

THE EFFECTS OF GROUP INITIATIVES IN
COLLEGIATE LEISURE SKILLS COURSES

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Parks, Recreation, and Tourism Management

by
Ryan Hegreness
May 2007

Accepted by:
Dr. Denise M. Anderson, Committee Chair
Dr. Francis A. McGuire
Dr. Robert Brookover

ABSTRACT

Leisure skills classes are offered to students at Clemson University with the intent of helping students to develop new skills in various leisure-time activities. If a leisure skills class is successful, a student's sense of efficacy in that skill should be greater at the conclusion of the semester. Leisure skills classes should be structured to give students the greatest sense of self-efficacy in the skill. This study attempted to determine whether leisure skills classes at Clemson University can become more effective in increasing self-efficacy through the addition of group initiatives as a part of the course curriculum. This study utilized a quasi-experimental design to examine whether there is a significant difference in general self-efficacy and leisure skills self-efficacy between the control and treatment groups as well as among the various class types. Leisure skills self-efficacy was found to increase significantly for both the treatment and control groups. The results failed to show a significant difference in general self-efficacy and leisure skill self-efficacy between the treatment and control groups as well as among the class types. Conditions are discussed that may have affected the results of the study and suggestions for future research are given. This study provides the Leisure Skills Program at Clemson University with valuable information for improving the leisure skills curriculum in the future.

DEDICATION

This thesis is dedicated to my loving wife, Amy. Without her encouragement and support this thesis would not have been possible.

ACKNOWLEDGEMENTS

I would like to thank my advisor and committee chair, Dr. Denise M. Anderson for her wisdom and guidance throughout my time in the graduate program. I would also like to thank my committee members, Dr. Francis A. McGuire and Dr. Robert Brookover, for their input and advice regarding this study.

Thanks also goes to Dr. Skye Arthur-Banning for his mentoring and help through my graduate school experience.

A special thanks goes to Nancy Warmath and the Clemson University Outdoor Lab. Nancy provided the initiatives used in this study and trained the facilitators to implement them. Her expertise was extremely helpful.

A special thanks also goes to Dan Anderson and the Leisure Skills Program. Dan went out of his way in many ways to make this study a possibility.

Finally, I want to thank my family, friends, and fellow students for their prayers, support, and friendship during my graduate studies.

TABLE OF CONTENTS

	Page
TITLE PAGE	i
ABSTRACT	iii
DEDICATION	v
ACKNOWLEDGEMENTS	vii
LIST OF TABLES	xi
CHAPTER	
I. INTRODUCTION.....	1
Rationale.....	1
Problem Statement	2
Study Objectives	3
Hypotheses	3
Definitions.....	4
Delimitations	6
Summary	6
II. LITERATURE REVIEW.....	7
Social Cognitive Theory.....	7
Self-Efficacy Theory	8
Experiential Education	14
Adventure Education.....	14
Challenge Courses.....	14
Summary	18

Table of Contents (Continued)

	Page
III. RESEARCH METHODS	19
Population and Sample.....	19
Data Collection.....	20
Procedures	21
Variables.....	22
Instruments	23
Data Analysis	24
Summary	25
IV. RESULTS	27
Data Cleaning.....	27
Data Analysis	29
Summary	38
V. DISCUSSION	41
Summary of the Study.....	41
Results	44
Conclusions	44
Discussion	45
Recommendations	48
APPENDICES.....	49
A: Survey Instruments	51
B: Timeline	55
C: Group Initiatives.....	57
REFERENCES.....	73

LIST OF TABLES

Table	Page
I. Classes Involved in the Study	20
II. Summary of Demographic Variables	31
III. Paired Samples T-Test for Control Group General Self-Efficacy and Leisure Skills Self-Efficacy.....	34
IV. Paired Samples T-Test for Treatment Group General Self-Efficacy and Leisure Skill Self-Efficacy	35
V. Independent Samples Test of Change in General Self-Efficacy.....	36
VI. Independent Samples Test of Change in Leisure Skills Self-Efficacy	37
VII. Analysis of Variance of General Self-Efficacy Among Class Types	37
VIII. Analysis of Variance of Leisure Skills Self-Efficacy Among Class Types	38
IX. Summary of Results	40
B-I. Timeline of Events	56

CHAPTER I

INTRODUCTION

This chapter introduces the study by giving the rationale for this research. Next, the purpose, objectives, and hypotheses for the study are stated. Finally, definitions are given for terms used throughout the study and delimitations are explained.

Rationale

Leisure skills classes are offered to students at Clemson University with the intent of helping students to develop new skills in various leisure-time activities. If a leisure skills class is successful, a student's sense of efficacy in that skill should be greater at the conclusion of the semester. Leisure skills classes should be structured to give students the greatest sense of self-efficacy in the skill.

One possible way of enhancing students' sense of efficacy is through group initiatives. Group initiatives have their background in experiential education, which is a process of teaching through experience and reflection (Breunig, 2005) that is believed to lead to improved learning (Goldenberg, Klensoy, & Templin, 2000). Adventure education and challenge courses are programs that fit under the umbrella of experiential education. The purpose of these programs is to bring about benefits such as increased self-efficacy, teamwork, and resiliency, by having participants work together in solving problems, trying new things, and conquering their fears. Group initiatives are

a major component of challenge course curriculums and aid in producing the previously mentioned benefits.

This study attempted to determine whether leisure skills classes at Clemson University can become more effective in increasing self-efficacy through the addition of group initiatives as a part of the course curriculum. The outcomes measured in this study were leisure skills self-efficacy and general perceived self-efficacy. The study utilized a quasi-experimental design to examine whether there is a significant difference in general self-efficacy and leisure skills self-efficacy between the control and treatment groups. The study examined a broad cross-section of leisure skills classes (e.g., tennis, camping/backpacking, top rope climbing, yoga, Pilates, core training, swing, and shag dance) in order to determine if there are significant differences among class types.

This study provided valuable feedback to the Leisure Skills Program at Clemson University. It allowed the program to identify outcomes from the classes, and lent insight into how leisure skills classes may be improved in the future. In addition to providing valuable feedback to the Leisure Skills Program at Clemson, this study also gave worthwhile insight to the existing literature on the benefits of challenge courses by examining whether general and skill-specific self-efficacy can be increased through group initiatives in a leisure skills class setting.

Problem Statement

This study addressed the following problem statement: Can the addition of group initiatives in Clemson University leisure skills classes increase participants'

leisure skills self-efficacy and general perceived self-efficacy; and do the effects vary based on the type of leisure skills class?

Study Objectives

The objectives of this study were:

1. To determine if the addition of group initiatives to Clemson University leisure skills classes has an effect on participants' general self-efficacy and leisure skills self-efficacy, and
2. To determine if the effects of the group initiatives differed based on class type.

Hypotheses

Research Question A: Can the addition of group initiatives in Clemson University leisure skills classes increase participants' general perceived self-efficacy and leisure skills self-efficacy?

The following null hypotheses were developed to test research question A:

H_{0A1}: There will be no significant difference in the change in general self-efficacy between the control and treatment groups.

H_{0A2}: There will be no significant difference in the change in leisure skills self-efficacy between the control and treatment groups.

Research Question B: Does the change in general self-efficacy and leisure skills self-efficacy differ based on the class type?

The following null hypotheses were developed to test research question B:

H_{0B1}: There will be no significant difference in the change in general self-efficacy among class types in the treatment group.

H_{0B2}: There will be no significant difference in the change in leisure skills self-efficacy among class types in the treatment group.

Definitions

The following terms have been defined to aid in the understanding of concepts discussed in this proposal:

Adventure Education: Adventure education is any form of experiential education that relies on outdoor adventure activities to bring about positive changes in participants.

Experiential Education: Experiential education encompasses a broad range of experiences that include any form of education that relies primarily on experience and reflection (Breunig, 2005).

Challenge Course: Challenge courses are a form of adventure education that utilize socialization games, group initiatives, and low and high elements, to bring about positive changes in participants (Wolfe & Samdahl, 2005).

Facilitator: The facilitator is an individual who leads individuals through group initiatives and guides the processing discussion after each activity. In this study the leisure skills instructors served as facilitators in their classes.

Group Initiatives: Group initiatives are group problem solving activities that are designed to increase trust and cooperation within a group (Wolfe & Samdahl, 2005).

General Perceived Self-Efficacy: General perceived self-efficacy is an individual's overall sense of self-efficacy. Bandura (1994) defined this as "people's beliefs about their capabilities to produce designated levels of

performance that exercise influence over events that affect their lives” (p.2). The General Perceived Self-Efficacy Scale (Schwarzer, 2005) is used to measure this concept (see Appendix A).

Leisure Skills Classes: Leisure skills courses are elective courses offered at Clemson University that teach basic skills in various leisure and recreational areas. The courses are offered for the duration of one academic semester, meet for approximately 45 hours during the semester, are graded based on participation, academic knowledge, and skills evaluation, and are worth one credit.

Leisure Skills Self-Efficacy: This is a measure of people’s overall confidence as it applies to the specific leisure skills class in which they are enrolled (see Appendix A).

Leisure Skills Instructor: An employee of Clemson University, who is experienced in the leisure skills offered, has proper certifications if necessary, and teaches the class for the duration of the semester.

Processing: Processing is the time following an initiative in which participants reflect on the activity, how they were successful, and what they could have done differently. The facilitator guides this time and focuses on generalizing the lessons learned to situations in life. In this study the facilitators were given specific processing questions intended to generalize the principles to leisure skills.

Web Survey: An online survey tool was used to set-up, administer, and collect the results of the survey leisure skills survey. The students in this study were emailed a link directing them to a website where they could take the survey.

Delimitations

This study was delimited in the following ways:

Classes – This study only focused on eight different leisure skills classes (19 sections), taught by a total of three different instructors.

Processing Questions – Due to the design of the study the instructors were limited to specific questions for the time of processing following each group initiative.

Respondents – The respondents for this study were students enrolled in specific leisure skills classes at one university.

