THE EFFECTS OF AN ADVENTURE ORIENTATION PROGRAM ON THE DEVELOPMENTAL TASKS OF COLLEGE FRESHMEN

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TABLE OF CONTENTS

LIST OF TABLES

Table Page

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The freshmen orientation experience is a program that is adapted and changed to assist incoming students with the transition to college life. For well over 100 years college orientation programs have been in existence. In 1888, the first freshmen orientation program was pioneered at Boston College in Massachusetts (Gass, 1983). According to O'Keefe (1988) college orientation programs are considered an integral part of the introductory process for freshman students. The objectives of college orientation programs help to facilitate the development and adjustment capabilities of students while helping to reduce the rate of student attrition. Progressing into the twenty-first century, colleges and universities continue to be concerned with providing programs that will assist in the adjustment and retention of first-year students. Orientation programs continue to provide colleges and universities with opportunities for student development to occur (Brown, 1996; Gass, 1983).

Higher education is being challenged to be accountable for the process of education as well as being expected to produce the development of better citizens. Colleges and universities have a unique opportunity through their contact with the younger generation to reorient the human community toward greater awareness (Berry, 1999). Orientation is the first impression a college or university makes on incoming

students. This first impression creates a context for incoming students to begin to understand the values and commitments of the community they are joining. Berry (1999) stated that colleges and universities should have the insight and the freedom to provide the guidance needed to strengthen the human community and foster global citizenship. This type of social expectation has accentuated institutional needs to evaluate orientation programs by focusing on their worth and long-term effectiveness.

Orientation programs introduce new students to campus facilities and personnel, opening a window of opportunity for faculty, staff and upper class students to create a support network to assist freshmen in their transition to college life. These programs serve to orient new students to available resources, academic life, and campus social settings (Brown, 1996; Gass, 1987). The orientation experience can effect freshman persistence by supporting and nurturing the student's ability to cope with a new set of social challenges and an unfamiliar environment (Pascarella, Terenzini & Wolfle, 1986). It is the relationships with other campus community members that provide a sense of connection for freshmen to persist through their collegiate career (Chickering, 1969; Stupka 1986). "At the beginning of the college experience, orientation programs provide a transition cushion or an adjustment period between past learning and developing, attending high school, and future learning and developing, attending college" (Brown, 1996, p. 42).

Many college communities are utilizing adventure programs to expand and facilitate learning opportunities that support the educational goals of the institution. Freshmen orientation experiences utilizing adventure programming provide institutions with an opportunity to begin the educational processes of incoming students through an

exciting and interactive format. Oklahoma State University invites incoming freshmen to participate in "Camp Cowboy" during the summer before their first semester at OSU. During the three-day camp adventure programming is used to prepare students for their academic experience. Students are engaged in team-building initiatives, small group discussions, and workshops in addition to being taught traditions important to the OSU community. Camp Cowboy is based on similar programs run at Texas A&M and Auburn Universities (Cox, 1999).

Colleges and universities large and small are offering adventure programming as an alternative to traditional orientation programs. Incoming freshmen are signing-up to spend their first collegiate week carrying backpacks, canoeing and rock-climbing at schools including Maine's Colby College, Vermont's Marlboro College, Hampshire College in Massachusetts, Harvard, Yale and Colombia (Lanza, 1998). According to Rick Curtis, Director of Outdoor Action Programs at Princeton, 72 outdoor orientation programs spanned seven states from Virginia to Vermont in 1998 (Lanza, 1998).

Theoretical Framework

Two theorists who studied student development and who are recognized for their insight and vision are Alexander Astin and Arthur Chickering. Chickering (1969) believed that "the major task confronting higher education is not to generate new, complex, and subtle understandings, but to act on knowledge already available, to recognize principles of learning and human development already established" (p. 280). Chickering (1969) challenged higher education to narrow the gap between what is known

and what is being done. Concepts presented within student development theory assist college personnel in constructing programs that cultivate student growth and complement academic study.

Investing one's self within the college community is what Chickering believed to increase student learning and development. According to Chickering (1969), the major tasks at this particular life-stage are developing a sense of competence, managing emotions, developing autonomy, identity, interpersonal relationships, purpose, and integrity. For the purposes of this research project the major tasks presented by Chickering will be examined as three student developmental behaviors: 1) a sense of purpose; 2) mature interpersonal relationships; and 3) academic autonomy.

It is the process of taking risks, meeting challenges and interacting with others, which amplify student development within Chickering's theory (1969). Comparable to Chickering, Astin (1984) developed a theory of student involvement through his work emphasizing active participation by the student in the learning process. Astin defined student involvement as "the amount of physical and psychological energy that a student devotes to the academic experience" (p. 297).

Adventure education programs support the student development theories of Astin and Chickering. Most adventure education programs are guided by a humanistic philosophy of educating through adventure, while striving to improve participants' self-esteem, self-awareness, self-assertion, and acceptance of others (Cousineau, 1978). When involved in outdoor adventure programs, students are encouraged, supported and challenged to overcome obstacles and situations they might otherwise avoid. Adventure education programs usually involve deliberately sought-after, new and unusual situations

(Cousineau, 1978). An adventure may demand personal sacrifice or even cause emotional strain. Adventures usually require some amount of risk taking (Cousineau, 1978; Henton, 1996). Klingman (1992) concluded that many benefits provided by adventure education programs parallel the objectives of college curriculum.

During the middle of the twentieth century, educators began re-learning the value of ancient teaching techniques that place people in challenging situations to develop citizenship and life skills (Miles & Priest, 1990). In the 1960s and 1970s the adventure wing of experiential education evolved in the United States (Kraft & Kielsmeier, 1995). Project Adventure, one of the founding adventure education programs in the United States, originally established the following two basic goals to guide adventure-based curriculum. First, teach problem-solving skills more creatively and efficiently, and second, provide assistance in overcoming preconceived barriers while sustaining agreed upon objectives and goals (Henton, 1996). Typically these goals are achieved through the popular understanding of adventure programs whereby a challenge is placed in an outdoor environment (Henton, 1996).

Varying theories of experiential learning suggest that personal growth and character building are achieved through participating in adventure programming and a group based social experience (Kraft & Kielsmeier, 1995). The processes of experiential education overarch adventure programming thereby linking engagement in mental and physical challenges (DuFrene, Sharbrough, Clipson, & McCall 1999). Experiential learning is concerned with a variety of behavioral, educational and affective components that include: 1) programs that take place outside of the conventional classroom; 2) programs in which students are placed in new roles featuring significant tasks with real

consequences; 3) programs with an emphasis on learning by doing followed by associated reflection (Kraft & Kielsmeier, 1995); and 4) an objective to bring about awareness for positive changes (Miles & Priest, 1990). Participation with group experiential activities may accelerate the bond and friendship formed between individuals (Cousineau, 1978). Many positive outcomes are seen in students participating in adventure activities. Leaders of current adventure education programs generally use an experiential learning process to produce outcomes (Wagstaff, 1997).

Statement of Problem

The use of outdoor activities in an educational setting is not new (Miles, 1987). Today, more than forty institutions of higher learning have established adventure orientation programs for new students (Galloway, 2000; Gass, 1986; O'Keefe, 1988). In addition to traditional orientation programs, current trends show alternative methods of service-learning and adventure orientation being utilized for freshman orientation programs. Dartmouth College began to offer an adventure orientation experience for first year students in 1935 and Prescott College began its program in 1968 (Gass, 1983). These two institutions have set a benchmark for what presently occurs.

Adventure orientation programs provide an opportunity for freshmen to meet students and develop an essential peer support group (Stremba, 1989). During adventure orientation programs students are actively involved with each other and with faculty and staff members outside the typical classroom experience. With some programs, students leave home and campus to travel in groups to distant and interesting places.

