between pre and post
test measures in the program's initial 1986-87 school year. Pre and post test measures taken in 1987-88 and 1988-89 indicate gains in student BES scores. There are a number of factors which could have contributed to this turnaround. Pre and post test mean scores were at their highest levels in 1986-87, which may suggest that the original student population had less severe behavior problems than those in subsequent years. New Campus staff likely learned more about their students' needs, and modified their techniques to enhance program effectiveness. The physical facility, which was originally a ward in a State psychiatric hospital, began to look more like a "traditional" school. Another factor was the implementation of an outdoor program for the 1987-88 school year. Independent one-way analysis of variance indicated the change in Behavior Evaluation Scores were significantly different following the implementation of outdoor programming in the New Campus curriculum.

To discern the outdoor program's effects on emotionally impaired students in a quantifiable manner, the BES subscale, Interpersonal Difficulties, was used as pre and post test for New Campus and Center Program students participating in the winter and spring outings. The results indicated a mean growth of 1.743 after the winter cross-country ski overnight trip, and a gain of 1.586 after the three-day canoeing experience. An ANOVA was performed on this data which indicates a significant difference between pre and post measures for both the spring and winter outings.

Students "becoming more comfortable in the out-of-doors" is viewed as the primary benefit of the outdoor program as indicated
through student and teacher interviews and student and teacher questionnaire responses. Both interview and questionnaire measures also found "being more cooperative" in a group a benefit of the outdoor program. Further, students particularly implied that they would like to participate in "greater amounts of Outdoor Education activities" in both ratings. The area of the lowest positive impact, as interpreted through the questionnaire, is student-teacher relationships. Though this item is interpreted as being of benefit, it appears to be of lesser impact than other items.

New Campus staff curriculum ratings indicate that the outdoor and the academic/classroom programs have the greatest impact on modifying New Campus students' behavior. This is supported by the priority ranking given to all New Campus teachers on how State Chapter 1 monies should be spent. The outdoor program ranked third on the list of ten items, higher than other listed instructional programs.

Summary

This chapter presents data on the effects of an outdoor adventure program as an agent of behavior change in emotionally impaired students.

Grand Traverse/Leelanau Community Mental Health researchers have gathered Behavior Evaluation Scale (BES) measures on New Campus students since 1986. In the fall of 1987, New Campus contracted with the Bay Area Adventure School to provide outdoor
adventure programs for their students. All other components of the New Campus curriculum were in place before the outdoor program was initiated. There was a significant difference (at the .05 level) between BES scores in the years after the outdoor program was implemented, when compared to the year when there was no outdoor program.

Recognizing that the outdoor program could have been one of several factors influencing the BES scores of New Campus students, BES subscale measures were taken before and after the winter and spring outings in 1990. Data indicated a significant difference in pre and post subscale scores at the .01 level for New Campus emotionally impaired students.

Open-ended interviews were conducted with New Campus teachers and students. Recurring themes were categorized and totaled. Students and staff all felt the outdoor program was of benefit and should continue to be a part of the school’s curriculum. The primary benefits of the outdoor program were felt to be development of outdoor skills, social skills, environmental awareness and personal growth. The interviews also sought information regarding activities which were perceived as most enhancing and enjoyable, as well as what changes might be recommended in the program.

In the spring of 1990, the TBA-ISD psychologist requested that New Campus and Center Program students and teachers complete a questionnaire regarding the effects of the outdoor program. The data indicated that the primary benefit was outdoor skills development. Other most positive benefits included working more cooperatively in a
group and increased self-concept. The questionnaires and interviews both indicated students in particular would like more outdoor educational activities.

Additional indicators of the program's value to staff included a curriculum rating and a needs priority assessment. In the spring of 1989, the classroom and outdoor programs were viewed as the most impacting components in the New Campus curriculum. When asked how State Chapter 1 funds should be spent, New Campus and Center Program staff ranked the outdoor program as the third highest priority, ahead of all other curriculum items.
CHAPTER V
SUMMARY AND CONCLUSIONS

The purpose of this study was to investigate the impact of an outdoor adventure program upon the reported behaviors of emotionally impaired students. This chapter summarizes the procedures and findings of the study, as well as the conclusions drawn. Recommendations for future directions of study are also included.

Numerous studies were reviewed which measured the impact of a variety of outdoor experiences on the human condition. Involvement ranged from a short film about an outdoor program to continuous programming over thirty days. This study is unique in that it examines an outdoor program which is an ongoing component in a curriculum for emotionally impaired students. It is the only study relevant to the field of outdoor adventure education which uses the Behavior Evaluation Scale (BES) as the instrument measuring behavior change.

The Traverse Bay Area Intermediate School District (TBA-ISD) is comprised of sixteen local school districts, and to provides educational services to vocational and special need students in a
five-county area in northwestern lower Michigan. TBA-ISD's New Campus and Center Programs serve emotionally impaired students whose impairments require services beyond those which the local school districts provide. Beginning in the fall of 1987, the Traverse City Area Public Schools Bay Area Adventure School was contracted to provide adventure-challenge outdoor activities for New Campus and Center Program students. A goal of this study was to determine the role the outdoor program plays in influencing students' behavior.

The study used four primary methods to garner insights as to the outdoor program's effectiveness. The quantitative data was originally collected by Grand Traverse/Leelanau Community Mental Health researchers in effort to evaluate the behavioral progress of New Campus students. Later, TBA-ISD's E.I. Program psychologist determined that the BES subscale Interpersonal Difficulties would be an appropriate measure with which to further examine the outdoor program's effects on the reported behaviors of New Campus and Center Program students. Interviews and questionnaires were used as a means of triangulation.