Due to the delimitations listed above, the results of this survey may not apply to other leisure skills classes or similar classes offered at another university.

Summary

This study attempted to determine if the addition of group initiatives to Clemson University leisure skills classes had an effect on participants' general self-efficacy and leisure skills self-efficacy, and to determine if the effects of the group initiatives differed based on class type. Four hypotheses were given to test the above objectives. The study is delimited by the classes used, the processing questions selected, and the respondents of the study.

CHAPTER II

LITERATURE REVIEW

The intention of this study was to determine whether the addition of group initiatives to existing leisure skills classes at Clemson University would bring about changes in students' perceived self-efficacy. This chapter presents the theoretical background for this study. Social cognitive theory and self-efficacy theory are examined and strategies to maximize efficacy are presented. Experiential education and adventure education are discussed as an introduction to challenge courses. The elements of challenge courses are discussed, as well as benefits, challenges, and strategies to maximize the effectiveness of challenge course education. Finally, the rationale for using only elements of challenge courses (i.e., group initiatives) is evaluated.

Social Cognitive Theory

Social cognitive theory views individuals as pro-active influencers of their own lives, capable of controlling their thoughts, actions, motivations and feelings (Bandura, 1999). Every day individuals make decisions based on their judgments of themselves, their environment, the anticipated outcome of their actions, and any number of other factors. Social cognitive theory uses a model of triadic reciprocal causality to represent this inter-relation of personal factors, behavioral patterns, and environmental events in the influencing of individuals actions (Bandura, 1989; 1999).

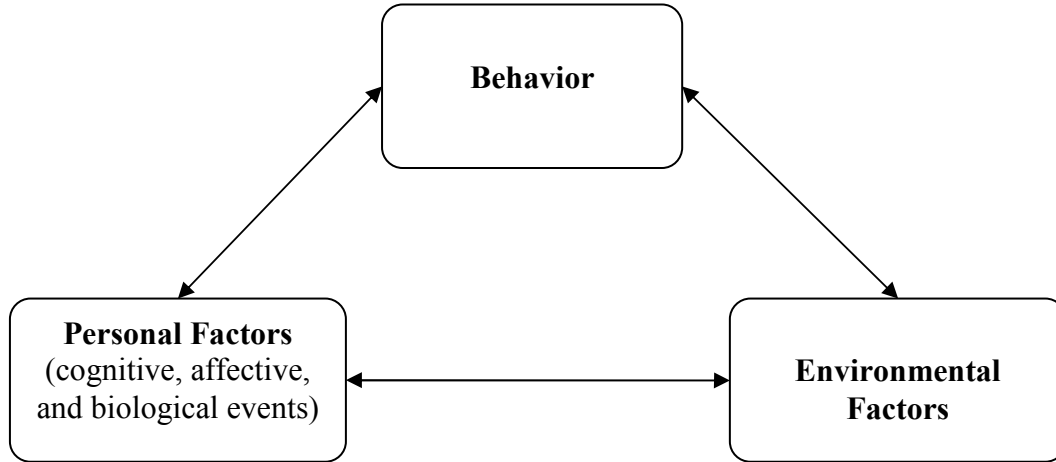


Figure I. Model of Triadic Reciprocal Causality (Pajares, 2002)

Self-Efficacy Theory

Within the construct of social cognitive theory, self-efficacy plays a central role as a determinant of motivation, affect, and action (Bandura, 1989; 2001). The theory of self-efficacy was introduced by Albert Bandura in 1977 in an article titled “Self-efficacy: Toward a Unifying Theory of Behavioral Change.” Perceived self-efficacy, as defined by Bandura (1994), is an individual’s “beliefs about their capabilities to produce designated levels of performance....” (p. 2). These beliefs, of all self-referent thoughts, are the most significant in influencing motivation, affect, and action (Bandura, 1997). If individuals do not believe that they can produce a desired outcome, there is little motivation for them to persevere (Bandura, 2001).

Types of Self-Efficacy

One way self-efficacy can be viewed is in a general sense. General self-efficacy refers to people's overall belief in their capabilities, as defined above (Bandura, 1994). In addition to a general view of self-efficacy, self-efficacy can also be looked at from a more specific framework. Situation-specific self-efficacy is people's beliefs about their capability to perform a particular activity or skill. According to Bandura, "perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given levels of attainments" (1989). These attainments can be nearly any task in which a person might endeavor. For example, studies have been conducted on exercise self-efficacy (Taylor-Piliae, & Froelicher, 2004), and even more specifically, self-efficacy related to certain exercises (Chen, 2004).

Dimensions of Self-Efficacy

Self-efficacy varies in three different dimensions. First, efficacy expectations differ in magnitude, or levels of difficulty. One person's efficacy expectations may only encompass simpler tasks, while another's may include more daunting ones (Bandura, 1977). The second way in which efficacy expectations differ is in generality. Some experiences may give a general sense of efficacy that applies to other situations, while other events may create only a specific efficacy expectation (Bandura, 1977; McGowan, 1986). Finally, efficacy expectations differ in strength. Strong efficacy beliefs may allow one person to persevere despite disconfirming circumstances, while another person's efficacy

beliefs might be erased by these same circumstances (Bandura, 1977; McGowan, 1986).

Sources of Self-Efficacy

Performance accomplishments. There are four sources of self-efficacy expectations. The first source is performance accomplishments. When individuals successfully perform tasks, their mastery expectations are elevated. Mastery experiences are the most influential in developing a person's self-efficacy (Bandura, 1994; 1999; Pajares, 2002). Mastery expectations are most easily influenced early on in skill acquisition (Bandura, 1977; 1999). Therefore, it is important to begin with small, structured, attainable steps in order to build mastery expectations. Such guided treatment can quickly provide psychological changes (Bandura, 1994) and will give one the determination to overcome occasional failures (Bandura, 1977).

Vicarious experiences. Vicarious experiences are a second source of self-efficacy expectations. An individual can have heightened self-efficacy beliefs after watching another individual successfully model a performance without adverse consequences (Bandura, 1977; 1994; 1999). Compared with mastery experiences, vicarious experience is a less dependable source of information because it relies on social comparison rather than personal accomplishment (Bandura, 1977).

Verbal persuasion. Another way to strengthen someone's efficacy beliefs is through verbal persuasion (Bandura, 1977; 1994; 1999). This method is used frequently because it is easy and readily available. The effectiveness of verbal

persuasion depends on the credibility of the persuader (Bandura, 1977). One can more easily undermine another's personal efficacy through verbal persuasion than increase it (Bandura, 1994).

Physiological states. Physical and emotional states serve as a final source of efficacy beliefs (Bandura, 1977; 1994; 1999; 2001). Stress and tension are interpreted as signs of vulnerability and tend to lower self-efficacy, while the absence of such feelings may result in expectations of success (Bandura, 1977; 1994). Therefore, self-efficacy can be increased by reducing individuals' emotional states and helping them to better interpret physical responses (Bandura, 1994).

Effects of Self-Efficacy

Cognitive processes. Self-efficacy expectations affect cognitive processes. For example, people with high self-efficacy visualize successful performances, set challenging goals, are more effective in managing their environment, and are more analytic, strategic, optimistic, and determined (Bandura, 1989; 1994; 1997; 1999; 2001). On the other hand, those with low self-efficacy are more inclined to visualize failure, dwell on things going wrong, are more erratic in their thinking, have lower aspirations, deteriorating performance, and a pessimistic outlook (Bandura, 1989; 1994; 1997; 1999; 2001).

Motivational processes. Efficacy beliefs also affect motivation, determining how much time individuals will spend on a problem, how much effort they will put into it, and how resilient they will be (Bandura, 1977; Pajaras, 2002). Individuals with high efficacy are more motivated because they see their

failures as a result of insufficient effort, poor strategies, or bad circumstances. Individuals with low self-efficacy tend to attribute their failure to low ability (Bandura, 1999).

Affective processes. Affective processes are also influenced by efficacy beliefs. The amount of stress, anxiety, and depression that people have is determined, in part, by their coping efficacy (Bandura, 1989; 1997). One major source of distress for some people is the inability to turn off disturbing thoughts. Perceived coping self-efficacy and thought control efficacy can reduce this behavior (Bandura, 1994). Moreover, individuals with high self-efficacy are able to remain calm when dealing with difficult circumstances (Pajares, 2002).

Choice processes. Finally, efficacy beliefs affect the choices that people make in their lives. People have the opportunity to choose their environments, and ultimately what they may become (Bandura, 1999; 2001). Individuals with higher self-efficacy are likely to have greater success in life because they are more likely to consider a larger range of careers and to better prepare themselves for them (Bandura, 1994).

Cognitive Processing of Efficacy Information

People process information regarding their efficacy differently. Individuals vary on the indicators of efficacy they attend to and use in processing their personal efficacy (Bandura, 1999). For example, the following are a few indicators that individuals may base their efficacy on: difficulty of the task, amount of assistance received, effort expended, conditions, emotional and physical state, and amount of time. Focusing on different indicators will result in

differing efficacy beliefs. Efficacy beliefs can vary even more due to the fact that people differ in the way they cognitively integrate this information to form their perceived self-efficacy (Bandura, 1999).

Generalization of Self-efficacy

Enhanced self-efficacy in a particular realm does not affect only that particular area, but tends to transfer to other situations (Bandura, 1998). Self-efficacy generalizes most naturally to similar activities; however, it transfers to activities that are substantially different as well (Bandura, 1997). In other words, an increase in efficacy in one skill will cause one to have a greater general sense of efficacy that can translate into higher efficacy in other skills.

Structuring Experiences to Maximize Efficacy

Activities can be structured to have the greatest potential for increased self-efficacy. Mastery experiences have the greatest effect on efficacy beliefs; thus, guided mastery experiences have the most promise for increasing efficacy. These experiences should be structured to build coping skills and a belief in one's ability to control potential threats (Bandura, 1994). These experiences should be designed for the individual to experience success (Bandura, 1994). As the individual progresses, additional help and support should be withdrawn and the challenge of the activities should increase (Bandura, 1977). Such guided mastery experiences can produce significant psychological changes in a short time by reducing anxiety and stress and creating positive attitudes (Bandura, 1994).