Relationships with peers, upper-class students, faculty and staff are often established. These relationships and support groups often extend throughout academic years.

Outdoor professionals continue to document the effectiveness of adventure programs that utilize wilderness as a means for orienting incoming students. Through his longitudinal research, beginning in the late 1980s, Gass found that adventure orientation programs enhance the ability of students to transfer learning from the outdoor experience to the campus environment. O'Keefe (1988), collected data about freshmen adventure orientation programs. She reported that adventure programs that utilize the wilderness have the ability to promote the development of skills in the areas of decision-making, problem solving, increased self-confidence, positive group interaction, handling stress and the ability to take responsibility for ones actions. Brown (1996) found that students participating in adventure orientation programs are directly and actively involved in the learning process. Brown's research indicated the ingredients needed to facilitate student learning and development can be found through an adventure orientation model.

The literature assessed for this research document portrays the terms outdoor, wilderness and adventure orientation synonymously to identify orientation programs that employ experiential education in an outdoor setting during freshmen orientation. These types of outdoor orientation programs provide a means for adventure education to occur, linking the idea of placing the participants in a challenging and stimulating environment in order to build self-awareness and self-assuredness. Adventure orientation programs assist colleges and universities in the development and retention of students in addition to introducing them to exciting programs offered on campus (Galloway, 2000).

After surveying 49 colleges to gather information about freshman orientation programs, O'Keefe (1988) suggested that the use of adventure orientation programs has increased, but research into the effectiveness of these programs has been limited. Very few institutions access available assessment opportunities (Galloway, 2000). While Brown (1996) acknowledged that research continues to expand on the importance of the university's orientation efforts, he also suggested that evidence supporting the effective use of adventure programming in a wilderness setting for freshmen orientation must continue to be researched. Little is known about the assessment techniques used to measure adventure orientation programs (Davis-Berman & Berman, 1996). Davis-Berman and Berman (1996) found that 43% of programs they sampled reported no inclusion of any evaluation effort. Thirty-eight percent of that sample reported no follow-up activities and 49% indicated an occasional follow-up with participants (Davis-Berman & Berman, 1996). Adventure orientation programs report generally using informal assessment to determine success (Galloway, 2000).

Additional evaluation is needed if adventure orientation programs are to achieve a stronger role in orienting new students (Gass, 1987). Understanding what components of orientation programs facilitate adjustment, retention and student developmental growth is important to the success of colleges and universities (Brown, 1996). By identifying the essential components of orientation programs and by recognizing the methods most effective to assist with orientation outcomes, administrators may be able to design and implement improved programs.

This quasi-experimental research study addressed the need to provide adventure orientation programs for new students in order to increase their potential for psychosocial

development, persistence as a first year student, and aid in retention. If the developmental outcomes of the first year students are closely related to the type of orientation program conducted by the institution, there may be implications for future programming in adventure orientation and the use of the outdoors as a tool for the adjustment to college. Additionally, this study examined the impact of differing adventure orientation experiences in order to evaluate their impact on freshmen development and attrition.

Purpose of the Study

Collegiate institutions continue to devise programs that assist in the development and maturation of first year students. Making the transition from high school to college is an important developmental step for many students. Colleges provide opportunities for learning and development as students encounter new people, experiences, and opportunities. Orientation programs vary in size, scope and organization from institution to institution. Each college or university develops specific goals and objectives for accomplishing new student orientation. Generally, the main purposes of such programs are to assist new students in their transition, expose students to the educational opportunities of the institution, and integrate new students in to the life of the institution (Council for the Advancement of Standards for Student Services/Development Programs, 1988).

College administrators often look to recreation professionals and outdoor specialists for the leadership and organization of outdoor orientation programs (Brown &

Armstrong, 1995). The use of alternative designs for educational programming has increased as more colleges and universities explore the benefits of experientially connecting learning for students. Adventure orientation programs provide one alternative to traditional student development orientation programs.

The purpose of this study was to evaluate and compare the effects of four adventure orientation program types, a 3-day backpacking field expedition and three combination programs, consisting of three individual day adventure experiences, on the retention and developmental growth of the first year students at a small-private liberal arts college in the southeast. The four program types were Expedition, Rock-climb, Canoe, and Alpine Tower.

Research Questions

The research questions addressed in the study are as follows:

1. Does the comparative effectiveness of the four types of adventure orientation programming change in relationship to gender and HSGPA on the participants' developmental tasks (PUR, MIR, AA)?
2. Are there differences among the four types of adventure orientation programs on the student developmental tasks including a sense of purpose (PUR), mature interpersonal relationships (MIR) and academic autonomy (AA)?
3. Are there differences between female and male participants on their developmental tasks (PUR, MIR, and AA)?

4. Are there differences among participants with high, medium and low high school grade point average (HSGPA) on their developmental tasks (PUR, MIR, AA)?
5. Do the four types of adventure orientation programs have a similar effect for female and male participants for their developmental tasks (PUR, MIR, AA)?
6. Do the four types of adventure orientation programs have a similar effect for participants with high, medium and low HSGPA on their developmental tasks (PUR, MIR, AA)?
7. Does the relative performance of female and male participants remain the same for those with high, medium, and low HSPGA on their developmental tasks (PUR, MIR, AA)?

Assumptions

The following list of assumptions is made in relationship to this study.

1. The condensed version of the Student Developmental Task and Lifestyle Inventory (SDTLI) is a valid and reliable instrument subject to the limitations of self-reporting assessments.
2. It was assumed that each subject volunteered to participate in the study and accepted the contractual terms without coercion.

3. It was assumed that the respondents answered the items of the inventories honestly, based on their own true feelings.

Limitations

The following items have been identified as restrictions to the study narrowing the generalizations made as a result of the data collected.

1. This study is limited by the single institution sample and the short period of time (1 academic semester) over which the sample was followed.
2. The results of the study are most applicable to the specific institution involved and may not be representative of the larger population of collegiate orientation programs.
3. Students in the expedition group sample either self-selected the type of orientation program they desired to participate in or were placed there after being identified as academically at-risk.
4. Variables not included in the study may be responsible for participant growth for each student developmental task.

Delimitations

The following list includes items beyond the parameters of the study that have been identified as confining to the depth and breadth of the data presented:

1. The relationship of this study to other adventure orientation programs is based on

the similarity between the independent variable, the institution and procedures within each program.

2. The type and amount of training provided to the faculty, staff, and student facilitators (peer mentors) involved in the adventure orientation program by the institution was beyond the control of the researcher.

Definition of Terms

The following list of definitions has been included based the importance of each term in clarifying concepts and theories presented within this study.

Adventure Education. A component of experiential education that provides practical experiences to expand the capabilities of a student, while encouraging students to consider perceived limitations as boundaries to be stretched (Cousineau, 1978). Individuals may gain self-awareness and self-confidence as a result of experiencing a challenging activity facilitated to understand and improve team relationships, group dynamics, cooperation, and communication (Miles & Priest, 1990; DuFrene, 1999). Also referred to as outdoor challenge education and adventure based learning (Bagby & Chavarria, 1980).

Adventure Orientation Program. This adventure orientation program is uniquely characterized where by each student is involved in at least one wilderness experience the week before classes begin or within the first four weeks of school. This type of program is experiential in nature. The terms adventure orientation and wilderness orientation may be used synonymously.

Alpine Tower. The tower is a 55-foot hourglass shaped element offering three climbing faces and innumerable routes that challenge participants physically and psychologically to enhance individual character and team-building activities designed and to assist students to increase self-concept and group development through experiential activities.

At-risk Students. These students have been conditionally accepted to this institution as determined by the admissions office and placed in the Academic Success Program (ASP) due to low grade point average, low college aptitude test scores, and possibly being identified as a first generation college student with a high desire and the intrinsic motivation to succeed. All ASP students are required to participate in the 3-day wilderness expedition and continue academic counseling during their first collegiate year.