**Summary of Procedures**

Participants in this study included upper elementary, junior high, and high school students placed in the New Campus and Center Programs for the emotionally impaired. Students participated in two days of ropes, climbing wall and initiative course activities, as well as a two-day winter camp and two three-day outings in the fall and spring.
These ten-day, five overnight trips (105 hours), coupled with pre trip and follow up activities (20 hours), account for more than 125 hours of involvement in the outdoor program each year. Recognizing there are 180 days in a school year, the outdoor program receives an average of 42 minutes per school day, roughly equivalent to the amount of time used for other academic components.

Grand Traverse/Leelanau Community Mental Health has monitored the progress of New Campus students with BES measures since the fall of 1986. As the outdoor program was added to the New Campus curriculum in 1987, a comparison between 1986 BES scores and scores in subsequent years gives an indication as to the role of the outdoor program and its effects on BES scores. In the spring of 1989, interviews were conducted to illicit staff and student perceptions as to the role and meaning of the outdoor program.

The BES subscale Interpersonal Difficulties was used to obtain pre and post scores for winter and spring outings in 1990 with New Campus and Center Program students. Teachers were requested to administer the instrument in effort to gain a clearer understanding as to what extent the outdoor program influenced students' measured behavior changes. In the spring of 1990, the TBA psychologist requested that staff and students complete questionnaires in effort to gain further qualitative insights as to the perceived influence of the outdoor program.

Other information was collected in the spring of 1989 relevant to staff perceptions of the outdoor program. These include a New Campus staff curriculum rating, as well as New Campus and Center
Program staff assessments as to how state funds could best be spent for TBA-ISD emotionally impaired programs.

Findings

Upon review of the data, the following findings are reached:

1. There is a significant difference at the .05 level of significance in pre and post test scores for New Campus students (N=16, 21 and 22) when comparing years in which the outdoor program was a component of the curriculum and the year when it was not.

2. There is a significant difference between pre and post BES subscale scores for New Campus and Center Program students (N=35) which exceeded the .05 level of significance used in this study. Data were found to be significant at the more stringent .01 level for the winter outing. When comparing mean scores of the subgroups of the population, all five groups indicated raised Interpersonal Difficulties BES subscale scores.

3. The spring measure was consistent with the winter outing in that there was a significant difference between pre and post BES subscale scores for New Campus and Center Program students (N=29) at the .01 level. When comparing mean scores of the subgroups of the population, four subgroups indicated raised Interpersonal Difficulties BES subscale scores. The subgroup which indicated no change, high school Center Program students, was much smaller than other subgroups (N=2).
4. All New Campus students interviews (N=20) indicate that the outdoor program should continue to be a part of the curriculum, with most indicating that the amount of program involvement should be increased. Favorite activities appear to be high ropes, whitewater rafting, and canoeing. Few students indicated any least favorite activity. Students would like to add rock/mountain climbing and downhill skiing to the curriculum, and take longer and more challenging trips. Students felt that the primary gain made through involvement in the outdoor program was the development of outdoor skills. Social skills and environmental awareness were areas of gain indicated by half those interviewed. To a lesser extent (6 cases), personal growth was perceived as a value of the outdoor program. Students expect to continue to participate in outdoor pursuits as adults.

5. New Campus staff (N=6) believe the outdoor program has a positive effect upon their students, and indicated cooperation skills, personal growth and outdoor skills development as the primary areas of gain. Ropes and initiatives, as well as the wilderness travel components, were both indicated as having positive impact upon students. Scheduling and logistic changes, more supplemental programs relating the outdoor program to the academic curriculum, and more pre trip planning were expressed most often as possible changes which the staff would recommend for the outdoor program. Determining a selection process for student participation, additional ropes and initiative activities, and taking
longer and more challenging trips were also considered to be areas of possible change in the staff's view.

6. Questionnaires of students and teachers (N=29) indicate the primary benefit of the outdoor program is that students feel more comfortable in the out-of-doors. Being more cooperative in a group and increased self-concepts were also viewed as chief areas of gain. The questionnaire also revealed that students in particular would like to increase the amount of outdoor programming.

7. The New Campus staff curriculum rating indicates that the outdoor and the academic classroom programs are the most impacting components in modifying their students' behavior. The priority ranking filled out by New Campus and Center Program staff on how State Chapter 1 monies would best be spent indicate the outdoor program as third in a ten-item listing. This was the highest ranking of any of the instructional programs listed.

**Conclusions**

The initial data in this study compared BES scores for years in which the outdoor program was a part of the New Campus curriculum to the year in which it was not. The extent of the outdoor program's influence on BES scores must be considered with caution, however. New Campus mean BES scores were at their highest level for the year in which the outdoor program was not a part of the curriculum. Further, this was New Campus' first year. Administrators, teachers and
staff likely became more effective in identifying, understanding, and working with students' needs. Despite these possible influences, BES scores indicate the outdoor program is of benefit to New Campus students. In effort to better understand the extent of the outdoor program's influence on BES scores, pre and post activity measures were taken.

BES subscale Interpersonal Difficulties scores indicate the outdoor program has considerable impact on New Campus and Center Program students' behaviors. Though subgroup sample sizes are not adequate for meaningful statistical analysis, comparisons between subgroup mean scores does allow for some speculation. Spring pre test scores were higher than winter pre test scores for junior and senior high school students, while both upper elementary groups indicate decline in pre activity measures. If the spring pre test is examined as a four-month follow-up to the winter post test scores, it appears that the impact of the outdoor programs may be short-lived. Studies by Kelly and Baer, as well as Heaps and Thostenson concluded that participation in month-long adventure programs provides long-lasting self-concept changes. Ewert (1982) indicates that the length of time engaged in adventure programs is a factor in determining the durability of changes when examining self-concept scores. When determining program design and implementation, it may benefit adventure educators to compare several short outings versus a single longer trip, and examining the direction and duration of the changed attributed to the outings. This study does not provide adequate evidence to suggest that numerous short outings can influence positive
long-lasting change. It is clear that two- and three-day sessions can greatly influence BES subscale Interpersonal Difficulties scores on a short-term basis, however.