Experiential Education

Experiential education is an approach that utilizes direct experience and reflection as a means of increasing the knowledge and skills of participants (Breunig, 2005). Experiential education is believed to lead to better learning and retention than traditional methods of instruction (Goldenberg et al., 2000). The practice of learning by experience is in no way a new concept; however, over the last century there has been growing interest in the benefits of such an educational process. For example, the Association of Experiential Education, which was formed in 1975, now consists of over 670 organizations (Attarian, 2001).

Adventure Education

Adventure programs are one form of experiential education. Adventure programs go back as far as the outdoor camping movement, where organized outdoor group programs were developed by schools and organizations (Hatch & McCarthy, 2005). The introduction of Outward Bound in 1962 marked the beginning of the adventure education movement in North America (Attarian, 2001). As the movement grew, an increasing variety of adventure education programs formed. Programs began focusing their curriculum to niche markets such as corporate, educational, therapy, and recreational groups.

Challenge Courses

Most adventure education programs utilize challenge courses, or components of challenge courses as a part of their curriculum. Challenge courses are usually made up of several or all of the following components: socializing games, group initiatives, low elements, and high elements (Wolfe & Samdahl,

2005). Socializing games are usually used at the beginning of a program to help people within a group get to know each other. Group initiatives consist of group problem solving activities in which individuals must learn to work together to accomplish a common goal. Low elements consist of problem solving activities using pre-constructed equipment that is on or near the ground (Wolfe & Samdahl). High elements usually take place 20-40 feet above the ground and require individuals to overcome their fears in order to accomplish a task (Wolfe & Samdahl).

Benefits of Challenge Courses

A number of benefits can result through the use of challenge courses. Research has found that challenge courses can improve communication skills, critical thinking, decision making, planning, cooperation, confidence, coordination, agility, expression of thoughts and feelings (Goldenberg et al., 2000), moral and ethical reasoning (Smith, Strand, & Bunting, 2002), self-efficacy, hope, group cohesion (Hatch & McCarthy, 2005), teambuilding (Hatch & McCarthy; Socha, Potter, & Downey, 2003), mood (Hatch & McCarthy; Kanters, Bristol, & Attarian, 2002), motivation, confidence, goal achievement, self-awareness, interpersonal relationships (Holman & McAvoy, 2005), self-esteem, leadership, teamwork, and trust (Goldenberg et al.; Hatch & McCarthy). Challenge courses can also help people overcome preconceived personal limitations and understand and respect individual differences (Goldenberg et al.).

Long-term Benefits of Challenge Courses

Some authors (e.g., Wolfe & Samdahl, 2005) have questioned whether the benefits resulting from challenge courses are long-term. According to Hatch and McCarthy (2005), there have only been four long-term studies of challenge courses. These four studies produced contradictory findings. One study showed continued improvements after four months, one showed that scores declined after three months if supportive procedures were not in place, and two other studies showed that benefits were maintained after two months. According to Hatch and McCarthy, “Without empirical evidence for the effectiveness of challenge courses and other adventure education programs, claims of these programs’ utility rely largely on anecdotal evidence and articles published in newsletters or training materials...” (p. 248).

Although there is a lack of overwhelming evidence that long-term benefits are associated with experiential education, there have been several studies that have found lasting effects. Neil and Richards (1998) concluded that the effects resulting from outdoor education do persist following the program. Propst and Koesler (1998) found that an outdoor leadership program was effective in increasing self-efficacy in both the short- and long-term, though the self-efficacy scores taken a year later were significantly lower than those taken immediately following the program. Paxton and McAvoy (2000) found that the self-efficacy levels of participants not only increased during a 21 day wilderness trip, but that efficacy continued to rise for up to six months following the adventure.

Maximizing the Benefits of Challenge Courses

There are several strategies that can be used to ensure that challenge courses are effective in bringing about desired outcomes. First, the program should be well organized and focus on providing educative experiences. The activities should be challenging but achievable. To achieve a proper level of challenge, mastery, and success, activities should increase incrementally in difficulty. Finally, allowing participants to set individual and group goals can lead to greater feelings of success (McKenzie, 2000).

The size of the group and the length of the program can also affect outcomes. Neil and Richards (1998) found that longer programs were the most effective. Groups should have between 7 and 15 members as this is large enough for conflict, but small enough to enable resolution and avoid cliques (McKenzie, 2000).

It is important for the participants to perceive value in the activities in which they are participating and to feel a sense of personal empowerment throughout the program (Sibthorp & Arthur-Banning, 2004). When participants can see the relevance or purpose of the activities they will exhibit greater effort and likely get more out of the experience (Sibthorp & Arthur-Banning).

Narrowing the Scope of the Challenge Course Curriculum

It may not always be practical to use all of the traditional aspects of a challenge course program. Some activities may be too costly or time consuming. Kanters et al. (2002) found that many of the same outcomes can be achieved after narrowing the activities to specific initiatives with specific objectives. In other

words, a program does not need to include all of the traditional challenge course elements to remain effective. This affords programmers greater flexibility as they can pick and choose initiatives that fit their schedule and provide the outcomes they desire. This was the method used for this study. Due to time, logistical, and budgetary constraints, it would not be feasible to do a traditional challenge course program with every leisure skills class. This would especially be true if the curriculum interventions presented in this study were implemented in all of the university leisure skills classes. Instead, specific initiatives were selected to bring about the desired outcomes.

Summary

This study evaluates leisure skills self-efficacy and general perceived self-efficacy of undergraduate students enrolled in leisure skills classes throughout the course of one semester. Self-efficacy has been found by many studies to be a benefit of challenge courses (Blanchard, Poon, Rodgers, & Pinel, 2000; Bollen & Hoyle, 1990; Chin, Salisbury, Pearson, & Stollak, 1999; Glass & Benschhoff, 2002; Hatch & McCarthy, 2005; Propst & Koesler, 1998); however, the transferability and long-term maintenance of these benefits has been brought into question (Hatch & McCarthy; Wolfe & Samdahl, 2005). The addition of the group initiative segments in the classes will provide individuals with opportunities to have mastery experiences in a supportive group environment, geared toward everyone experiencing success and building coping strategies for future problems. The study will examine whether the effects of the group initiatives on efficacy transfer into the situation-specific leisure skills self-efficacy.

CHAPTER III

RESEARCH METHODS

This chapter describes the research methods used in this study. First the population and sample are described. Next, the method of data collection, the procedures, and the variables are discussed. Finally, the instruments used and the method of data analysis are explained.

Population and Sample

The population studied consisted of students enrolled in Clemson University leisure skills classes during the fall semester of 2007. The population was predominately comprised of full-time undergraduate students ages 18-22.

The study looked at four categories of classes: outdoor, traditional sport, fitness and dance. For each of these four categories at least two class subjects were selected. For every class selected at least one section was designated as the control group and at least one section as the treatment group. The treatment and control group for each class was taught by the same instructor and in the same manner, with exception to the periodic group initiatives that were implemented in the treatment group classes. The field hockey class was dropped from the study because the treatment and control classes were combined due to low enrollment. Table I shows the classes involved in the study.

Table I

Classes Involved in the Study

Outdoor	Dance	Fitness	Traditional Sport
Top-rope Climbing	Shag	Pilates	Tennis
Camping/Backpacking	Swing	Core Training	Field Hockey
		Yoga	

Data Collection

Data were collected through a pretest and posttest web-based survey. The university Leisure Skills Program has issued web-based surveys to students for the last several semesters. At the end of the survey, students are prompted to print a confirmation page to turn in to their instructor. Students have the option of completing both surveys, or writing two papers. The completion of the survey or papers is worth 10% of the students' final grade in the class. For this reason, the surveys typically have high response rates. The instruments used in this study were added to the existing leisure skills survey.

On the first day that each class in the study met, the teacher explained the leisure skills survey to the students. A link to the survey was sent to the students by email at the beginning of the semester. Reminder emails were sent out by both the Leisure Skills Program and the leisure skills instructors. The students had approximately one week to complete the survey. The group initiatives were implemented in the next two classes following the one-week survey completion period. The third round of initiatives was conducted in the middle of November. The posttest survey was emailed to students the last week of November.

Procedures

Prior to the start of the fall semester, the leisure skills instructors involved in this study were trained to lead the group initiatives that were implemented in the treatment groups. The instructors met once to learn the initiatives for the first two days of class. For each initiative the instructors first participated in the initiative, then they were shown, step-by-step, how to conduct the initiative. After each initiative potential problems and solutions were discussed. A few days after this training, the instructors practiced implementing the initiatives with a group of graduate students from the university. At this time the instructors were evaluated as they led the initiatives. Guidance and correction was given as needed in order to maintain consistency among the instructors. A final meeting was held in the middle of the semester to learn instruction techniques for the final set of initiatives (see Appendix B). The instructors were briefed on how to conduct their classes in light of the study and were given a booklet containing step-by-step instructions for when and how to implement the group initiatives.

A link to the first survey was sent to students through Clemson Webmail at the start of the fall semester. The students had approximately one week from the first day their class met to complete the first survey and turn in the confirmation page to their instructor for class credit.

Starting with the first full week of class, the leisure skills instructors began following the instructions given in the booklets for implementing the group initiatives in the experiment sections on the days assigned. The group initiatives were added to the class curriculum three times during the semester. The first two

sets of initiatives were implemented in the two classes immediately following the deadline for submission of the pretest survey. These initiatives began with games to help classmates get to know each other better and then progressed to activities that required teamwork and problem solving. For example, the first initiative required the students to learn the names of their classmates as well as an activity that each person enjoyed. The fourth initiative required the students to work together to squeeze onto a small sheet (see Appendix C). The third day of group initiatives was scheduled for the middle of the semester. This was done to reinforce the concepts learned at the beginning of the semester.