Condensed Student Developmental Task Inventory-2 (CSDTI-2). A revision of the inventory developed by Winston, Miller, and Prince (1990) created by Michael Gass (1986) to identify the existence of developmental tasks in traditional age college students.

Expedition Orientees. Non-fall athlete freshmen students, who either elect or are placed because of being considered at-risk, into a total immersion, three-day backpacking experience in the Great Smoky Mountain National Park, a week before beginning their fall semester. These orientees leave campus immediately after spending one night on campus to begin their trek in the Smokies and return to participate in a half-day experience on a low elements challenge course.

Experiential Education. Participatory learning through direct experience (Dewey, 1900).

Freshmen. A male or female student in their first year of study at an institution of higher education.

Individual Adventure Experience Orientees. Freshman students that are assigned to orientation groups to participate in three individual one-day adventure experiences during the first few weeks of the fall semester. These adventure experiences include a half-day on the low elements challenge course, followed by a combination of two of the following activities: a day hike in the Great Smoky Mountain National Park, canoeing, rock-climbing, an introduction to map & compass and an orienteering hike, or a half-day experience on the Alpine Tower on campus.

Low-elements Challenge Course. Constructed of ropes, cables, wood, and other natural materials constructed outdoors in trees or using telephone poles this 25-element course consists of several group challenges intended to encourage group cohesion and individual learning (Webster, 1989). Adventure activities used to promote interpersonal and intrapersonal growth (Bagby & Chavarria, 1980).

Orientation Program. Orientation programs introduce incoming students into a new environment by bridging the gap between the familiar past and the unfamiliar future. These programs provide students with information about day-to-day operations in college and help them adjust to college life as quickly and smoothly as possible (Brown, 1996).

Psychosocial Development. This term is used to describe the advancement of self-knowledge and interpersonal skills of college students, as a parallel to their academic development. Students' involvement with teachers, peers, student leaders, students from diverse cultures, and exposure to the climate of the college environment affects the way students think about themselves and their world. It affects their self-confidence and desire to give to others, as well as their sense of personal identity and maturity (Winston & Miller, 1987). Operationally psychosocial development will be defined as the scores of development tasks on the Condensed Student Developmental Task and Lifestyle Inventory (Gass, 1986).

Traditional College Age Students. For this study, traditional age students are defined as college students ages 17-24. The instrument utilized for this study was a condensed version of the SDTLI (Winston & Miller, 1987) and was developed for use with this age group. Chickering's (1969) vector theory of student development is also based on this age group.

Wilderness. An adventure, a state of mind. The qualifications for wilderness involve human experience of a place where a traveler can find the physical and emotional challenge of the unknown (Miles & Priest, 1990).

CHAPTER II

REVIEW OF LITERATURE

The following review of related literature focuses on six major topic areas in an attempt to summarize the current body of knowledge pertaining to this research project. First, relevant literature on psychosocial development is discussed. Second, Chickering's student development model is reviewed in relationship to college student programming. Third, orientation programming for first year students is addressed. Fourth, retention is discussed as a motivator for collegiate programs such as orientation. The fifth area of review illustrates the related literature on adventure education. Sixth, orientation programs utilizing adventure and wilderness as a context for experiential learning are reviewed. The final portion of this literature review demonstrated the need to examine the use of adventure education as a means to facilitate freshmen orientation.

Psychosocial Development

Developmental theorists use life events to describe and understand individual patterns of response and adaptation to situations as a means of identifying human behavior and development throughout the life span (Bowers, 1997). Psychosocial development theories of human development consider the external environment as the

social context that influences the internal dynamics of the individual, recognizing that interactions with one's family, social institutions and one's culture affect the development of the individual (Knefelkamp, Widick, & Parker, 1978). Using the life stage concept, theorists are able to categorize and define certain developmental characteristics that seem to emerge at predictable times and are consistent to most all people (Erikson, 1968). These developmental stages emerge as biological and psychological changes within individuals converge with environmental demands brought on by the norms and expectations of their culture (Rodgers, 1991).

Psychosocial theorists describe developmental issues or tasks related to life events that occur throughout the life span in addition to individual patterns of responses and adaptation to events (Bowers, 1997). Transitions in life often require changes in behavior. These changes occur over time and have both cognitive and affective characteristics (Brown, 1996). Successful adaptation during the transition requires favorably learning the developmental tasks specific to that life-stage. Havighurst (1972) defined a developmental task as one that "arises at or about a certain period in the life of an individual, successful achievement of which leads to happiness and success with later tasks, while failure leads to unhappiness in the individual, disapproval by society, and difficulty with later tasks" (p. 2).

Erikson used life stage theory to describe psychosocial development. Within Erikson's (1959) *Eight Stages of Man*, identity versus role confusion is the stage associated with adolescence. Erickson believed people at this stage must develop an identity as to who they are and what they believe. Each stage in Erickson's theory (1959) has as its focus an issue or a task that is qualitatively unique from the other stages.

Resolution is the central issue of each stage with successful resolution of each issue increasing the individual's sense of strength and the capacity to deal with life's struggles.

While growth is linked to the field of human development, it possesses certain situational factors that underscore the need for concern by university administrators and faculty (Gass, 1986). The transition from high school to college involves significant social and psychological changes. Each student encounters new teachers and friends with varied beliefs and values. Various academic, social, and personal demands are created with new freedom and opportunity. As young adults, college students are confronted with identity issues that require them to make choices about their lifestyle, experiment with various roles, identify their talents, and find meaning in their lives (Rodgers, 1991). Pascarella and Terenzini (1991) suggested that the ability of colleges and universities to influence change and development within students lies in the exposure they afford students to diversity, opportunities to explore, peer and adult role models to emulate, and experiences that challenge currently held values, attitudes and beliefs.

In an attempt to clarify the role of colleges and universities in the growth of students' intellectual, identity, interpersonal and value development, the field of student development has established models and definitions to assist college administrators in meeting their goals. Chickering's (1969) college development model identified the dynamics, dimensions and structure of growth, specifically within college students. Pascarella and Terenzini (1991) wrote, "No other psychosocial theorist has had a greater influence than Arthur Chickering on the study of college development or on the administrative programming intended to promote student development" (p. 20). Chickering hypothesized that psychosocial development in traditional age college

students is generally a movement toward greater differentiation, integration and complexity in the thinking and behavior. Chickering (1969) elaborated on Erikson's (1968) work concerning the resolution of identity issues with his vector model of college student development. As with Erickson's (1968) stages, the vectors have a sequential pattern, with development in earlier vectors necessary for successful resolution of later tasks.

College Development Model

Two decades ago Warren Doyle (1981) challenged higher education to reach out to college students and adopt a more holistic educational approach. He urged colleges and universities to embrace more than just the cognitive growth of students and to develop programs that assist individuals in their transformation into young adults. Colleges and universities have show concern for keeping students in school and implement a variety of efforts to retain individuals. At the same time researchers continue to investigate how the student develops as a member of the campus community (Gass, 1986).

Tinto (1987) asserted that an awareness of the social and intellectual character of a campus and the mechanisms which can enable individuals to integrate into those communities assist new students in the adjustment to college life. Upon a student's arrival, the institution is immediately confronted with the developmental needs of the undergraduate. "The maturation of the student's intellectual, emotional, moral, physical and social growth during this time is defined as student development" (Gass, 1986, p. 59).

Alexander Astin (1984) developed a theory of student involvement, which advocates learning in an environment that is structured to encourage active participation by the student. Astin believed that the greater the student's involvement in school, the greater the amount of student learning and personal development would be. Astin found that the greater the effort and personal investment a student makes, the greater the likelihood of educational and personal returns on that investment across the spectrum of college outcomes.