Perhaps of greater importance than the quantifiable data of this study are the participants' perceptions as to the effectiveness of the outdoor program. Open-ended interviews were used to gain this insight, as well as to learn what participants believe could be done to make the program more effective. Interviews were conducted with New Campus students and staff in the spring of 1989. They indicated a number of congruencies regarding student and staff impressions as to the value of the outdoor program. Both see the primary effect as being development of outdoor skills. Of the twenty students interviewed, fourteen statements were interpreted as contributing to outdoor skill development. Three New Campus staff members (N=6) agreed that outdoor skill development was a positive contribution of the outdoor program. A questionnaire administered to students and staff (N=29) in the spring of the following year supported the view that outdoor skills development is the primary effect of the outdoor program on New Campus and Center program students. The population of this study is considered to be high risk candidates for future participation in socially deviant behaviors. The skills acquired as a result of the outdoor program may influence many of these students to participate in more socially acceptable pursuits, as nearly all of those interviewed expect to continue doing outdoor activities as adults. Interest in outdoor activity could have a positive influence in leading New Campus and
Center Program students away from the physically and emotionally debasing worlds to which many of them could become ascribed.

Staff viewed both team building (five statements), and personal growth (four statements), as being areas on which the outdoor program had the greatest effect on students. Student interviews indicate eleven statements supporting the development of social skills as a benefit; however, only six students mentioned personal growth as an effect. The questionnaires support the notion that students are more cooperative as a result of the outdoor program. Though the questionnaires show support for enhancing participants' self-concept, it is again perceived by both students and staff as of lesser value than outdoor skill development and increased group interactions.

Both teachers and students appear to support the notion that more outdoor programming would be beneficial; however, they seem to desire involvement in different ways. Students would like to spend more time on outings, whereas teachers feel that more time should be spent bringing the outdoor program into the classroom. Three teachers indicated they would like Bay Area Adventure School staff to spend more time in their classrooms for pre trip planning and leading activities which supplement the academic curriculum.

Discussion

Though they do not provide a panacea for all social ills, there is little question that outdoor adventure activities can have a positive effect on participants. As adventure education and adventure-based
counseling programs make their way into mainstream education, professionals need to determine what methods are most impacting and applicable; and areas of course content, structure, and evaluation need to be explored further. Cause and effect phenomenon must be examined so that practitioners can better understand what activities and techniques best meet the needs of the populations with which they work.

This study raises a number of questions regarding program design and research implications, some of which include:

- This study indicates that New Campus and Center Programs do have a positive impact on emotionally impaired students and that the outdoor program contributes to this change. When examining BES data for New Campus students, it is clear that some intervention would be of benefit to check declining scores through the summer months. Students and staff have recommended longer and more intense trips as a change in the TBA-ISD emotionally impaired outdoor program. The outdoor program has demonstrated effectiveness in altering behavior and should thus be considered as an intervention strategy for controlling the declining BES scores during summer months. Further, longer courses may contribute to the duration of the positive benefits derived from the outdoor adventure experiences.

- It was suggested in several of the interviews that individuals who do not exhibit appropriate behaviors in the classroom prior to a
scheduled outing should be excluded from that trip. According to the interviewees, certain individuals can negatively influence others, thus sabotaging the positive effects which might be derived from an outing. Therefore, it may be beneficial to examine the relationship between selected versus ascribed program participation in outdoor adventure activities.

- Adventure challenge activities are often used as treatment for emotional impairments or as an alternative to incarceration. Adventure programming may do well to examine whether appropriate modeling behaviors and peer pressure exist in groups comprised entirely of those defined as deviant, delinquent or emotionally impaired. Are emotionally impaired students' scores influenced more by groups containing students identified as having average and above average social skills? How are behavioral measures affected by group composition?

- In their classic study, Kelly and Baer (1966) suggested that the Colorado and Hurricane Island Outward Bound Schools had a greater effect on students than did the Minnesota Outward Bound School, which was perceived as being less physically and emotionally demanding. Adventure education needs further investigation comparing particular activities' effectiveness on influencing behavior changes. Studies which examined the effects of course lengths on self-concepts conclude that longer courses influence the duration of program effectiveness (Ewert 1982.).
perceived risk activities have a greater influence on the extent and longevity of behavior changes?

- Longer courses are often more labor intensive and require more extensive wilderness travel skills. Short courses may provide equally high emotional challenges, yet be of lesser benefit because they may be less physically demanding. Is it possible that wilderness skill acquisition or levels of physical work/development have greater influence than course length, when considering the longevity of program impacts?

Summary Statement

The quantitative data, BES and the BES subscale Interpersonal Difficulties, indicates that the outdoor program has a positive effect on the behavior scores of New Campus and Center Program students. The qualitative measures, interviews and questionnaires, affirm that students and teachers perceive the outdoor program as being of benefit. These results support the findings of Adams (1969), Porter (1975) and others (Robbins, 1976; Wood, 1978) in finding that outdoor adventure programs can have a positive impact on emotionally disturbed youth.
APPENDIX A

CODED INTERVIEW RESPONSES
Should New Campus continue to offer the outdoor program? To what extent should the program continue?

**Upper Elementary**

#1—"I'd like to go camping every day...take those who earn it."
#2—Yes, more.
#3—Yes..."lots more of it."
#4—Yes...more.
#5—"More."
#6—Yes, more...doing them in the summer as well.
#7—"More camping trips in a campground."
#8—More camping.

**Junior High**

#1—"Definitely...I'd increase it."
#2—"Yes, probably more...it makes students feel better."
#3—"I'd keep it...do a lot more."
#4—"I would continue to do it...a little bit more."
#5—"Yes. A lot more camping stuff. More trips."
#6—"Yes. More, because we like to go outside."
#7—Yes. A lot more.