The initiatives were designed to maximize student success. For many of the activities the classes set their own goals. After each initiative, the instructor led the class through processing and tied the principles discussed to the leisure skills activity. The initiatives were sequenced so that the tasks became increasingly challenging as the students progressed.

A few weeks prior to the conclusion of the semester a link was emailed to all students in leisure skills classes requesting that they complete the posttest survey. The survey remained open for the remainder of the semester.

Variables

Two independent variables and two dependent variables were used in this study. The first independent variable is study group. This is a nominal measure indicating either treatment or control group. The second independent variable is class type. This variable indicates which type of class is being analyzed (e.g., shag vs. tennis). It is also a nominal measure.

The two dependent variables are interval measures resulting from the change scores from the pretest to the posttest. The first dependent variable is general perceived self-efficacy. General self-efficacy is an individual's belief "about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p.2). The second dependent variable is leisure skills self-efficacy. Leisure skills self-efficacy is an individual's belief about his or her ability to successfully perform the leisure skill in the class in which they have enrolled. This measure will come from the questions in the existing leisure skills survey that measure perceived ability. These questions were adapted from a study by Pelletier (1997) that examined the self-efficacy of first-time skiers.

Instruments

Two instruments specific to this study were used in the data collection. The first instrument is the Leisure Skills Self-Efficacy Scale (Appendix A). This scale was adapted from an instrument used by Pelletier (1997) to assess the abilities of downhill skiers. For this study, the scale was used to assess students' perceptions of their ability to successfully perform the leisure skills in their class. The responses are in the form of a seven-point Likert scale from "not true at all" to "exactly true." This scale included items such as: "I can always manage to solve difficult problems if I try hard enough" and "I am confident that I could deal efficiently with unexpected events."

The second instrument is the General Perceived Self-Efficacy Scale (see Appendix A). This scale is used to measure a person's general perceived ability to

produce desired outcomes. The General Perceived Self-Efficacy scale was used for this measure. This scale has been found to be reliable in 23 nations with Cronbachs alpha ranging from .76 to .90, with the majority being in the high .80's. The validity of the scale has been documented in numerous studies (Schwarzer, 2005). The scale was modified from a four-point Likert scale to a seven-point Likert scale ranging from "not true at all" to "exactly true." This change was made in the scale so that it was consistent with the Leisure Skills Self-Efficacy Scale. This scale included items such as: "I find the activity very easy to perform due to my abilities and techniques."

The survey also gathered demographic data. Demographic data included age, gender, GPR, race, and academic classification. The students were also asked about their length of experience with the leisure skill, their proficiency in the skill prior to the class, their prior experience with group initiatives, the recency of their participation in initiatives, whether they had taken leisure skills classes in the past, and if they plan to take another leisure skills class in the future.

Data Analysis

The data collected through the web surveys were entered into SPSS for statistical analysis. One way analysis of variance (ANOVA) and cross tabulations were used to examine the demographic information. A paired samples t-test was used to evaluate within group variance. An independent samples t-test was used to evaluate the changes in general self-efficacy and leisure skills self-efficacy between the treatment and control groups. An ANOVA was used to evaluate

whether there were significant differences among the class types in the treatment group.

Summary

This quasi-experimental design study collected data on students' general perceived self-efficacy and leisure skills self-efficacy at the beginning of the semester and after the experiment group had completed all the group initiatives at the end of the semester. The sample population was a selection of several different types of leisure skills classes in which two sections are offered. Half of the sections became the control group; the other half underwent the group initiatives. A t-test and ANOVA were used to evaluate the changes in the variables from pretest to posttest.

CHAPTER IV

RESULTS

This chapter presents the results of the study. This chapter begins by describing the method of data cleaning and analysis. Next, the demographic variables, reliability, and analysis within groups are discussed. Finally, the results of the between groups analysis of the hypothesis are given.

Data Cleaning

Data were entered into SPSS (a statistical software package). The data set was cleaned by eliminating unusable data. There were several issues that made the data cleaning difficult. First, students were able to start the survey more than once. Second, students in the study may have been enrolled in more than one leisure skills class and reported answers on the survey for a class that was not in the study. Third, although the survey was only sent to participants in the study, it was possible for other students who were not in the study to participate in the survey by receiving the link from a friend or receiving it in error. Finally, many students did not take both the pretest and the posttest.

The first step in cleaning the data was to remove the data for any students who took the survey for a class that was not in the study. One of the first questions on the survey asked the student to indicate the leisure skills class in which they were enrolled. If they were enrolled in more than one class they were asked to indicate the class for which they were answering the questions. If students indicated a class that was not in the study their data was removed.

After removing unrelated survey data the issue of students taking the same survey multiple times had to be addressed. It is believed that the high incidence of this was due to students forgetting to print the confirmation page after the first completion of the survey and taking the survey again in order to get to the confirmation page at the end. Whenever there were multiple instances of the same user the survey data was inspected. If one instance of the survey was incomplete and another was complete, the incomplete survey was discarded. When there was more than one set of complete data, the first survey was always retained and any additional surveys were omitted.

The last step in cleaning the data was matching pretest and posttest survey data. In order for the data to be useful, both the pretest and posttest data was necessary from each individual. If students did not participate in both surveys their data were omitted from the study.

Because of the nature of online surveys, it is difficult to identify a response rate. Any time a user opens the survey the software makes a record of it, regardless if the survey was completed or even started. As mentioned previously, many students accessed the survey more than once, either because they were reporting for multiple leisure skills classes or because they needed to get to the confirmation page. Prior to any data cleaning, the survey software reported that 414 pretest and 432 posttest surveys had been initiated. After cleaning the data, there were 221 useable pretest and posttest surveys. At the conclusion of the semester, the records indicated that 363 students had completed the leisure skills

courses in this study. Though the overall response rate was actually higher, the effective response rate was 60%.

Data Analysis

Demographic information was collected in both pretest and posttest surveys. The demographic information collected for each participant included race, age, academic classification, GPR, gender, prior participation in the leisure skills activity, prior proficiency in the leisure skills activity, prior experience with group initiatives, recency of group initiative participation, prior participation in leisure skills classes, and plans to take another leisure skills class.

An analysis of the demographic information was conducted to describe the treatment and control groups and to compare the demographic variables between the groups. Table II provides a summary of this information.

Table II

Summary of Demographic Variables

Demographic	Treatment	Control	Difference	Significance
Group Total	110 (49.08%)	111 (50.02%)		
Age	19.89	20	F = .210	p = .647
Gender			$\chi^2 = .399$	p = .528
<i>Male</i>	35 (31.8%)	31 (27.9%)		
<i>Female</i>	75 (68.2%)	80 (72.1%)		
GPR	3.23	3.32	F = 1.044	p = .308
Race				
<i>White/Caucasian</i>	96 (87.3%)	98 (88.3%)	$\chi^2 = .114$	p = .736
<i>African American</i>	8 (7.3%)	7 (6.3%)	$\chi^2 = .116$	p = .733
<i>Asian/Pacific Islander</i>	1 (0.9%)	3 (2.7%)	$\chi^2 = .946$	p = .331
<i>Latino/a</i>	0 (0.0%)	1 (0.9%)	$\chi^2 = .968$	p = .325
<i>Other</i>	2 (1.8%)	1 (0.9%)	$\chi^2 = .376$	p = .540
Academic Classification				
<i>Freshman</i>	17 (15.5%)	16 (14.4%)	$\chi^2 = .001$	p = .978
<i>Sophomore</i>	30 (27.3%)	33 (29.7%)	$\chi^2 = .164$	p = .686
<i>Junior</i>	32 (29.1%)	20 (18.0%)	$\chi^2 = 3.765$	p = .052
<i>Senior</i>	25 (22.7%)	37 (33.3%)	$\chi^2 = 3.079$	p = .079
<i>Graduate Student</i>	5 (4.5%)	4 (3.6%)	$\chi^2 = .125$	p = .723
<i>Other</i>	1 (.9%)	1 (.9%)	$\chi^2 = .000$	p = .995
Prior Involvement in Activity				
<i>Activity is new to me</i>	70 (63.6%)	67 (60.4%)	$\chi^2 = .252$	p = .616
<i>One year or less</i>	24 (21.8%)	25 (22.5%)	$\chi^2 = .016$	p = .900
<i>Two or more years</i>	16 (14.5%)	19 (17.1%)	$\chi^2 = .274$	p = .601
Prior Proficiency in Activity			$\chi^2 = .001$	p = .979
<i>Not – Somewhat proficient</i>	95 (86.5%)	96 (86.4%)		
<i>Moderately – Very proficient</i>	15 (13.7%)	15 (13.5%)		
Prior Participation in LS Class			$\chi^2 = .036$	p = .849
<i>Yes</i>	36 (31.5%)	35 (31.5%)		
<i>No</i>	74 (68.5%)	76 (68.5%)		
Plan to take another LS Class			$\chi^2 = 1.598$	p = .207
<i>Yes</i>	80 (81.6%)	80 (79.2%)		
<i>No</i>	18 (18.4%)	21 (20.8%)		
Prior Group Initiatives			$\chi^2 = .385$	p = .535
<i>Yes</i>	72 (65.5%)	77 (69.4%)		
<i>No</i>	38 (34.5%)	34 (30.6%)		
Group Initiatives in Last Year			$\chi^2 = .365$	p = .546
<i>Yes</i>	56 (50.9%)	52 (46.8%)		
<i>No</i>	54 (49.1%)	59 (53.2%)		

A one-way analysis of variance (ANOVA) was conducted to determine if there was a significant difference in the participants' age by group. The results showed that there was not a significant difference in age between the groups ($F=.21$, $p=.65$). The mean age of the treatment group was 19.89. The mean age of the control group was 20.

A cross tabulation was conducted to determine if there was a significant relationship in participants' gender between groups. The results showed that there was no significant relationship between the groups. Women made up the majority of each group with 68.2% in the treatment group and 72.1% in the control.

A one-way ANOVA was used to see if participants' GPR differed significantly by group. The mean GPR of the treatment group was 3.23 and the mean GPR of the control was 3.32. The ANOVA revealed that there was not a significant relationship in these scores ($F=1.04$, $p=.31$).