According to Chickering (1969), new students increase their learning and development as they encounter and experience a new environment in which they are subsumed. Chickering's theory is based in his belief that education essentially amplifies two basic developmental processes in the lives of students, differentiation and integration. Differentiation occurs as the student comes to understand and distinguish the interacting parts and concepts of something seen as one-dimensional. The student becomes more complex as interests increase and choices become more diverse and he or she begins to establish a personal identity. Integration occurs as the student meets and associates with new people differing in values and beliefs than their own. Taking risks, meeting challenges and interacting with others strengthen the developmental process along Chickering's seven vectors, including competence, emotions, autonomy, identity, interpersonal relationships, purpose and integrity.

Chickering's vectors provide seven areas in which to connect student change and development to educational practices and institutional programs. Orientation programs can provide opportunities for development along these seven vectors. The conditions, arrangements and purposes of college programs, such as orientation can assist the

developmental and adjustment processes of students. Chickering assumed that institutions of higher education will be effective educationally only if they provide means for student growth within the seven vectors. Chickering (1969) considered the development of traditional age college students age 17-24, while describing and discussing seven vectors and the developmental challenges to be mastered within each. The vectors have a sequential pattern, with development in earlier vectors necessary for successful resolution of later tasks.

Chickering's first vector, developing competence specifically involves achieving personal growth in intellectual competence, physical and manual skills, and social and interpersonal relationships. A sense of competence in these areas is defined as the student's "ability to cope with what comes and to achieve successfully what [one] sets out to do" (Chickering, 1969, p. 9). Managing emotions, the second vector, refers to developing an increased awareness of aggressive and sexual impulses and learning appropriate reactions, including a suitable time, place, and expression of these emotions. According to Chickering (1969), during their college transition, students have a variety of emotions that have both biological and social origins.

Developing autonomy or independence, the third vector of development involves becoming emotionally independent, while moving toward recognizing and accepting interdependence. Gradually students disengage from parents and the need for their approval and recognition. Relationships are developed based on mutual respect. Self-direction increases as the student gains confidence and the capacity to carry out most of life's activities by one self. The first three vectors, developing competence, managing emotions and developing autonomy represent understanding one's capabilities,

integrating self-control and interdependence, while realizing that one can be socially and academically competent within the new environment of college life (Rodgers, 1991).

Chickering (1969) stated that some development in the first three vectors is necessary to successfully resolve the fourth vector of establishing identity. Chickering (1969) described identity formation as the primary developmental concern of college students, stating, "At one level of generalization, all the developmental vectors could be classified under the general heading 'identity formation'" (p. 78). Similarly Erikson (1968) suggested that the failure to resolve the identity task led to role confusion, in which the individual is unsure of the meaning of life and drifts along aimlessly with no sense of direction. As the individual develops along the first three vectors, he or she will begin to feel capable of coping with internal and external demands and will be ready to face the challenge of determining what is important to cope with. The principal tasks of the fourth vector, establishing identity, include accepting and integrating into one's sense of self, one's body and physical appearance, and one's sexuality. Chickering stated that development of identity involves "clarification of conceptions concerning physical needs, characteristics, and personal appearance, and clarification of appropriate roles and behavior" (1969, p. 14).

Integrating a realistic picture of self encourages development in the last three vectors where decisions are required; these vectors include freeing interpersonal relationships, establishing purpose, and developing integrity (Chickering, 1969). Having developed a strong sense of identity fosters the development of tolerance for persons different from oneself, as well as, changing one's capacity for developing and maintaining intimate relationships; these tasks describe vector number five, freeing

interpersonal relationships. Chickering (1969) explained this developmental phase as the student's tolerance of persons of varying backgrounds, habits, values, and appearance. It is a shift toward openness and acceptance of diversity.

Development along the sixth vector, establishing purpose provides the individual with direction and life meaning. Clarity of purpose occurs as students identify the answers to questions such as "Who am I going to be?" and "Where am I going?" (Chickering, 1969, p.16). Within this vector students formulate vocational interest and plans, recreational pursuits and lifestyle choices. Growth along Chickering's seventh vector of developing integrity refers to the process of clarifying one's values and working to achieve behavior that resonates personally held values. According to Chickering (1969), these seven developmental changes occur in students between the ages of seventeen or eighteen through the middle to late twenties. Each vector of development gives direction and magnitude to the maturation of students (Table 2.1).

Chickering (1969) suggested several ways to bring the knowledge of his seven vectors and the practices and policies of universities closer together in his publication, *Education and Identity*. In his text he outlined six major areas universities can affect student growth positively or negatively: 1) the ability of the institution to articulate objectives and the internal consistency of policies and programs to the objectives; 2) institutional size as a factor in the development of competence, identity, integrity and the freeing of interpersonal relationships; 3) the variety, flexibility, and opportunities for learning in the curriculum and from the teaching; 4) the residential life program, hall arrangements, size, programming, safety, and their ability to foster diversity, friendships, attitudes and values of interest of the students; 5) the student-faculty interaction, how frequently and under

Table 2.1

Seven Vectors: Developmental Directions

From	*To*
Developing Competence *(intellectual, physical, interpersonal)*	
-Lack of confidence in one's abilities	-Strong sense of competence
Managing Emotions *(fear, anxiety, aggression, depression, guilt, Shame, dysfunctional attraction)*	
-Little control over disruptive emotions	-Flexible control and appropriate expression
-Little awareness of feelings	-Increasing awareness and acceptance of emotions
-Inability to integrate feelings with actions	-Able to integrate feelings with responsible actions
Moving Through Autonomy Toward Interdependence	
-Emotional dependence	-Freedom from continual needs for reassurance
-Poor self-direction or ability to solve problems	-Direction, persistence, instrumental independence
-Independence	-Interdependence
Developing Mature Interpersonal Relationships	
-Lack of awareness of differences, intolerance of differences	-Tolerance and appreciation of differences
-Nonexistent, short-term or unhealthy intimate relationships	-Capacity for intimacy that is enduring and nurturing
Establishing Identity	
-Discomfort with body, appearance, gender and sexual orientation	-Comfort with body, appearance, gender and sexual orientation
-Lack of clarity with heritage, social/cultural roots of identity	-Sense of self in social, historical and cultural context
-Confusion about lifestyle	-Clarification of self-concept
-Lack of clarity about others' evaluations	-Sense of self in response to feedback from valued others
-Dissatisfaction with self	-Self-acceptance and self-esteem
-Unstable, fragmented personality	-Personal stability and integration
Developing Purpose	
-Unclear vocational goals	-Clear vocational goals
-Shallow, scattered personal interests	-More sustained, focused, rewarding activities
-Few meaningful interpersonal commitments	-Strong interpersonal and family commitments
Developing Integrity	
-Dualistic thinking and rigid beliefs	-Humanizing values
-Unclear or untested personal values and beliefs	-Clarifying and affirming personal values and affirming others' values
-Self-interest	-Social responsibility
-Discrepancies between values and actions	-Congruence and authenticity

(Chickering, 1969, p. 38-39)

what conditions do they take place; and 6) the student culture that exists and the congruence it has with the institution. Chickering believed universities that best promote these six areas of influence are the ones that facilitate growth in the seven vectors of development. Orientation programs are among the first areas of academic, social, personal-emotional, and institutional attachment attributing to the growth of freshmen students as the enter the campus community (Brown, 1996).