**Senior High**

#1—Yes...little trips through the year and then a big trip at the end.
#2—Yes. About the same.
#3—Yes. About the same.
#4—Yes. A little bit more.
#5—Yes. About the same.

What were your favorite/least favorite activities?

**Elementary**

#1—Canoeing. Looking at the woods.
#2—Canoeing.
#3—Camp. I liked them all.
#4—Canoeing and cooking.
#5—Hiking. Don't like going to bed.
#6—Canoeing and camping (i.e. gathering firewood) Stories. Cooking and clean up are least favorite.
#7—Canoeing and fishing. Is kind of scared to sleep out.
#8—Cooking, low ropes and skiing.
Junior High

#1—Canoeing, high ropes. "I really didn't not like nothing."
#2—"The high ropes, that was great." Camping. "Sledding was probably my least favorite."
#3—"Probably canoeing and camping...skiing. The high ropes kind of freaked me out. It really scared me at first, but I liked the ropes course. I didn't like the trust fall. The initiatives course is really good, because we all have to work together. I really don't think there's anything I'd want to do less of."
#4—"I really liked camping a lot...and high ropes was real fun. I didn't care too much for the canoeing, backpacking or sledding."
#5—"I like the high ropes course... it helped me a lot."
#6—Hiking.
#7—Camping, skiing, fishing. "I liked the high ropes course pretty much."

High School

#1—Only participated in whitewater rafting trip. Didn't like the bugs.
#2—Only participated in whitewater rafting and x-c skiing. Didn't like sunburn.
#3—Only participated in the winter overnight/x-c ski outing. Enjoyed both.
#4—Liked canoeing and loved whitewater rafting.
#5—High ropes. "I got over my fear being up there."

If you could, how would you change the program?

Upper Elementary

#1—No change.
#3—Add downhill skiing.
#4—More X-C skiing.
#5—More hiking/less snowshoeing(binding trouble?)
#6—More canoeing, camping and low ropes and skiing/sledding.
#7—More canoeing and fishing...more everything.
#8—More fishing and cooking and skiing.

Junior High

#1—Longer trips out of state for Jr. and Sr. high students. Do more rock climbing, whitewater rafting, and downhill skiing.
#2—Snowshoeing would be done less. Go hiking in the mountains...more of a wilderness trip.
#3—More camping, skiing and high ropes..."they are all good activities for the kids to get involved with each other." "We could study the history of things, like go out west for like a week." Do water skiing and take airplane rides.
#4—"I'd probably go less on skiing because it was less organized...we just went out and skied, like no big deal. I know what most kind of people in these schools love--excitement. Stuff like whitewater rafting. Dangerous types of stuff...like the high ropes course...it really freaks you out. Downhill skiing would be another major good one. What I mean is exciting...falling, or going fast."
#5—Add mountain climbing, water skiing and caving. Put Camp Buffalo Springs on a lake.
#6—More camping and fishing. Downhill skiing. Rock climbing..."I've never been before."
#7—More skiing, camping, hiking and whitewater rafting. Add motorcycle riding and snowmobiling.

Senior High

#1—Add go cart driving, rock climbing, running activities, backpacking and snowshoeing.
#2—Add power boat racing or drag racing.
#3—Camping, fishing, and maybe canoeing.
#4—More whitewater rafting. Add kayaking, swimming, tubing and water skiing. Teach us what kind of plants are out there...like poison ivy.
#5—Add mountain climbing.

What have you gained or learned as a result of the outdoor program?

Upper Elementary

#1—"I learned how to make tea from berries. I learned the rules. I learned how to steer a boat (canoe)."
#2—Learned how to do the pry (canoe stroke). Learned about wildlife.
#3—"I saw snakes, deer, birds."
#4—"I know more about camping and canoeing now...it was fun."
#5—"I kind of learned how to survive and get along with each other...we couldn't be down each other's throats all the time. Mr. Stew took these grapes off this tree and made this juice, and showed us that we can eat some things off the ground and stuff like that."
#6—Note that he identified the bow as the front of a boat in a description. "I learned to be careful when camping. I made a couple of new friends...I like them more. I want to be just like Stewart. I wasn't sure I was going to be able to ski. The first time I tried I was the best skier in the whole class."
#7--"I learned about using a compass and fishing. I like my classmates more. I am a lot better camper now...I know how to set up a tent. We saw a coyote."
#8--"I learned how to canoe. I made friends with Jeremy. I'm a better camper now."

**Junior High**

#1--Not to be scared of heights. How to canoe. How to get along with people that you don't like. I learned about what kind of different trees there are, and how to pick up tracks.
#2--How to camp and cook and so on.
#3--"I learned what I'm scared of and what I'm not scared of. I learned how to deal with other people...and that teachers like some of the things we (students) like. I learned the things nature does...it's ways."
#4--"We really didn't go out to learn stuff, that's boring. We went out to have fun. I probably learned a lot of little stuff, like how to set up a tent, use a map and compass."
#5--"I learned to behave myself or I'd be sent home."
#6--"I learned about mushroom hunting and improved camping skills." Enhances relations with teachers/staff. How to get firewood..."I got compliments and thanks for it...which made me proud."
#7--"I learned a lot about Mr. Morgan, and how the kids acted. I learned how to canoe and hike. I learned about the ropes course, the climbing wall and orienteering. I was scared of high places before I went on the ropes course. Now, whenever I'm mad or hassled like that, I've been climbing trees ever since then. Before, I never climbed trees. I learned about rivers...that when water flows over things and bubbly, and gets cleaned. Stew taught me lots about birds."

**Senior High**

#1--That ( ) is an all right guy underneath the front he puts up. Morgan was pretty cool.
#2--Teachers are people, too.
#3--I learned how to x-c ski.
#4--I learned different strokes. I get along better with the people I went on the (rafting) trip with. I have more guts than I thought I had.
#5--How to survive, to be a better camper. Teachers are always weird.