A cross tabulation was conducted to see if there was a significant relationship in participants' race between groups. The results showed that there was not a significant relationship in the representation of any of the racial groups in this study. White/Caucasians comprised 87.3% of the treatment group and 88.3% of the control ($\chi^2=.11$, $p=.74$). African Americans made up 7.3% of the treatment group and 6.3% of the control group ($\chi^2=.12$, $p=.73$).

Another cross tabulation was conducted to see if there was a significant relationship between the treatment and control group in participants' academic classification. Graduate students (4.5% and 3.5%) and freshmen (15.5% and 14.4%) were the smallest groups in the study. The treatment group had more

juniors than the control group and the control group had more seniors than juniors, however no significant relationship was found. Cross tabulation was also used to compare participants' prior involvement in the activity. When comparing the treatment and control groups the data revealed that there was not a significant relationship in the participants' prior involvement. The results showed that 63.6% of the treatment group and 60.4% of the control group had enrolled in a leisure skill that was new to them.

Cross tabulation also revealed that there was no significant relationship between the groups in participants' prior proficiency in the activity ($\chi^2=.001$, $p=.98$). Only 13-14% of either group reported being moderately to very proficient in the skill in which they had enrolled.

The study revealed that 68.5% of both groups had never participated in a Clemson University leisure skills class. Approximately 80% of participants plan to take a leisure skills class again. The difference in responses between classes was not significant ($\chi^2=1.60$, $p=.21$).

Lastly, 85.5% of the treatment group and 69.4% of the control group reported that they had participated in group initiatives in the past. Of those who had participated in group initiatives, 50.9% of the treatment group and 46.8% of the control group indicated that they had participated in group initiatives within the last year. A cross tabulation revealed that there was no significant relationship between the groups for these responses.

Reliability

Reliability tests were run on the pretest general self-efficacy and leisure skills self-efficacy items. The general self-efficacy scale had a Cronbachs alpha of .882. The leisure skills self-efficacy scale had a Cronbachs alpha of .917.

Analysis Within Groups

A paired samples t-test was conducted on the pretest and posttest scores for general self-efficacy and leisure skills self-efficacy for both groups. The results for the control group showed that there was no significant difference in pretest and posttest scores for general self-efficacy ($p=.16$). However, there was a significant difference in leisure skills self-efficacy scores ($p=.00$). The results are shown in Table III.

Table III

Paired Samples T-Test for Control Group General Self-Efficacy and Leisure Skills Self-Efficacy

	Mean		t	p
	Pretest	Posttest		
Pair 1: PreGSE – PostGSE	57.69	58.45	1.422	.158
Pair 2: PreLSE – PostLSE	59.40	63.64	4.938	.000

The paired samples t-test for the treatment group showed that there was no significant difference in general self efficacy from pretest to posttest ($p=.974$).

There was a significant difference in leisure skills self-efficacy from pretest to posttest ($p=.008$). The results are shown in Table IV. Both the treatment and control groups had significantly higher leisure skills self-efficacy scores at the conclusion of the semester.

Table IV

Paired Samples T-Test for Treatment Group General Self-Efficacy and Leisure Skills Self-Efficacy

	Mean		T	p
	Pretest	Posttest		
Pair 1: PreGSE – PostGSE	58.71	58.73	.032	.974
Pair 2: PreLSE – PostLSE	62.25	64.32	2.724	.008

Analysis Between Groups

For research question A, an independent samples t-test was performed on the treatment and control groups. The independent variable was the group. The dependent variable was the change score for general self-efficacy or leisure skills self-efficacy. For research question B, a one-way analysis of variance (ANOVA) was performed. The independent variable was class type in the treatment group (outdoor, fitness, dance, or traditional sport). The dependent variable was the change score for either general self-efficacy or leisure skills self-efficacy. All analyses were performed using SPSS.

Research Question A

Research Question A stated: Can the addition of group initiatives in Clemson University leisure skills classes increase participants' general perceived self-efficacy and leisure skills self-efficacy?

H_{0A1}: There will be no significant difference in the change in general self-efficacy between the control and treatment groups.

An independent samples t-test was performed on the general self-efficacy change scores comparing the treatment and control group. The independent variable was the group assignment. The dependent variable was the general self-efficacy change score. The change scores for general self-efficacy did not vary significantly between the treatment and control groups ($p=.343$). Therefore, the study failed to reject H_{0A1} . The results are summarized in Table V.

Table V

Independent Samples Test of Change in General Self-Efficacy

	Mean Difference	T	p
Change in General Self-Efficacy	.739	.950	.343

H_{0A2}: There will be no significant difference in the change in leisure skills self-efficacy between the control and treatment groups.

An independent samples t-test was performed on the leisure skills self-efficacy change scores of the treatment and control group. The independent

variable was the group assignment. The dependent variable was the leisure skills self-efficacy change score. The change scores for leisure skills self-efficacy did not vary significantly between the treatment and control groups ($p=.060$).

Therefore, the study failed to reject H_{0A2} . The results are summarized in Table VI.

Table VI

Independent Samples Test of Change in Leisure Skills Self-Efficacy

	Mean Difference	T	p
Change in Leisure Skills Self-Efficacy	2.171	1.890	.060

Research Question B

Research Question B stated: Does the change in general self-efficacy and leisure skills self-efficacy differ based on the class type?

H_{0B1}: There will be no significant difference in the change in general self-efficacy among class types in the treatment group.

A one-way analysis of variance (ANOVA) was performed on the general self-efficacy change scores of the treatment group. The independent variable was the class type (outdoor, fitness, dance, traditional sport). The dependent variable was the general self-efficacy change score. The change scores for general self-efficacy did not vary significantly among the class types ($p=.098$). Therefore, the study failed to reject H_{0B1} . The results are summarized in Table VII.

Table VII

Analysis of Variance of General Self-Efficacy Among Class Types

	Mean Square	F	p
Change in General Self-Efficacy	73.862	2.153	.098

H_{0B2} : There will be no significant difference in the change in leisure skills self-efficacy among class types in the treatment group.

A one-way analysis of variance (ANOVA) was performed on the leisure skills self-efficacy change scores of the treatment group. The independent variable was the class type (outdoor, fitness, dance, traditional sport). The dependent variable was the leisure skills self-efficacy change score. The change scores for leisure skills self-efficacy did not vary significantly among the class types ($p=.268$). Therefore, the study failed to reject H_{0B2} . The results are summarized in Table VII.

Table VIII

Analysis of Variance of Change in Leisure Skills Self-Efficacy Among Class Types

	Mean Square	F	p
Change in Leisure Skills Self-Efficacy	84.046	1.331	.268

Summary

This study attempted to determine if group initiative curriculum interventions are effective in raising students' general and leisure skills self-efficacy. The secondary purpose of the study was to determine if there was a difference in response to the curriculum interventions among various class types. Hypotheses A₁ and A₂ examined whether there was a significant difference between the treatment and control group in the change in general self-efficacy and leisure skills self-efficacy. A two-tailed t-test revealed that there were no significant differences between the treatment and control group for either general self-efficacy or leisure skills self-efficacy.

Hypotheses B₁ and B₂ examined whether there was a significant difference in the change in general self-efficacy and leisure skills self-efficacy among class types in the treatment group. A one-way analysis of variance (ANOVA) showed that there was no significant difference between class types for either general self-efficacy or leisure skills self-efficacy.

Table IX

Summary of Results

Research Questions & Hypotheses	Findings
<p>RQ A. Can the addition of group initiatives in Clemson University leisure skills classes increase participants' general perceived self-efficacy and leisure skills self-efficacy?</p> <p>H_{0A1}: There will be no significant difference in the change in general self-efficacy between the control and treatment groups.</p> <p>H_{0A2}: There will be no significant difference in the change in leisure skills self-efficacy between the control and treatment groups.</p>	<p>The addition of group initiatives did not significantly increase participants' general self-efficacy or leisure skills self-efficacy.</p> <p>Fail to Reject - There was no significant difference in the change in general self-efficacy between groups.</p> <p>Fail to Reject - There was no significant difference in the change in leisure skills self-efficacy between groups.</p>
<p>RQ B. Does the change in general self-efficacy and leisure skills self-efficacy differ based on the class type?</p> <p>H_{0B1}: There will be no significant difference in the change in general self-efficacy among class types in the treatment group.</p> <p>H_{0B2}: There will be no significant difference in the change in leisure skills self-efficacy among class types in the treatment group.</p>	<p>Changes in general self-efficacy and leisure skills self-efficacy did not differ significantly among class types.</p> <p>Fail to Reject – There was no significant difference in the change in general self-efficacy among class types in the treatment group.</p> <p>Fail to Reject – There was no significant difference in the change in leisure skills self-efficacy among class types in the treatment group.</p>

CHAPTER V

DISCUSSION

The purpose of this study was to determine if the addition of group initiatives to leisure skills classes would have a significant effect on participants' general and leisure skills self-efficacy. This chapter summarizes the study and findings and makes conclusions and recommendations for the Leisure Skills Program and for future research.

Summary of the Study

Current literature on the subject of experiential education, adventure education, and challenge courses reveal that one potential benefit of such programs is an increase in self-efficacy (Blanchard, Poon, Rodgers, & Pinel, 2000; Bollen & Hoyle, 1990; Chin, Salisbury, Pearson, & Stollak, 1999; Glass & Benschhoff, 2002; Hatch & McCarthy, 2005; Propst & Koesler, 1998). Kanters et al. (2004) demonstrated that specific initiatives can be selected from the challenge course curriculum instead of using all elements of a typical challenge course. Literature on self-efficacy states that self-efficacy can generalize from one activity to another (Bandura, 1997; 1998). The first purpose of this study was to see if the addition of group initiatives to leisure skills classes has an effect on students' general self-efficacy and if these efficacy beliefs would transfer to the students' leisure skills self-efficacy. The second purpose of the study was to determine if the effects of the group initiatives varied by class type.