Orientation Programs

Traditional college orientation programs have been in existence for over 100 years. Almost all colleges and universities offer some type of orientation program for incoming students (Barefoot & Fidler, 1992). These orientation programs vary from campus to campus. What a college does to help new students make adjustments says a great deal about the quality of the institution and its values. As reported by Stupka (1986), probably the single most important move an institution can make to increase student persistence toward graduation is to ensure that students receive the guidance they need at the beginning of their journey through college to lead them to graduation. Early guidance can also assist in acquiring competence, through programs such as orientation and the formal general education curriculum, which students will need to complete their courses of study and function effectively beyond graduation. After completing his four-year study, Stupka (1986) recommended that new student orientation should begin well before students arrive on campus and should continue as a formal course during the first term on campus.

Brown (1996) suggested that most orientation programs are designed around four basic topics: academic, social, personal involvement, and personal development. Higher education has moved away from catering only to those who can meet institutionally imposed standards to providing and adapting programs that meet the needs of a greater diversity of students. Due in part to the shrinking pool of traditional college applicants; university personnel are concerned with the retention of students. New students want a choice in selecting what type of orientation program is best for them (Brown, 1996). Brown assumed that most administrators seek orientation programs that can best adjust and retain students.

A longitudinal study by Shanley and Witten (1991) found that successful completion of student orientation resulted in increased retention and graduation rates. The purpose of their study at the University of South Carolina was to determine whether differences existed between orientation participants and non-orientation participants on the variables of retention, persistence, and graduation rates through seven years following freshman matriculation. Their study examined and gave support to the contention that assisting students with a successful start in the college experience will have a positive effect in terms of motivation and integration into the campus community.

Contrary research indicates not all orientation programs report success in variables important to student development. Higginson, Moore, and White (1991) suggest that traditional freshman orientation programs have little effect on new students' attrition levels, adjustment to campus or grade point averages. Brown (1996) stated that orientation programs do generally not affect the grades of new students. A study produced at Oklahoma State University (Childress, 1984) also reported no significant

difference in the mean grade-point averages among three groups of freshman orientees. In another study, comparisons between outdoor orientees and classroom orientees, at Salisbury State University revealed no significant difference between first-semester grade-point averages (Battistoni et al., 1992). Yet, personal development in academic and non-academic areas is often overlooked and not taught, nor monitored. Social relationships, physical fitness, wellness, leadership, interpersonal skills, time management, and problem-solving abilities are equally important in the development of the whole person (Witmer & Sweeney, 1992). Orientation programs are looked to for help with this concern.

Retention

Student attrition is a significant problem in American higher education (Cuseo, 1991). Losing a student causes an institution of higher learning more than just the concern for the welfare of these individuals. The concern for attrition is also a financial issue for colleges and universities (Gass, 1986). Some authors suggest that all college attrition should not be viewed as a failure or a negative consequence. Many of the studies focus on students who simply leave and do not come back. These studies do not account for students who transfer, move, or quit to join the work force (Rummel, Acton, Costello & Pielow, 1999). Rummel et al. (1999) question the goal of 100% retention in their recent study. Their study found that many collegiate institutions are viewing students who leave college as a negative event, even if the students were leaving for positive reasons. The reasons for the development and continuation of orientation programs vary from not only the goal of reducing the attrition rate, but also to promote a

more positive transition to college life, and to introduce new students to college programs (Gass 1983; Galloway 2000).

Gass (1990) stated, "Although the problems highlighted by these researchers definitely exist, some orientation programs focusing on retention have been successful in overcoming these issues. Most of these programs have achieved their goals because they have viewed retention as a complex interaction of specific academic and social variables" (p. 33). It is clearly presented in the literature by Gass that the importance of reflecting the institutional goals accurately during orientation, while educating and mentoring students with specific objectives, is key to fostering student retention.

Among student development theorists, non have guided and inspired research about retention more than Tinto (Bunn, 2000). Tinto's model (1987) asserts that if a student does not establish significant social ties within the institution, then he or she is more likely to dropout. His model assumed that persistence/withdrawal behavior is primarily cultivated by the students' integration into the social and academic systems of an institution (Pascarella, Smart, & Ethington, 1986). Tinto (1975) made the following assertions: (1) for the majority of students, the academic and social integration into the college community are inseparable, (2) students who become appropriately integrated into college develop and maintain a strong commitment to attain a college degree, and (3) students who are insufficiently integrated and whose values are different from the college where they are enrolled are more likely to withdrawal. Tinto's thesis is that, all things being equal, the greater the students' level of involvement in the social and academic life of the college, the more likely the student is to continue at that particular institution (Chapman & Pascarella, 1983). Too often, psychological models of student attrition have

relied on the student's abilities and intellectual attributes to meet academic demands as a predictor of student drop out rates (Tinto, 1987).

Orientation programs provide institutions with opportunities to facilitate development in the lives of freshman students during a critical transition stage in the students' lives. Understanding the particular developmental stage of new students can better help administrators to design orientation programs. Brown (1996) stated that orientation programs that promote knowledge and information, as well as, development in Chickering's seven vectors are most successful in integrating freshman students and therefore increasing student retention.

Much like retention, institutional commitment is used as a predictor of collegiate success. The size and structure of the institution create a climate with which students must learn to thrive. Chapman and Pascarella (1983) administered the Student Involvement Questionnaire from 11 institutions to collect demographic data and personal characteristics from full time freshmen students. The researchers reported that high levels of social integration were paired with greater institutional commitment where as low levels of social integration were paired with commitment to graduation. However, they also noted that their model did not allow for size and difference between type of institution to be characterized and analyzed within their results (Chapman & Pascarella, 1983).

Orientation programs aim to integrate freshmen into the institutional culture and assist students in their adjustment to the collegiate atmosphere. Generally, orientation programs reflect the values and mission of the institution, thereby introducing incoming students to the character of the college. The goals and objectives adhered to by the

institution being researched may have played a role in the significance of these research findings. The climate, size, and type of institution being researched are foundational to reporting conclusions based on this study.

Adventure Education

In their efforts to facilitate the adjustment of incoming students, a number of colleges and universities have implemented nontraditional orientation programs. One such development is the use of adventure or wilderness during orientation programs. While the study of adventure education is not the primary focus of this thesis, a brief discussion of the historical development and foundational concepts defining adventure education will be provided to the reader to assist in making the connection from adventure education to that of orientation programs that utilize outdoor, adventure and/or wilderness experiences. The basis for most adventure orientation programming is established in the field of adventure education.

Kurt Hahn is generally credited as the first person to use challenging outdoor experiences as a medium for the development of the self and of groups (DuFrene et al., 1999, Gass 1986). Hahn was approached in 1941 by Lawrence Holt, the head of a large merchant shipping line, to address the problem of the poor survival rate of young sailors, which Holt attributed to an inability to rely on their inner resources. Hahn developed a program of physical experiences that were used as a means for the sailors to mature and realize their full potential. While Hahn recognized its value, he never advocated adventure as an end in itself, but rather as a training method through which youth would mature. The key tenets of Hahn's concept may be summarized as an experience which:

1) takes place in the outdoors; 2) is structured to assist individuals to discover and realize their strengths and limitations; 3) is designed to reflect the environment in which the participant is expected to operate; 4) is based on adventure activities which are either inherently dangerous or perceived to be dangerous and deemed appropriate for meeting the first three objectives (Irvine & Wilson, 1994).

The establishment of the Outward Bound movement by Hahn popularized the challenge experience to a broad array of participants all over the world. During the Outward Bound Movement, Hahn became the world leader in the use of adventure to educate young people (Flavin, 1996). By 1950 Hahn had established several Outward Bound schools with a defined purpose of protecting youth from the problems in society by fostering a sense of adventure, enterprise, skill and compassion (Flavin, 1996).