Do you expect to participate in outdoor activities when you're older? What ones?

**Upper Elementary**

#1--Yes.
#2--Yes. Camping.
#3—Yes. Camping and canoeing.
#4—Canoeing and skiing.
#5—Yes. Canoeing and camping.
#6—Yes. I'm going to put up a cabin with signs like you guys do. Camping and canoeing...a lot of canoeing.
#7—No response.
#8—Yes...plans to do it all...I like 'em all.

**Junior High**

#1—"Ya, probably rock climbing, whitewater rafting, and camping."
#2—Probably camping.
#3—"Probably just stuff like the high ropes, skiing, camping, fishing..."
#4—"I might do a little downhill skiing...a little camping when I have a family."
#5—"Yes...most likely all of them."
#6—"Canoeing, I love it a lot."
#7—"Definitely camping. Probably skiing and sledding. I'll do a lot of fishing."

**Senior High**

#1—No pertinent response.
#2—Yes. Camping and canoeing/rafting.
#3—Yes. Fishing, camping and canoeing.
#4—Yes. Canoeing/rafting.
#5—Probably canoeing and downhill skiing.
Staff Interviews

How does the outdoor program affect your students? In what areas do they grow or regress?

Teamwork

A--It created positive relations between each other (students) and with staff.

B--It unifies the kids and gives them something in common. They work together to get everything done...I like that because at school they don't usually do that.

C--The initiatives particularly help the kids build group cohesiveness, (but) the social things are not coming as fast as I'd like.

D--Teamwork should be involved. (neutral statement, not coded)

E--I think all of the activities required the class to really pull together and use team work...they get to know one another.

F--Cooperation skills in that setting develop much more quickly than they do in the classroom.

Personal Growth

A--Trusting each other. A lot of them did gain some new insight into skills and interest areas.

D--It builds their self-esteem.

E--The program makes students more responsible.

F--More strengths come out in many kids and abilities were recognized out there...like if someone was especially strong or especially helpful. It helps them feel good about themselves.

Skills building

A--A lot of the kids developed more camping skills and gained new insights and interest areas.
C—Outdoor skill building is definitely being seen.
F--The kids were very proud of their skills.

Environmental Awareness

C--A positive effect is that the students develop more of an appreciation and awareness of nature.
F--(The instructor) trained them to become more environmentally attuned.

Academic Ties

C--Some of the kids have had really good English reports on what they've seen and done on the camping trips....there have been some good spin-off activities.
F--The fact that we've seen something there helps when we follow it up in the classroom.

In your opinion, what activities have a greater or lesser impact?

Ropes Course/Climbing Wall/Initiatives

B--The wall and initiatives are great.
C--We've seen the initiatives as being a personal growth and group cohesiveness building experience for the kids.
D--The high ropes course is very important I think. It strips away the "macho-ness"...and can build self esteem
F--The ropes and initiatives was probably the most unifying activity for this class...especially the initiatives. The group problem-solving kinds of things is a really good experience.
Camping Trips

A--The whitewater rafting definitely. It was a greater challenge and definitely more exciting. A lot of them (students) never have had an opportunity to leave Michigan or to go any distance from Traverse City.

B--The overnights really make you (feel) like (you are) a part of a family...they get to see the real us and we get to see another them, which I like.

D--I think the trips are important.

F--I would say that the most impacting activity was to actually be out in the woods camping together. Canoeing was our most successful outing.

How would you change the outdoor program?

More Outdoor Program used to Supplement Academic-core Curriculum and Classroom Activities

A--I would like to see a stronger tie with the academic things such as history and science. For example, when we were at Tsequahmenon Falls, I know there's a lot we could have discussed in the classroom and the kids would have benefited by knowing about it and then being able to say, "Hey, there's what we were talking about in class."

D--We need to draw the outdoor education and school (classroom) things together...there's biology, math, and history with outdoor education. Use challenges (based on) what they've learned (in the classroom).

F--I'd love to see more environmental studies taught, as well as map and compass for math; more tying the activity into the classroom...I think you guys do an excellent job of relating to these students, but it's a difficult job because they're difficult kids. Not being with them daily does make a difference...I think it might help follow-up and coordinate the whole thing (if the Adventure School) were in the classrooms to lead the students in spin-off activities.

Scheduling and Logistics

C--I don't think canoeing has had the positive effect of some of the other activities have shown. We need to find a better way to shuttle
canoes. I think maybe next year we should have one canoe trip instead of two...then we can spend more time hiking and in the campsite preparing food and having other specific responsibilities.

D--I'd like to see alternative dates (added in case of inclement weather).

F--My biggest complaint is having an outing in the middle of the week and being expected to come back and teach class the next day. That has been very frustrating because we're all drained.

More Extensive Pre-Trip Planning

C--I sometimes forget that these kids have severe behavior problems and so I should better pro-actively plan on how to deal with them before we go...instead of being reactive. I think Bay Area and myself should get together and spend more time before the trips to plan on how we are going to deal with behavior problems...and use a kind of reality approach.

D--Bay Area should come into the classrooms to teach more skills. Even more preparation.

E--Maybe a couple more day programs before we jump into the overnights..to prepare them and let them know what to expect.

Wilderness Challenge Increased

D--The trips should be of longer duration and more intense. I see the problem here as they go on an overnight, and there's always a way to cop out. Somebody mentioned an island, where the only way they can be rescued is by the Coast Guard in a utter emergency. Junior and Senior high students should be capable in providing the teamwork necessary and learning the skills, to do a three-night outing in a snowbank, in the winter.

F--I would like to see more isolated destinations.

Additional Ropes and Initiatives Programs

A--Add another day of ropes.

F--More ropes and initiatives.
Selection Process for Students Participating on Trips

D--Maybe we need a selective process by which we check them out first, so that if four or five out of seven are ready for the trip, then they go.