The Clemson University Leisure Skills Program was supportive of the study and was interested in whether the addition of group initiatives would be beneficial for its classes. The program provided information on potential classes and recommended instructors for the study. The Leisure Skills Program also assisted by sending emails to the students with the survey link.

The Clemson University Outdoor Lab staff assisted in many ways. First, they provided assistance in selecting group initiatives that would be appropriate for the study. Second, they trained the leisure skills instructors to facilitate the initiatives. Third, they provided the instructors the opportunity to practice facilitation with another group visiting the Lab.

Classes were selected to reflect four class types: outdoor, fitness, dance, and traditional sport. For each class type at least two different classes were selected. For each class selected for the study, at least one section of the class was randomly designated as the treatment class and one was designated as the control. Due to a lack of interest in field hockey, the treatment and control classes were merged. Because of this field hockey was dropped from the study.

The study utilized the existing pretest and posttest leisure skills surveys used by the program to collect data from participants. The web-based surveys consisted of multiple instruments and took approximately 30 minutes to complete. The students received emails from the Leisure Skills Program providing the link to the surveys. After data cleaning the useable responses represented 60% of the study population.

The instructors participated in facilitator training prior to the start of the semester. Following the training, the instructors had the opportunity to practice the facilitation techniques they learned with a group of graduate students. A second training session was held in the middle of the semester to teach the third set of initiatives.

The instructors were given binders with step by step instructions for each group initiative and the subsequent processing. After each initiative the instructors recorded in the binder the level of success, time, processing responses, and any issues that arose during the initiative. These binders were evaluated to see if all of the groups were able to complete the initiatives and to see whether there were any problems or unusual circumstances during the initiatives.

Two problems arose during the implementation of the study. First, on the second day that group initiatives were conducted some students voiced their disappointment in participating in them. They later explained that they had come to class expecting to do the leisure skill. They said that if they had been told in advance that they would be doing initiatives they would not have been disappointed when they arrived. As a result of this situation, the instructors were told to inform their classes of the date of the final session of initiatives.

The second objection was in regards to the classes being videotaped. Originally, each class in the treatment group was to be videotaped at least once in order to provide some observational information about the study as well as to compare instructor facilitation techniques. Several students strongly objected to being taped when a camera was present for the first time. As a result no additional

classes were taped as it appeared that having a video camera present in the classes would have a negative effect on the study.

The leisure skills instructors were enthusiastic about the group initiatives and thought that they were of benefit to their classes. They reported the students being more comfortable and sociable with each other. Some instructors chose to use several of the initiatives for their classes in the spring because of the results they saw from the study.

Results

The within group analysis between pretest and posttest scores showed no significant difference in general self-efficacy for the control and treatment groups. The analysis did show a significant difference in leisure skills self-efficacy for both the treatment and control group. This significant increase in leisure skills self-efficacy shows that, regardless of group initiatives, the classes are effective in increasing students' leisure skills self-efficacy.

The purpose of the between groups analyses was to determine if significant differences existed between the control and treatment groups. No significant differences in the change in general self-efficacy or leisure skills self-efficacy were found for any of the between group analyses.

Conclusions

The data revealed that students' leisure skills self-efficacy increased from the beginning of the semester to the end of the semester for both the treatment and control groups. General self-efficacy did not change significantly for either group. Based on the data, this study revealed that group initiative curriculum

interventions did not have a significant impact on general self-efficacy or leisure skills self-efficacy when compared to the control group. Furthermore, the study did not show that the effects of the group initiatives differed based on the class types. The data support the four null hypotheses.

Discussion

This study did not find any significant differences in the classes that took part in group initiatives. Therefore, the possibility that the inclusion of group initiatives in collegiate leisure skills classes does not have a significant effect on efficacy beliefs must be considered.

Although the data do not indicate that there were any significant differences between groups, the possibility exists that despite the findings the group initiatives did have an effect on either general self-efficacy or leisure skill self-efficacy. The findings in this study may have been affected, in part, by four conditions: issues of measurement validity, study design, implementation, and population characteristics. There are two issues that may have affected the measurement validity. First, due to the design of the study, the leisure skills self-efficacy questions were broad in nature. Since the same instrument was used for a variety of classes the items had to be broad and applicable to all classes. A better measure of leisure skills self-efficacy might have been obtained by using specific items related to each leisure skills class; however, such an adjustment of the instrument would have limited the capability to compare different classes. Second, the use of a pretest to measure the student's leisure skills self-efficacy prior to the class may have resulted in inaccurate measures. The demographic data

revealed that 62% of the participants had enrolled in a class in which they had no prior experience. It cannot be assumed that students would be capable of accurately judging their abilities in the skill without any prior knowledge or experience in the activity. Research shows that when respondents do not have adequate knowledge concerning the pretest items they tend to either overestimate or underestimate their abilities in their responses (Pratt, McGuigan, & Katzev, 2000; Davis, 2003; Lam & Bengo, 2003). When the time comes for the participants to take the posttest their standard of measure has changed due to their familiarity with the activity.

Several elements in the design of the study may have also affected the results of the study. First, of the three instructors who participated in the study only one had prior experience in facilitating group initiatives. Although the instructors went through a brief training session, it is possible that more experienced facilitators may have been able to better lead and process the activities. Second, due to the design of the study the instructors were limited to specific questions for the time of processing following each group initiative. This restriction on the processing may have limited the internalization and generalization of the principles taught in the initiatives because the instructors were unable to discuss situations specific to their classes. Third, the timing of the surveys likely had a part in the lack of significant change. Research shows that college students typically have higher levels of efficacy at the beginning of the semester and lower efficacy towards the end of the semester when final papers and exams are due (Kanters et al., 2002). Because the pretest was taken at the

beginning of the semester and the posttest was taken during the last few weeks, it is likely that the efficacy scores were naturally lower at the time of the posttest, which would have suppressed the effects of the group initiatives. Finally, because a posttest was not administered immediately following the initiatives, the immediate effects of the group initiatives cannot be known. It is possible that the initiatives were successful in raising efficacy expectations in the short term but that these effects wore off before the conclusion of the semester.

Another potential explanation for the failure of the study to show significant changes has to do with the implementation of the study. First, despite instructions otherwise, one of the instructors told many of the classes in the study that half of the sections were participating in group initiatives as a part of a research project. The participants' knowledge of the study may have affected their responses on the posttest survey. Second, it is possible that the group initiatives that were selected were not effective. Nearly all of the classes that participated in the group initiatives were able to successfully complete all of the challenges. It is possible that more difficult initiatives could have been selected in order to provide a greater challenge to the students.

One last factor that may have affected the results of the study is the characteristics of the study population. The fact that over half (50.9%) of the respondents in the treatment group indicated that they had participated in group initiatives within the last year may explain why no significant changes were seen. It is possible that their recent experience with group initiatives may have resulted in already increased efficacy prior to the pretest. It is also a possibility that the

prior group initiative experience may have resulted in a lack of interest or involvement by the students.

Recommendations

This study found that the addition of group initiatives to the leisure skills course curriculum did not have a significant effect on general self-efficacy or leisure skills self-efficacy. Taking into consideration the elements discussed that may have limited the results of the study, it is recommended that another study is conducted with several modifications. First, in addition to the final posttest, the study should be designed with a posttest immediately following the group initiative sessions. This would allow for the immediate effects of the initiatives to be measured as well as any change in efficacy by the end of the semester. Second, the use of a retrospective pretest would provide a better estimation of students' changes in ability over time. Third, in addition to the leisure skills self-efficacy scale used in this study, the addition of a scale that more specifically addresses individual skills for each class might provide a better estimation of leisure skills self-efficacy. Finally, the group initiatives used should provide a greater challenge for the students.

Further study is needed before considering the addition of group initiatives into the general leisure skills course curriculum. Two of the instructors in this study voluntarily chose to implement group initiatives into their classes the following semester because they felt they had a positive impact on their classes. Additional studies should look into the effect of group initiatives on other variables such as teamwork and cohesion.

APPENDICES

Appendix A
Survey Instruments

General Perceived Self-Efficacy Scale

Introduction Text: For the following questions, please indicate to what extent you find the statements true.

Response Options: Not true at all, Somewhat untrue, A little untrue, Undecided, A little true, Somewhat true, Exactly true

1. I can always manage to solve difficult problems if I try hard enough.
2. If someone opposes me, I can find the means and ways to get what I want.
3. It is easy for me to stick to my aims and accomplish my goals.
4. I am confident that I could deal efficiently with unexpected events.
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
6. I can solve most problems if I invest the necessary effort.
7. I can remain calm when facing difficulties because I can rely on my coping abilities.
8. When I am confronted with a problem, I can usually find several solutions.
9. If I am in trouble, I can usually think of a solution.
10. I can usually handle whatever comes my way.

Leisure Skills Self-Efficacy Scale

Introduction Text: Please mark the answer that best describes your feeling about the leisure skills activity that you are currently enrolled in.

Response Options: Not true at all, Somewhat untrue, A little untrue, Undecided, A little true, Somewhat true, Exactly true

1. Due to my resourcefulness, I can deal with most obstacles that I encounter while engaging in this activity.
2. I find the activity very easy to perform due to my abilities and techniques.
3. I can remain calm while facing difficulties during this activity because I can rely on my abilities.
4. I am confident that I will be able to utilize verbal instruction to improve my abilities.
5. When confronted with a potential problem while engaging in the activity I can usually find several solutions.
6. After viewing an instructor perform a technique, I feel confident that I will be able to execute the move being taught.
7. No matter what comes my way while engaging in the activity, I'm usually able to handle it when verbally instructed on what to do.
8. I feel comfortable and in control when I am participating in the activity.
9. Seeing another person successfully participate in the activity increases my belief that I can be successful in the activity as well.
10. I feel more confident in my abilities to perform the activity after hearing others describe what to expect while participating.
11. I find that activity to be very relaxing and enjoyable because of my abilities.