By the early 1990s Outward Bound had begun training thousands of teachers "Expeditionary Learning" based upon Hahn's philosophy (Flavin, 1996). The principles of Expeditionary Learning (Table 2.2) transformed many public school systems. The Outward Bound concept continues to be a catalyst, to encourage change and to help each participant more fully achieve self-knowledge and understanding of others (Irvine & Wilson, 1994). Outward Bound utilizes nature and its challenges as an approach to self-discovery (Doyle, 1981). Today, the benefits of Hahn's initiative and work can be seen in nearly every program that uses adventure as an educational process (Gass, 1986).

Within the adventure programming model, expedition behavior is often taught to prepare students for their experience. Expedition behavior (Petzoldt, 1974) is an awareness of all relationships experienced in the adventure context such as individual to individual, individual to group, group to individual, and group to other groups.

Table 2.2

Expeditionary Learning
Design Principles

1. ***The Primacy of Self Discovery***
   Learning happens best with emotion, challenge and the requisite support. People discover their abilities, values, "grand passions," and responsibilities in situations that offer adventure and the unexpected. They must have tasks that require perseverance, fitness, craftsmanship, imagination, self-discipline and significant achievement. A primary job of the educator is to help students overcome their fear and discover they have more in them than they think.

2. ***The Having of Wonderful Ideas***
   Teach so as to build on children's curiosity about the world by creating learning situations that provide matter to think about, time to experiment, and time to make sense of what is observed. Foster a community where students' and adults' ideas are respected.

3. ***The Responsibility for Learning***
   Learning is both a personal, individually specific process of discovery and a social activity. Each of us learns within and for ourselves and as a part of a group. Every aspect of a school must encourage children, young people, and adults to become increasingly responsible for directing their own personal and collective learning.

4. ***Intimacy and Caring***
   Learning is fostered best in small groups where there is trust, sustained caring and mutual respect among all members of the learning community. Keep schools and learning groups small. Be sure there is a caring adult looking after the progress of each child. Arrange for the older students to mentor the younger ones.

5. ***Success and Failure***
   All students must be assured a fair measure of success in learning in order to nurture the confidence and capacity to take risks and rise to increasingly difficult challenges. But it is also important to experience failure, to overcome negative inclinations, to prevail against adversity and to learn to turn disabilities into opportunities.

6. ***Collaboration and Competition***
   Teach so as to join individual and group development so that the value of friendship, trust, and group endeavor is made manifest. Encourage students to compete, not against each other, but with their own personal best and with rigorous standards of excellence.

7. ***Diversity and Inclusively***
   Diversity and inclusively in all groups dramatically increases richness of ideas, creative power, problem –solving ability, and acceptance of others. Encourage students to investigate, value and draw upon their own different histories, talents and resources together with those of other communities and cultures. Keep the schools and learning groups heterogeneous.

8. ***The Natural World***
   A direct and respectful relationship with the natural world refreshes the human spirit and reveals the important lessons of recurring cycles and cause and effect. Students learn to become stewards of the earth and of the generations to come.

9. ***Solitude and Reflection***
   Solitude, reflection and silence replenish our energies and open our minds. Be sure students have time alone to explore their own ideas. Then give them opportunity to exchange their reflections with each other and adults.

10. ***Service and Compassion***
    We are crew, not passengers, and are strengthened by acts of consequential service to others. One of the school's primary functions is to prepare its students with the attitudes and skills to learn from and be of service to others.

(Flavin, 1996, p. 153-154)

A key component to expedition behavior is having concern for others, as equally as one cares for oneself (Petzoldt and Ringholz, 1984).

In the middle of the 1960s, traditional schools began to develop programs modeled after Outward Bound as an avenue to break down racial and social tension and as a method to increase the effectiveness of the academic programs (Priest, 1996). One

such example began in 1972 when Bob Lentz established Project Adventure at the Hamilton-Wenham High School in Hamilton, Massachusetts. Project Adventure (PA) has progressed from this start to become a major force in the field of adventure education.

Project Adventure, now a world-renowned experiential organization, has identified the educational goals of adventure education as to: 1) increase the participant's sense of personal confidence; 2) increase mutual support within a group; 3) develop an increased joy in one's physical self and in being with others; and 4) to develop an increased familiarity and identification with the natural world. Adventure educators often adopt these educational goals as a basis for their programs goals.

Miles (1987) elaborated on the benefits of adventure/wilderness experiences for individual growth and betterment. Benefits gained through wilderness experiences include an increased awareness of one's relationship with physical environment and an opportunity for contemplation (Miles, 1987). Miles (1987) stated, "When a person gains control over his or her body, as must be done in wilderness travel, there may be corresponding gain in control in other areas" (p. 9). Out of the adventure/wilderness experience individuals develop problem solving, cooperation and communication skills. Miles supported his argument by examining the writings of John Muir summarizing Muir's philosophy, which fundamentally suggest that wilderness is a healing place. For John Muir, wilderness was a restorative place in which to learn and grow while developing one's mental and physical well-being. Miles (1987) stated that the search for healing and growth in wild places has become an organized industry commonly identified as therapeutic recreation. Miles (1987) noted the research documenting the therapeutic

value of wilderness experience indicates programs like Outward Bound may result in positive changes in self-concept, personalities, individual behavior, and social function.

Adventure Orientation

Since 1935 orientation programs, which take place outside of the classroom, have been changed and developed at colleges and universities across the country (Gass, 1983). Galloway (2000) described Gass' (1986) historical rendering about the development of wilderness orientation programs as containing three phases. The first phase involves the use of an adventure/wilderness experience to develop interpersonal relationships. The second phase occurs with the introduction of Outward Bound principles and practices to orientation programs. Principles may include such things as shared responsibility, leadership development, low-impact camping techniques, a solo experience, journaling, and development of self-awareness and group management. The third phase includes an effort taken by colleges and universities to apply current research on orientation to design programs to meet the needs of incoming students. Programs adapted from the Outward Bound model have been initiated in dozens of colleges to supplement course offerings (Doyle, 1981).

In a national study by O'Keefe (1988), information about college freshman adventure orientation programs was collected from across the country. The following was summarized as a result of her data collection. Outdoor adventure orientation programs vary in purpose, setting, and leadership personnel. All programs were interested in providing the best possible introduction to each particular college. These

adventure programs have been designed to educate through the environment, but not necessarily for the environment.

The specific findings of the O'Keefe study indicated that: 1) there were nearly equal numbers of small and large colleges offering adventure orientation programs; 2) the average length of time programs have been existence was eight years; 3) half of the adventure orientation programs served less than 50 students per year; 4) the length of time programs operated varied from one day to one month with a majority having students in the field between four to seven days; 5) the majority of programs operate just prior to the fall semester; and, 6) the cost of the adventure programs to the participant ranged from nothing to $1200 with the majority falling between $50 and $200 (O'Keefe, 1988).

Davis-Berman and Berman (1996) noted significant changes in distribution of the goals of adventure orientation programs over the past few years. Their results indicated greater emphasis on facilitating social interaction and development than O'Keefe (1988) found in earlier surveys. Davis-Berman and Berman (1996) suggested this change might reflect increased competition for students among private schools and the use of adventure programming as a marketing tool to attract potential students. An example of an orientation program at a state college on the west coast demonstrated these changes. This one credit hour, freshmen program focuses on academic preparation as well as issues associated with adventure education, such as, communication, listening, community/teamwork, and problem-solving skills (Fine, 1997).

Galloway produced a study similar to O'Keefe in 2000 and found that adventure orientation programs vary across several operation factors. Operational variables within

his research include program length, number of participants, requirement of participation and length of time within an outdoor setting. Galloway (2000) reported that seventy percent of the programs (N=40) indicated spending from 80-100% of their time in a wilderness or outdoor setting. Only nine programs indicated spending less than 60% of their time in a wilderness or outdoor setting. Galloway (2000) found that seventy percent of programs spend most of their time in a wilderness or outdoor setting and the duration of most programs is between three and six days. Program goals shared by most colleges were positive peer group development, improved decision-making skills, improved small-group skills, increased satisfaction, adjustment and maturity, having fun, enhanced student leadership skills and increased self-confidence (Galloway, 2000). Galloway (2000) described most programs as supporting pro-social goals, such as positive peer group development, enhanced self-confidence and self-esteem, as well as having fun. Fewer institutions held academic goals such as easing transition to college and increased interest in academics.