E--We also need to look at the students we're taking. Sometimes I guess we can't agree that every student should participate. If we take everyone, we could use more staff and structure. Maybe we should have the students fill out a form that indicates, "this is what you're going to do;" then, if their attitude is poor, they know they are definitely going to go home.

Student Trip Planning

A--I like the idea of having the high school students decide their own trip. I don't know if it could work for the rest of the classes, but it really worked for us.

More and Different Activities

B--I think we could go more. After you get used to it, it's not such a big deal. We could go a lot more...Add different activities like rock climbing, kayaking, swimming--anything that's different and varies.

Additional comments:

When asked for concluding or additional comments, two staff members indicated that they are becoming more comfortable with the outdoor program. Two of those interviewed had no additional comments. Two staff expressed again their feelings of the program's value.

A--I think it's great. I know there are advantages in what we do and that they outweigh the problems...I think we need to keep that in mind.

B--I like what's there so far. I think it's really good and that we should only add to it (the program).

C--I thoroughly enjoy being outside with the kids. I'm getting more comfortable with it. I've always been comfortable with Stew (the instructor). He's got a good handle on my kids...I really liked the winter activity at the Timbers, (it) was a good experience. We did a variety of activities and had a great home base to work from.
I learned that I've gotten better at this, and that I'm much more comfortable with it (the outdoor education program) than I was at the beginning. The students are helping too, with menu planning and shopping...that kind of stuff.
APPENDIX B
PORTIONS OF THE TBA-ISD E.I. PROGRAM'S
OUTDOOR PROGRAM CURRICULUM GUIDE
R 340.1706 Determination of emotionally impaired.
Rule 6.(1) The emotionally impaired shall be determined through manifestation of behavioral problems primarily in the affective domain, over an extended period of time, which adversely affect the person's education to the extent that the person cannot profit from regular learning experiences without special education support. The problems result in behaviors manifested by 1 or more of the following characteristics:
(a) Inability to build or maintain satisfactory interpersonal relationships within the school environment.
(b) Inappropriate types of behavior or feelings under normal circumstances.
(c) General pervasive mood of unhappiness or depression.
(d) Tendency to develop physical symptoms or fears associated with personal or school problems.
(2) The term "emotionally impaired" also includes persons who, in addition to the above characteristics, exhibit maladaptive behaviors related to schizophrenia or similar disorders. The term "emotionally impaired" does not include persons who are socially maladjusted, unless it is determined that such persons are emotionally impaired.
(3) The emotionally impaired shall not include persons whose behaviors are primarily the result of intellectual, sensory, or health factors.
(4) A determination of impairment shall be based on data provided by a multidisciplinary team, which shall include a comprehensive evaluation by both of the following:
(a) A psychologist or psychiatrist.
(b) A school social worker.
(5) A determination of impairment shall not be based solely on behaviors relating to environmental, cultural, or economic differences.
OUTDOOR EDUCATION
CURRICULUM GUIDE
Fourth through Twelfth Grades

PROGRAM DESIGN 1989/90
This curriculum guide contains policies, procedures and administrative forms to assist you and your class in implementing the Outdoor Education program.

In addition, this guide includes short term goals, assessments, checksheets, and related information activities to aid you in providing quality experiences for you and your students. As you follow this curriculum guide, you will be asked to provide feedback to the Director of EI programs regarding additions, changes, or deletions of the various components.

As this essential part of the EI curriculum evolves, it is hoped that staff will continue to provide additional information, recommendations, and/or activities to be included in the guide.

The 1988/89 school year was the first year for this curriculum. Modifications have been made in various goals, assessments, and other forms contained in the original Curriculum Guide and are reflected in this Guide.

The Outdoor Education Curriculum has been divided into two guides. One for K - 3 population and another for the 4th - 12th grade population. This occurred as a direct result of teachers' experience with the curriculum and recommendations for changes.
OUTDOOR EDUCATION

PHILOSOPHY

An integral component of the Center Programs for the Emotionally Impaired is the Outdoor Education Program. Outdoor Education is an innovative program based on experiential learning which emphasizes group interactions and individual challenges outside the traditional classroom setting. Through a variety of outside activities, our students learn to participate as a part of a group - encouraging and helping their peers to gain individual success and participating in group activities which stress group problem solving skills and working together toward a common goal.

One of the overall goals of the Outdoor Education Program is to give students experience and expertise in a variety of leisure time activities. The acquisition of these skills will provide students with many future activities in their lives that can be rewarding and positive.

Cross-country skiing, canoeing, camping, outdoor cooking, shelter building, backpacking, hiking, fishing, group initiatives and ropes courses are only a few of the activities offered through the Outdoor Education Program.

The individual goals and objectives contained in this curriculum are the basic skills that students need to master in order to assure that they learn the minimal skills necessary for successful outdoor experiences. These goals were developed in cooperation with Bay Area Adventure School (BAAS) staff, through various books and periodicals on camping skills and from personal experiences by Traverse Bay Area (TBA) staff.

By challenging themselves and meeting individual goals, our students learn to believe in themselves and develop feelings of self-worth. By participating in group activities, they learn the value of working toward a common goal with a group.
Outdoor Education is a series of experiential activities. These activities offer students the opportunity to participate in a variety of outdoor activities. Outdoor Education within the Traverse Bay Area Intermediate School District New Campus/EI classrooms is a part of the overall curriculum.

Through these experiences students are assisted in developing positive changes in attitudes and behaviors. These experiences require groups and individuals to draw upon inner resources to accomplish a task or solve a problem. The solutions, when concluded, reflect the participants' attitudes and beliefs. Students are encouraged to go one step beyond their self-imposed limitations, each is valued for his/her effort. Success is measured by effort.

Students develop self esteem and self confidence as they work toward individual and group challenges. Trust is developed within the group as students work together to solve common problems. An understanding and an acceptance of individual differences is the goal of many activities.