Appendix B

Timeline

Table B-I: Timeline of Events

Date	Event
August 19	LS Instructor Training (Set 1 and 2)
August 23	Classes begin
August 23	Pretest survey link emailed to students
August 29	Last day to add a class
August 28	Pretest survey link and reminder emailed to students
August 30	All Pretest surveys completed before this date
Aug. 30 – Sept. 5	Group Initiatives Set 1 and 2
September 5	Last day to withdraw or drop a class with a “w”
September 23	LS Instructor Training (Set 3)
October 9-13	Group Initiatives Set 3
November 22-24	Thanksgiving Holiday
November 25	Posttest survey link emailed to students
November 30	Posttest survey link and reminder emailed to students
December 5	Posttest survey link and final reminder emailed to students
December 8	Last day that the posttest survey was available for students
December 9-16	Examinations

Appendix C
Group Initiatives

Initiative 1: Name Game

PROPS: None

TIME: 10 minutes (depending on group size)

DESCRIPTION:

Everyone stands in a circle.

The first person says their first name and an activity they like to do. As they say the name of the activity they act the activity out. Ex.: “Bob...Baseball” (pretends to throw a ball).

Everyone in the group then repeats together “Bob...Baseball” and pretends to throw a ball.

The next person in the circle then says their name and an activity (and acts out the motion). Ex. “Carrie...Photography” (takes a picture).

Everyone in the group then says “Bob...Baseball (throw a ball),
Carrie...Photography (take a picture)”

The group will not repeat everyone’s name – One person will share their name and activity, then the group will say the name/activity of the two people to that persons right and end with the person who just shared their name (no more than 3 names/activities will be said each time)

This continues until everyone in the group has shared their name and a favorite activity.

At the very end have the group go all the way around the circle saying each name and activity.

PROCESSING QUESTIONS: None

Initiative 2: Handshakes

PROPS: None

TIME: 5-10 minutes

DESCRIPTION:

Facilitator has everyone find a partner. Introduce yourselves and remember who that partner is. This will be your “high five” partner so they give each other a high five.

Facilitator tells everyone to find a new partner. Introduce yourselves and remember who that partner is. This will be your “low five” partner so give each other a low five.

Facilitator tells everyone to find a new and different partner. Introduce yourselves and remember who that partner is. This will be your “pinkie shake” partner so give each other a pinkie shake (connect their pinkies and shake).

Facilitator tells everyone to find a fourth and last partner (new & different). Introduce yourselves and remember who that partner is. This will be your “fish shake” partner so give each other a fish shake (go like you’re going to shake hands but lightly slap each others’ lower arms and raise one leg out in back).

Now that everyone has 4 different partners, facilitator tells them to start moving around area. Then facilitator yells out “High five” and they must find their “high five” partner. Facilitator keeps yelling out one of the four until they have gone through each a couple of times.

PROCESSING: Ask if anyone knows the first names of all 4 partners.
(No real processing).

Initiative 3: Have You Ever?

PROPS: Paper Plates (one for each participant)

TIME: 10 minutes

DESCRIPTION:

Every participant puts their plate on the ground in front of them. One person starts in the center (usually facilitator). That person asks the question “Have you ever_____?” (example: been swimming, etc.) It must be something person in the center has done. If anyone has done what was asked, they must move to a different plate.

Rules:

No running. No fighting.

Cannot move to the plate on either side of you.

Can't take the plate with you when you move.

After 1-2 practice runs, then start taking plates away so more people end up in center and have to come up with something everyone has done.

PROCESSING:

Share some interesting things that you found you have in common with others?

Initiative 4: All Aboard

PROPS: A full size sheet folded into a fourth of original size depending on size of group. Should be about 2-3 feet square.

TIME: 10-25 minutes (depending on group size/ability)

DESCRIPTION:

Explain activity: Everyone on the team must have one foot on the platform (sheet) and the other foot off the ground (or in the air) all at the same time long enough to sing one verse of a song of their choosing.

Ask if anyone in the group has done this activity before. Those that have can participate but not give any advice (they may answer questions asked by teammates).

If the group succeeds quickly (10 minutes or less) ask them to do it a very different way using the same instructions (give them another 10 minutes or so).

(Good activity to use “out of the box thinking”. There are many ways to accomplish this. Standing up is only one. If they choose to sit on the ground, that follows the rules too.)

PROCESSING:

How did the team decide on what song to sing?

At what other times could you use this decision making process?

Were there any examples of creativity or “out of the box” thinking? If so, what were they?

During this leisure skills class, when will you be able to use your creativity or “think outside the box”?

Initiative 5: Moon Ball

PROPS: Beach Ball

TIME: 10-15 minutes

DESCRIPTION:

Start out with group in a circle. Facilitator will say “I’m going to toss the ball in the air. Every participant on this team must hit the ball once before anyone can hit it a second time.”

Ask the group to set a goal of how many times they think it will be hit before it falls to the ground. The ball cannot be caught and then hit. Facilitator counts out loud on each hit.

Note: If they want to change how they stand, let them. If they ask you to throw it to a particular person first, do it. This helps teach “ask for what you need”. If they don’t ask, then throw the ball in a different direction every time.

PROCESSING:

What was the first step taken in order to reach your goal?

What obstacles were there or could there have been to keep you from reaching your goal?

What types of obstacles might you encounter in this leisure skills class?

What types of goals can you as a team set for this class?

Initiative 6: Six Count

PROPS: None

TIME: 5 minutes

DESCRIPTION:

Group should form a circle. Facilitator asks if anyone knows what 6 count is. You may get all sorts of answers but it is simply counting to six.

Facilitator then has group hold out left arm, shake it out, and wave at someone across from them then put it down.

“We’re now going to do six motions with the left arm beginning on one and stopping on six.” Left arm goes up and down to the count of six-go slowly at first then faster. If they don’t stop on six, continue to do it until they do.

Facilitator then has group hold out right arm, shake it out, and wave at someone across from them then put it down.

“We’re now going to do six motions with the right arm beginning on one and stopping on six.” Right arm goes up (on 1 & 4), to side (on 2 & 5), then down to side (on 3 & 6) to count of six-same as above

“We’re now going to do both arms simultaneously.” Facilitator should do it fairly quickly and listen for the laughter. Can also have them go very slowly next time to practice and then fast again.

This activity is used as a warm-up and to get people loosened up and laughing. They do have to work together in starting on 1 and ending on 6. Most of the time someone will continue going.

PROCESSING: None

Initiative 7: Deck of Cards

PROPS: Deck of Cards (arranged beforehand)

TIME: 10 minutes

DESCRIPTION:

Preparation: Facilitator arranges cards in order from aces to kings with each rank (number) in Hearts, Diamonds, Spade, and Clubs, for example, the Aces are stacked Ace of Hearts, Ace of Diamonds, Ace of Spades, Ace of Clubs. Stack rest of cards the same way (2 of hearts, 2 of diamonds, etc.)

Process: Deal out a card, starting with the aces, to each player but ask them not to look at the face of the card. When ea. player has a card you will be asking the group to arrange themselves into smaller groups based on what you tell them. They may not look at their card (might have them hold it on their forehead) and they may not tell another player what his or her card is (no verbal communication).

Have them:

Arrange themselves into groups based on color of the card.

Arrange the Arrange themselves into groups of like rank (number on the face, kings, etc)

PROCESSING:

What forms of communication were used during this activity?

Other than speech, what forms of communication may have to be used in this class?

In what ways do you think communication will be important in this leisure skills class?

Initiative 8: Quick Lineup

PROPS: None

TIME: 5-10 minutes

DESCRIPTION:

Facilitator stands in a spot and has group line up in square around them. Have sides of square represented by birthdays (Winter, Spring, Summer, Fall) If this doesn't come out even, then just move some people to make it as even as possible. Tell group to look at their line (person on either side of them and order of people in that line). They must stay in this order throughout the activity. Group does not move until facilitator says, "Go". Facilitator then moves to a different location, says "Go" and the team must realign themselves in the same order in relationship to the facilitator. When any line is in their correct order they raise their hands in the air and yell "Quick Lineup". For the last time it's always fun for facilitator to move to a spot and then when the group is almost aligned, turn in another direction. Do the activity three times. On the third time facilitator changes direction before everyone is aligned.

PROCESSING:

Did any planning occur during this activity? At what point?

How many teams were there in this activity? If they answer more than one, ask for what reason?

What methods were used to finally get everyone in their line?

In what ways might planning be important in this leisure skills class?

Initiative 9: Life Raft

PROPS: Sheet/Sheets

TIME: 10-25 minutes

DESCRIPTION:

Open sheet on the ground/floor
Everyone starts out on top of the sheet.

Objective: The team must turn the sheet over to the other side without anyone, or any body part, touching the ground. Can use the story that they're on a cruise ship that sinks. This is their life raft but it went in the water upside down and all the supplies they need to survive are underneath. There are sharks in the water so that's the reason they can't step off. If they do, the shark eats that body part (example: if it's a leg, then they do the rest of the activity without using that leg). Fun to make the "Jaws" noise if they are close to having a part off.

If the group has not made much progress after 10-15 minutes give them an additional raft to utilize (half size sheet).

PROCESSING:

What did it take to accomplish this activity? Do not let them use the word "teamwork." Make them give you examples of their answers.

In what ways will it be necessary to use teamwork in this class?

In what way did you deal with lack of personal space?

Did anything surprise you during this activity? If so, what?

How do you think you will deal with surprises that occur in this class?

Initiative 10: Warp Speed

PROPS: Tennis Balls, Stopwatch

TIME: 5-10 minutes

DESCRIPTION:

Everyone stands in a circle. The facilitator tosses the ball to someone across the circle and calls out that person's name. Each person will toss the ball to someone on the other side of the circle always using that person's name. You may not toss the ball to the person on either side of you or to someone that has already received it. Last person always tosses back to facilitator (leader). Remember the sequence in which the ball was thrown. Everyone must receive the ball once. It always stays in that sequence. Facilitator can also hand the ball(s) to a certain participant to begin and not be in the game.