In an earlier study (Gass, 1987), the effectiveness of an adventure orientation program designed to reduce student attrition and assist with the development of first year students was compared to two other programs. Three groups of freshman students at the University of New Hampshire participated in this study. The outdoor adventure group, labeled Summer Fireside Experience Program (SFEP, N=32), the Freshman Camp (FC, N=64), and the Control Group (CG, N=64). The FC and the CG were randomly selected from their populations. The SFEP group participated in a structured five-day program prior to the beginning of the fall semester. The outdoor adventure program consisted of games and initiatives, orienteering, rock-climbing and rappelling, backpacking, a solo

experience, service projects and a long distance run. The FC was a four-day program at a residential camp prior to the beginning of classes. Activities included small group discussions with upper-class students, skits about campus life, a faculty-student day, and cheers and songs. Students in the control group did not participate with any program.

Retention rates, grade point averages and data gathered from the condensed Student Development Task Inventory (CSDTI-2) were compared between the three groups. After controlling for critical differences between students (i.e. high school rank, college aptitude test scores), results showed retention rates and grade point averages after one year were highest in the adventure group participants. This study suggested that while the adventure orientation program had no significant effect on students in the area of developing purpose, it did produce learning experientially in an outdoor environment, and the ability to transfer learning successes from the outdoors into the campus environment. The adventure orientation program had a positive effect on assisting students in developing autonomy and interpersonal relationships (Gass, 1987). These positive effects were found to be true for both male and female students in the adventure orientation program (Gass, 1987).

Brown (1996) also found significance in a study examining the adjustment differences of freshman at a university offering three varying types of orientation programs. Prior to selecting a traditional classroom option, a service-learning option, or an outdoor adventure experience, 576 freshmen completed the College Transition Questionnaire (CTQ). Results from the CTQ found no difference in the three groups prior to participating in the orientation programs. There was a significant gender difference found among freshmen in choosing one of the three types of orientation

programs. Females tended to choose service learning, whereas males tended to choose either the classroom or adventure option. The adventure orientation program was offered during the summer before classes began. Students chose from among canoeing in Algonquin Provincial Park, Ontario, bicycling in Acadia National Park, Maine, or sailing on Chesapeake Bay. The alternative options, such as service-learning and adventure orientation programs were held the week before school began and continued during the fall semester. The traditional classroom orientation program was held the first five weeks of the semester.

Following completion of the orientation programs, 277 freshmen completed the Student Adaptation to College Questionnaire (SACQ). Results indicated that adventure orientees had the best adjustment means in each of the following areas: academic, social, personal-emotional, institutional attachment, and overall score. Second semester and second year retention rates compared between the three orientation groups indicated that adventure orientees had the highest second semester retention rates in six of the last eight years. Brown (1996) stated that because adventure orientation programs are challenging to the student and required an investment in time and energy by faculty and staff, they are beneficial for student development.

Experiential and adventure education theory support concepts of development in individuals participating in outdoor adventure activities. Through personal involvement within an adventure orientation program, students can gain a sense of confidence, direction, and a connection to others on campus (Brown, 1996; Gass, 1986; O'Keefe 1988). Overcoming a challenging experience during an adventure orientation program can lead to developing confidence in one's abilities. Increasing self-competence through

adventure orientation assists students in their self-confidence to meet the academic and social demands of college (Brown, 1996; Stemba, 1989; Gass 1986, 1987, 1990).

Since 2000 a conference titled Student Affairs and the Great Outdoors (SAGO) began to bridge the areas of adventure education and student development. This conference has been held annually at Appalachian State University in Boone, North Carolina. The past year's conference was held May 29 – June 1, 2001 and featured Dr. Michael Gass as the keynote speaker.

Summary

Adventure orientation programs have become increasingly popular for use as an alternative to traditional orientation programming. Providing a variety of orientation programs creates opportunities for students to connect to their new situation in diverse ways. Historically, one of the main purposes of higher education has been to promote the moral and ethical development of its students (Gass, 1986). If a significant connection exists between the developmental maturity of college students based on their first year experience and their freshmen orientation program, then it is important to determine if adventure experiences could assist in the process of student adaptation to college life.

Doyle (1981) has recommended that more studies be done on differences in socio-psychological change between males and females as a result of outdoor challenge experiences. O' Keefe (1988) believed that many program directors do not know if their goals are being met because of a lack of meaningful evaluation of their programs. Assessment of adventure orientation programs may be utilized to identify outcomes such as: increased grade point average, improved self-concept, completion of a degree

program and other variables associated with retention (Galloway, 2000). Data from sound evaluation techniques can provide valuable information about the programs effectiveness, as well as, justifying the program's worth to college administrators.

CHAPTER III

METHOD

The purpose of this study was to evaluate and compare the effects of four adventure orientation program types, a 3-day backpacking field expedition and three combination programs, consisting of three individual day adventure experiences, on the retention and developmental growth of the first year students at a small-private liberal arts college in the southeast. This study presents findings based on observations made of a freshmen orientation program during the fall of 2000. The institution utilized for this assessment is a small, private, residential, church-related, liberal arts college, located in the southeastern United States.

Orientation 110 (OR 110) is a course required of all freshmen as a foundation for the liberal arts curriculum at the institution surveyed. During OR 110, freshmen students participate in one of two types of adventure orientation options which occur before the beginning of the fall semester: 1) a three-day expedition backpacking trip into the Great Smoky Mountain National Park, preceded by a day on the low elements of the campus challenge course, or 2) a combination adventure experience consisting of three, separate, one-day encounters that include a day on the low elements of the campus challenge course, and a combination of three-four of the following options: belay training, climbing the Alpine Tower, canoeing, rock-climbing, or a day hike in the Great Smoky Mountain

National Park. Adventure programming has been a universal experience for freshmen at the institution being researched for over five years.

OR 110 provides incoming freshmen one credit hour for enrolling in a required course designed to facilitate a supportive group experience to assist freshmen in their transition to college life. Through small group discussion, experiential activity, and reflection, students are integrated into a peer-support group identified as useful in the college environment as they learn to adapt to their new roles on campus. OR 110 is a five-week program integrating traditional classroom curricula and experiential adventure programming for students as a means to foster group connection and support, understanding of the institutional mission and expectations, and individual awareness. Discussions include a wide range of wellness and health related issues, college history and traditions, college policies, campus life, campus resources, and student activities.

All first year students must choose one of the two adventure orientation tracks, with the exception of fall athletes and students that have been identified as at-risk. At-risk students are mandated through the Academic Success Program (ASP) to participate in the three-day expedition during orientation. Additionally, because of athletic training, all fall student athletes that have not been identified as at-risk are requested to stay on campus; this automatically restricts them from selecting the expedition. Other students will self-select into either the expedition group or a combination adventure experience. Students are placed by the registrar into a OR 110 section based on their preferred adventure orientation experience and a formula used to balance gender representation within each section. Within nearly 20 sections of OR110 approximately 80 students

completed the expedition and some 240 students completed the combination adventure orientation experience.