Students reach their fullest potential when they can move beyond their perceived limits. Students develop self confidence as they learn to accept themselves and others. Students develop an awareness of their impact on others as they learn to make decisions and choices effecting themselves and others.

The goals of the Outdoor Education Program include:

1. To develop understanding of self
2. To develop staff respect
3. To increase respect for others
4. To develop an appreciation of the natural environment
5. To develop leisure skills
6. To develop a willingness to move beyond previously set limits
7. To develop individual problem-solving skills
8. To develop group problem-solving skills
9. To improve relationships with others by developing respect for individual differences
I. Student will increase self esteem as measured by the Behavior Evaluation Scale, Pre and Post Tests, Self Evaluation Scale, Staff Observations, and Annecdotal Records.

II. Student will gain a better understanding of himself/herself in relationship to peers and adults as measured by Behavior Evaluation Scale, Pre and Post Tests, Self Evaluation Scale, Staff Observations, and Annecdotal Records.

III. Student will develop and exhibit feelings of trust and cooperation toward others as measured by Behavior Evaluation Scale, Pre and Post Tests, Self Evaluation Scale, Staff Observations, and Annecdotal Records.

IV. Students will develop and demonstrate patterns of responsible behavior toward others and himself/herself as measured by Behavior Evaluation Scale, Pre and Post Tests, Self Evaluation Scale, Staff Observations, and Annecdotal Records.

V. Student will develop and exhibit problem-solving skills as measured by Behavior Evaluation Scale, Pre and Post Tests, Self Evaluation Scale, Staff Observations, and Annecdotal Records.

VI. Student will learn and demonstrate successful conflict resolution skills as measured by Behavior Evaluation Scale, Pre and Post Tests, Self Evaluation Scale, Staff Observations, and Annecdotal Records.

VII. Student will learn to identify and demonstrate changes in self-defeating behaviors as measured by Behavior Evaluation Scale, Pre and Post Tests, Self Evaluation Scale, Staff Observations, and Annecdotal Records.

VIII. Students will become aware of and learn to accept individual differences as measured by Behavior Evaluation Scale, Pre and Post Tests, Self Evaluation Scale, Staff Observations, and Annecdotal Records.

IX. Student will exhibit the ability to deal with personal stress in an appropriate manner as measured by Behavior Evaluation Scale, Pre and Post Tests, Self Evaluation Scale, Staff Observations, and Annecdotal Records.

X. Student will exhibit empathy and tolerance for others as measured by Behavior Evaluation Scale, Pre and Post Tests, Self Evaluation Scale, Staff Observations, and Annecdotal Records.
STAFF RESPONSIBILITIES
OUTDOOR ADVENTURE EDUCATION PROGRAM

1. The minimum ratio of staff to students will be 1:3. If staff feel that additional adult supervision is warranted due to: specific circumstances, students whose behavior dictates a need, trip considerations or other concerns, than a conference will be held with the Director of Emotionally Impaired programs or designee. A determination of need shall be made in consultation with staff and supervision provided accordingly.

2. Staff are responsible for assuring that to the maximum extent appropriate students will have a positive outdoor experience.

3. Staff are responsible for assuring that students understand behavior expectations and that specific rewards and consequences are administered consistent with student behavior.

4. Anytime a student's experience is terminated, staff shall complete an Incident Report. The Incident Report shall be given to the Department Chair or Director of Emotionally Impaired Programs within one day of returning from an experience.

5. Staff shall complete an Incident Report for all incidents involving physical assault by students. This report shall be given to the Director of Emotionally Impaired Programs or designee no later than one school day after returning from the particular experience.

6. Depending on the age and needs of each group, staff will determine if a male or female staff need to be present for specific experiences.

7. On a case by case basis, staff will determine if a student needs to be on an Individual Behavior Plan (IBP). If such a determination is made, the IBP will be developed prior to any experience.
STUDENT BEHAVIOR EXPECTATIONS

OUTDOOR ADVENTURE EDUCATION PROGRAM

The purpose and philosophy of New Campus, as stated in the handbook, says in part, "the overall goal of New Campus...teach our students to understand and manage their own behavior, afford our students the opportunity to enhance their self-esteem, allow our students to develop independence, and at all times, preserve our students dignity and self-worth". To further these goals and provide opportunities for responsible social behavior, the Outdoor Adventure Education Program was developed and implemented. In as much as this program is an extension of the curriculum, it is necessary to define student behavior expectations while participating in these activities. Students will be expected to follow the rules listed below:

1. In order to maintain adequate supervision of students during the Outdoor Education experiences, students must remain within the confines of the area designated by staff at the beginning of each experience. This designated area will vary depending upon the activity, staff assigned, and the age and needs of the students.

2. Using, passing or selling any illegal substance is prohibited. Police may be notified of any violation. Any student observed with illegal substance or materials related to illegal substances will be required to give them to a staff member immediately upon request. Students' experience will be terminated and the student will be taken home.

3. Weapons are not permitted and will be confiscated by staff if found. Parents and/or police may be notified. The student's experience may be terminated.

4. Profane language or gestures, noncompliance to staff directives, threatening physical harm to peers or staff may result in termination of the outdoor experience.

5. Students will not be allowed to physically assault staff or other students. If a physical assault does occur, staff shall decide:
   a. If termination of the experience is warranted.
   b. If assault and battery charges are appropriate.
   c. If law enforcement officers should be contacted immediately.
   d. If the "on call" person should be contacted.
   e. Other actions.
   f. A school vehicle and staff will always be available and on call for transportation home of a student whose behavior necessitates termination of an experience. If staff are unable to safely transport a student, parents, guardians and/or the authorities may be called to assist.
6. Students will follow the guidelines for attire outlined prior to each outdoor experience. The guidelines will differ depending upon the type of planned activity and the time of year. If students do not have proper clothing for an experience, they should notify staff in order that they be provided (e.g., mittens, long underwear, raincoats, etc.).