Once the group has successfully completed the sequence they do the same thing again. This time the facilitator times them. Once they have finished tell the group their time and ask them to set a goal (how many seconds, or minutes) to complete. Have them continue the activity until they reach their goal. If they reach the goal quickly ask them if they think they can set a higher goal.

PROCESSING:

What did the group have to do to improve your time?

What can you take from this activity that will help you improve your skills in this class?

Initiative 11: Bigfoot

PROPS: None

TIME: 5-10 minutes

DESCRIPTION:

Objective: The group lines up side by side in a straight line with their feet touching the feet of the people on both sides of them. Without becoming disconnected at any time, the whole group must move until they all cross a line. If they disconnect then have them go back to starting point or give a consequence.

** Try to have students walk at least 10-15 feet.

** If the line is too long for the room, have the students make two lines.

Processing:

What did it take to accomplish this activity? (Again, don't let them say "teamwork" and make them give you examples of what they are talking about.)

With you being in a straight line, how did you communicate as a team?

If during this class, you cannot see everyone or are not close to someone, what will you be able to do to let your ideas or feelings be known?

Initiative 12: Four of a Kind

PROPS: Deck of Cards, Paper plates

TIME: 10-15 minutes

DESCRIPTION:

Place all the cards face down in a big circle (or just in the middle of the room). Spread them out enough so players can maneuver around the cards. Divide the group into small teams of 2, 3 or 4 players and give them each a paper plate to put on the ground at least 10-15 feet from the cards in the center (this will be their card table outside the big circle). This area will be their home base.

One player from each group is allowed to enter center circle to retrieve 1 card and bring it back to their home base-only 1 player from each group can be in the large rope circle and this player can only touch 1 card during their turn. The card may not be looked at by anyone on that team until it gets to the card table, where it is then turned over. The option at this point is to return the card back to the circle-face down-or keep the card. Another player from a different group is then allowed to enter the circle-they can retrieve the card just returned or get a new card to take back to the table. Same as before, they can keep the card or return it to the circle. The objective is for each group to get 4 of a kind-all 4 cards of the same rank. Indicate to the group that the activity isn't over until everyone has 4 of a kind.

** Not a competition.

** It's fair if players call out the card they put back into the circle or even show other teams what the card is.

Processing:

Everyone close your eyes and by raising your fingers 1-10, rate your team communication on this activity (1 being the worst and 10 being the best). (When they have done this then have them open their eyes and see what other's ratings were. Discuss the differences and the reasons.)

In this class, what is the reason that communication is important?

Initiative 13: Hula Hover

PROPS: One hula-hoop for every 8-12 people

TIME: 10 minutes

DESCRIPTION:

Set Up & Objective: With everyone standing in a circle, have one arm out to center with a pointer finger out (as if they're pointing to the person across from them). Facilitator is going to place the hula-hoop on your fingers. By maintaining constant contact with the hoop you must lower it to the ground. When everyone's fingers are on the ground you have accomplished the task.

Rules: You may not hold the hoop with your finger. Finger must be turned to the side or down while it's pointing and must be under the hoop, not on top.

Processing:

(Objective in doing this is to show that in order to work as a team we sometimes have to give up control of our part to make it work.)

Was there a definite leader during this activity? If so, who was that leader and in what way did they lead? If not, for what reason?

When during this class will you have to give up total control?

Initiative 14: Stepping Stones

PROPS: Paper plates

TIME: 20+ minutes

DESCRIPTION:

Set up: Make “river banks” by using something as a marker.

Equipment: Paper plates as resources (make sure there are few enough plates that it will be difficult and require teamwork in order to make it across the river – too many plates and they will just step across)

Instructions:

You must get from one bank of the river to the other without touching the ground. It is shallow but moving swiftly so resource will float away if someone is not touching it at all times.

Safety considerations: You cannot throw or carry people across the river.

You’ve come to a river of hot chocolate. The blocks (paper) are marshmallows that you may use to cross. Since they are so light, they will float away if someone isn’t touching them at all times.

**If event goes too quickly (and time permits), have the group go again but make the river wider and/or give them fewer plates.

Processing:

What was the single most important factor in you reaching your goal during this activity?

Who was the leader? What was their leadership style? If no leader, for what reason?

What were some examples of care and concern for others being demonstrated?

Are there other observations you had during this activity?

When can those same things have to be demonstrated in this class?

After this last activity today ask:

- What were the three most important elements in completing today’s tasks?
- How can you apply those elements to either this class or your studies?

REFERENCES

- Attarian, A. (2001). Trends in outdoor adventure education. *The Journal of Experiential Education*, 24(3), 141-149.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175-1184.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998).
- Bandura, A. (1997). Self-efficacy. *Harvard Mental Health Letter*, 13(9), 4-6.
- Bandura, A. (1999). A social cognitive theory of personality. In L. Pervin & O. John (Ed.), *Handbook of personality* (2nd ed., pp. 154-196). New York: Guilford Publications. (Reprinted in D. Cervone & Y. Shoda [Eds.], *The coherence of personality*. New York: Guilford Press.)
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26.
- Blanchard C., Poon, P., Rodgers, W., & Pinel, B. (2000). Group environment questionnaire and its applicability in an exercise setting. *Small Group Research*, 31(2), 210-224.
- Bollen, K. A. & Hoyle, R. H. (2001). Perceived cohesion: A conceptual and empirical examination. *Social Forces*, 69(2), 479-504.
- Breunig, M. (2005). Turning experiential education and critical pedagogy theory into praxis. *Journal of Experiential Education*, 28(2), 106-122.
- Chen, S. (2004). The development and testing of the pelvic floor muscle exercise self-efficacy scale. *Journal of Nursing Research*, 12(4), 257-265.
- Chin, W. W., Salisbury, W. D., Pearson, A. W., & Stollak, M. J. (1999). Perceived cohesion in small groups: Adapting and testing the perceived cohesion scale in a small-group setting. *Small Group Research*, 30(6), 751-766.

- Davis, G. A. (2003). Using a retrospective pre-post questionnaire to determine program impact. *Journal of Extension*, 41(4). Retrieved November 7, 2006, from <http://www.joe.org/joe/2003august/tt4.shtml>
- Glass, J. S., & Benshoff, J. M. (2002). Facilitating group cohesion among adolescents through challenge course experiences. *Journal of Experiential Education*, 25(2), 268-277.
- Goldenberg, M. A., Klensoy, D. B., O'Leary, J. T., & Templin, T. J. (2000). A means-end investigation of ropes course experiences. *Journal of Leisure Research*, 32(2), 208-224.
- Hatch, K. D., & McCarthy, C. J. (2005). Exploration of challenge courses' long-term effects on members of college student organizations. *Journal of Experiential Education*, 27(3), p. 245-264.
- Holman, T., & McAvoy, L. H. (2005). Transferring benefits of participation in an integrated wilderness adventure program to daily life. SEER 2004 Abstract. *Journal of Experiential Education*, 27(3), 322-325.
- Kanters, M. A., Bristol, D. G., & Attarian, A. (2002). The effects of outdoor experiential training on perceptions of college stress. *The Journal of Experiential Education*, 25(2), 257-367.
- Lam, T.C., & Bengo, P. (2003). A comparison of three retrospective self-reporting methods of measuring change in instructional practice. *American Journal of Evaluation*, 24(1), 65-80.
- McGowan, M. L. (1986). Self-efficacy: Operationalizing challenge education. *Bradford Papers Annual*(1), 65- 69.
- McKenzie, M. D. (2000). How are adventure education program outcomes achieved?: A review of the literature. *Australian Journal of Outdoor Education*, 5(1), 19-28.
- Neill, J. T., & Richards, G. E. (1998). Does outdoor education really work? A summary of recent meta-analyses. *Australian Journal of Outdoor Education*, 3(1), 1-9.
- Pajares, F. (2002). *Overview of Social Cognitive Theory and of Self-Efficacy*. Retrieved December 21, 2005 from <http://www.emory.edu/EDUCATION/mfp/eff.html>.
- Paxton, T., & McAvoy, L. (2000). Social psychological benefits of a wilderness adventure program. *USDA Forest Service Proceedings*, 15(3), 202-206.

- Pelletier, C. R. (1997). *The effects of a lesson on a first-time skier's level of self-efficacy and the relationship to intention and behavior in the sport of downhill skiing*. Unpublished master's thesis, Clemson University, Clemson, South Carolina.
- Pratt, C. C., McGuigan, W. M., & Katzev, A.R. (2000). Measuring program outcomes: Using retrospective pretest methodology. *American Journal of Evaluation, 21*(3), 341-349.
- Propst, D. B., & Koesler, R. A. (1998). Bandura goes outdoors: Role of self-efficacy in the outdoor leadership development process. *Leisure Sciences, 20*, 319-344.
- Schwarzer, R. (2005). General perceived self-efficacy scale. Retrieved April 8, 2005, from Freie Universität website: <http://userpage.fu-berlin.de/~health/engscal.htm>
- Sibthorp, J., & Arthur-Banning, S. (2004). Developing life effectiveness through adventure education: The roles of participant expectations, perceptions of empowerment, and learning relevance. *Journal of Experiential Education, 27*(1), 32-50.
- Smith, C. A., Strand, S. E., & Bunting, C. J. (2002). The influence of challenge course participation on moral and ethical reasoning. *Journal of Experiential Education, 25*(2), 278-280.
- Socha, T. L., Potter, T. G., & Downey, P. J. (2003). The effect of team building on the physical self-concept of grade 9 physical education students. *Journal of Experiential Education, 25*(3), 347.
- Taylor-Piliae, R. E., & Froelicher, E. S. (2004). Measurement properties of Tai Chi exercise self-efficacy among ethnic Chinese with coronary heart disease risk factors: a pilot study. *European Journal of Cardiovascular Nursing, 3*(4), 287-294.
- Wolfe, B. D., & Samdahl, D. M. (2005). Challenging assumptions: Examining fundamental beliefs that shape challenge course programming and research. *Journal of Experiential Education, 28*(1), 25-43.