7. Equipment supplied for each activity must be cared for properly while being used by students. Destruction of any property is subject to student and/or parent responsibility for replacement. If this creates a "financial burden" then student(s) will be required to work off the costs of the destroyed item under New Campus or Bay Area Adventure School staff supervision.

8. Student opportunities for social interactions are increased by the outdoor activities. In light of these increased opportunities for students to interact in an informal setting, physical contact between students shall be limited to holding hands. Inappropriate physical contact between students shall be dealt with on a case by case basis and could result in termination of an experience or other actions as deemed appropriate by staff.

9. Any student who exhibits severe behavior problems on an experience will not only have that experience terminated but is also subject to losing the next scheduled experience.

   This determination shall be made on a case by case basis by the involved staff members, with a plan of action developed and all appropriate persons notified.

10. Each teacher and outdoor education supervisor will determine whether or not the Level System will be used during any experience they shall also determine if individual contracts or behavior management plans are appropriate.

   If the determination is made to use the Level System Contracts and/or management plans, then the students shall be so informed.
Outdoor Education Program Evaluation
1989/90 School Year

In an effort to maintain accountability and minimize documentation requirements, Outdoor Education for 1989/90 will include a "streamlined" system for evaluation. This evaluation system was designed for use with each scheduled experience, regardless of the specific activity. As this system was developed, whenever possible, current evaluative measurements were incorporated to avoid additional paperwork requirements.

If the Outdoor Education component is a class "for credit", pre and post assessments for basic knowledge must be used. Pre and post assessments are included in the Curriculum Guide. The assessments can be adapted or used as designed.

The information gathered will be compiled yearly and become a part of our total program report, as a basis for future grant applications, as documentation for student credit status, as a basis for future publications and inservices, and as a way to continually improve the Outdoor Education Curriculum.
STUDENT POST QUESTIONNAIRE FOR OUTDOOR EDUCATION PROGRAM 1989/90 SY

Teacher _______ Grade _______ School _______ Date _______

1. I feel more self confident as a result of Outdoor Education.

   /  
   A Great Much A Little Not at 
   Deal More More More All

2. I feel I am able to work more cooperatively in a group as a result of Outdoor Education.

   /  
   A Great Much A Little Not at 
   Deal More More More All

3. I feel more comfortable in the out of doors as a result of Outdoor Education.

   /  
   A Great Much A Little Not at 
   Deal More More More All

4. I feel better about my teacher as a result of Outdoor Education.

   /  
   A Great Much A Little Not at 
   Deal More More More All

5. I feel better about my class as a result of Outdoor Education.

   /  
   A Great Much A Little Not at 
   Deal More More More All

6. I feel I want to do more Outdoor Education activities.

   /  
   A Great Much A Little Not at 
   Deal More More More All

7. I feel better about myself as a result of Outdoor Education.

   /  
   A Great Much A Little Not at 
   Deal More More More All
Students Name__________________________ Teacher____________ Date________

Outdoor Experience/Date________________________

Post Test Score______________________________

Code for Post Test

1 - Never or not observed
2 -
3 - Sometimes
4 -
5 - Most of the time
6 -
7 - Continuously throughout the experience

Avoids interaction with other students or teacher ___ X 2 = ___

Makes derogatory comments or inappropriate gestures to other students or teacher ___ X 3 = ___

Verbally or physically threatens other students or teacher ___ X 3 = ___

Tries to interact with other students, but is not accepted by them due to his/her behavior ___ X 2 = ___

Demonstrates inappropriate physical or verbal responses to other students' or teachers' attempts to interact ___ X 2 = ___

Refuses to share or allow others to participate ___ X 2 = ___

Responds inappropriately to praise or recognition from students or teacher ___ X 1 = ___

Physically hurts other students or teacher ___ X 3 = ___

Seeks excessive physical attention from others ___ X 2 = ___

Responds inappropriately to constructive criticism or comments from others ___ X 2 = ___

TOTAL: ___
Proposed Agreement between the Bay Area Adventure School and Traverse Bay Area Intermediate School District's E.I. Center Programs.

1989/90 School Year

Considerations:

I. Bay Area Adventure School (B.A.A.S.) will provide equipment and one staff member for each outing (exception - TBA will provide 6 canoes for each canoe trip).

II. B.A.A.S. will provide initiative and ropes course experience per developed schedule.

III. TBA staff will have primary responsibility for supervising student behavior.

IV. B.A.A.S. staff will submit a written narrative summary of each experience to each teacher.

V. TBA staff will be responsible for all food needed for each experience.

VI. B.A.A.S. and TBA staff will develop an annual schedule of experiences.

VII. B.A.A.S. and TBA staff will develop an annual budget. Bills will be submitted quarterly by B.A.A.S.

VIII. B.A.A.S. and TBA staff will be responsible for meeting with each classroom (as needed) prior to each experience in order to prepare students for the upcoming experience.

IX. TBA staff will be responsible for making sure that students understand behavior expectations and consequences for inappropriate behavior.

X. TBA staff will be responsible for transporting students to and from all scheduled experiences.

XI. TBA staff will be responsible for teaching the Outdoor Education Curriculum utilizing the Curriculum Guide.
XII. TBA staff will be responsible for completing the program evaluation requirements contained in the Outdoor Education Curriculum Guide.

XIII. Administrative details will be coordinated between TBA's Director of Emotionally Impaired Programs and the B.A.A.S. Supervisor.

XIV. Any changes in this agreement shall be made by mutual agreement between B.A.A.S. Supervisor and TBA's Director of Emotionally Impaired Programs.
LIST OF REFERENCES


Curry, T. J. and Clark, A. C. (1983). *Introducing Visual Sociology*, the Ohio State University class handout, sociology 620


Sanders, D. P. (Autumn, 1984). *Characteristics of a Researchable Question*. The Ohio State University, class handout Qualitative Research in Education: Sanders.