During orientation all students were assigned to a section with a peer mentor (an upper-class student), a staff advisor and a designated meeting place. The first week each group meets daily for several hours at a time, followed by a four week period in which each group meets twice weekly for a one-hour period. All sections explore the significance of the institutional statement of purpose and educational goals, and the college covenant. In addition each student is mentored through a process of developing a personal mission statement. The objectives (Appendix A) of the orientation program include:

1. Make connections by developing familiarity with the campus, a sense of community and citizenship, and a sense of inclusion or belonging.
2. Establish and nurture relationships by creating the ability to understand and cope with new and changing relationships, a positive expectation for cultural differences, and a sense of wellness to further personal balance and self-care.
3. Develop competency in various self-management skills including time and money management, study skills and preparing for exams, stress management, communication and "academic etiquette".

The factors evaluated in this study include the participant's high school grade point average, gender, and type of orientation experience. These factors were measured to determine differences among student developmental behaviors after participating in the five-week orientation program described herein. Chapter III contains sections describing

the procedures, sample, instrumentation, data collection, and the statistical analysis of data.

Sample

Approval for this study was granted by the Institutional Review Board at Oklahoma State University and the Human and Animal Subjects Review Committee at the college participating in this research project (Appendix B). The sample for this study included 120 incoming freshmen students during the fall semester of 2000. The subjects in this study were both male and female students, whose chronological ages ranged from 17-24 years. The subjects remained in intact groups throughout the orientation program.

For the purposes of this study the types of adventure orientation experiences have been categorized into four differing treatment groups. The subjects within each group have been randomly selected based on treatment type to create equal cells. The first treatment group (Expedition) represents participation in the 3-day backpacking expedition and a challenge course experience (N=30; 15 females and 15 males). Treatment group 2 (Rock-climb) represents students who have participated in a challenge course experience, attended ground belay training, and participated in both a one-day trip rock-climbing and a hiking day trip (N=30; 15 females and 15 males). The third treatment group (Canoe) identifies students who have participated in a challenge course experience, attended ground belay training, participated in a half-day experience on the Alpine Tower, and a day trip including canoeing and hiking (N=30; 15 females and 15 males). The fourth treatment group (Alpine Tower) identifies students who have

participated in a challenge course experience, attended ground belay training, participated in a half-day experience on the Alpine Tower, and a hiking day trip (N=30; 15 females and 15 males). Each treatment group is identified by an outstanding adventure experience unique to that orientation type. The four types of adventure orientation experiences treatment types evaluated were: Expedition, Rock-climbing, Canoe and Alpine Tower (Table 3.1).

TABLE 3.1

ADVENTURE ORIENTAION
TREATMENT TYPES

T1	T2	T3	T4
Expedition n=30	Rock-climb n=30	Canoe n=30	Alpine Tower n=30

Instrumentation

The four types of adventure orientation groups (Expedition, Rock-climb, Canoe, and Alpine Tower) were compared based on the high school grade point average of the subjects, gender, and three task areas from a condensed version of the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987). The Student Developmental Task and Lifestyle Inventory (SDTLI) measures three developmental tasks: 1) establishing and clarifying a sense of purpose (PUR); 2) developing mature interpersonal relationships (MIR); and, 3) demonstrating academic autonomy (AA).

The developmental task PUR consists of five areas: 1) educational involvement, which considers the extent to which students have defined and explored educational goals

and are active, self-directed learners; 2) career planning, which considers the degree to which students have integrated self-knowledge and information about occupations, made an emotional commitment and are taking steps to achieve career goals; 3) lifestyle planning, which considers the extent to which students have established a direction and planned for the future while considering their values and family plans, as well as their vocational and educational objectives; 4) life management, which considers the degree to which students are able to satisfy their daily needs, meet responsibilities, manage finances, and met academic demands; and, 5) cultural participation, which assesses cultural interests and the degree to which students participate in traditional cultural activities.

Scores on the PUR indicate the extent to which students have re-defined and thoroughly explored career goals and plans; have synthesized knowledge about themselves and the world of work into appropriate vocational plans, both in terms of emotional commitment and taking action to move toward career goals; have established a personal direction and future plans that take into account values, lifestyle choices, and career objectives; and have structured their lives and are able to use the resources of their environments to meet life's demands effectively (Winston & Miller, 1987).

The developing mature interpersonal relationships (MIR) task (Winston & Miller, 1987) includes the following areas: 1) peer relationships, 2) tolerance, and 3) emotional autonomy. Students have resolved successfully the challenges of the peer relationships to the extent that they have developed peer relationships that are characterized by independence, frankness, and trust. This reflects appreciation of individual differences between friends and acquaintances and shows that they are not unduly influenced by

pressure to conform to group norms or to conceal opinions that may differ from other group members. The tolerance area defines the extent to which students are open and accepting of people from different cultures, races and backgrounds, thereby choosing to respond to people as individuals while accepting contact with others who are different from them in some way. Emotional autonomy reflects the degree to which students are free from the need for constant reassurance, approval and direction from others, having developed confidence and trust in their own ideas and feelings.

The academic autonomy (AA) task refers to the extent to which students can deal with ambiguity and monitor and control their own behavior to meet goals successfully and fulfill responsibilities, especially as it relates to achievements (Winston & Miller, 1987).

The instrument used in this study was selected to provide data about college students' psychosocial development and the effects of the given adventure orientation program. The Student Developmental Task and Lifestyle Inventory (SDTLI) (Winston & Miller, 1987) was developed as an instrument to measure the level of psychosocial development of college students. Winston and Miller (1987) described a developmental task as "an interrelated set of behaviors and attitudes which the culture specifies should be exhibited at approximately the same time by a given age cohort in a designated context" (p. 8). The SDTLI is intended for use with students 17-24 years of age within the context of colleges and universities (Winston, 1990).

Although it does not completely conform to the vector structure, the SDTLI is based on Chickering's (1969) work that described seven vectors of development believed to be salient developmental issues for college students (Winston, 1990). According to

Chickering (1969), these seven vectors represent the core of the major foundations of the young adult college years. The seven vectors identified by Chickering for college students are fundamental to the assessment inventory developed by Winston and Miller (1987).

The SDTLI authors performed psychometric testing to determine the validity and reliability of the assessment. Test re-test reliability data gathered to measure the stability of the SDTLI was conducted during an introductory education class (N=27) at a large, public, southeastern university and in an introductory psychology class (N=42) at a small, public college in the southeast. Product-moment correlations were computed for each task and clustered around .80 during both a two-week and four week trial. All the test-retest correlations were statistically significant at $p<.01$ level (Winston & Miller, 1987). Winston and Miller's (1987) data suggests that the SDTLI is adequate for group data.

The second method of determining reliability was conducted by estimating internal consistency. The alpha coefficients for a large group (N=1200) of students (ages 17 to 24) enrolled at 22 colleges and universities in the United States and Canada were examined for data collection during the fall of 1986 (Winston & Miller, 1987). Alpha coefficients ranged from .90 for the PUR task to .50 for the response bias scale. The coefficient alpha (n=954) for the total inventory was .93. Three subtasks (cultural participation, tolerance, and emotional autonomy) were shown to have relatively low alpha coefficients. The tasks to which they belong (PUR and MIR) however do seem to have adequate internal consistency reliability to use in research studies with groups of students (Winston & Miller, 1987). Miller and Winston (1987) stated that the PUR and

MIR tasks are relatively independent from one another; however, the AA task is relatively correlated with both PUR (.41) and MIR (.39).

The validity estimates were conducted for each task by collecting data with samples of convenience from a relatively large southeastern community college in a metropolitan area, a highly selective liberal arts college in the northwest, and a large, public university in the Midwest (N=109). Winston and Miller (1987) reported that PUR has a relatively high correlation with two of its subtask scales, (1) career planning (.70) and (2) career exploration (.49). PUR also correlated with other instruments such as the *Omnibus Personality Inventory* and the *College Student Questionnaire* (Winston & Miller, 1987).

A variety of instruments were correlated with MIR in order to establish its validity. The *Mines-Jenson Interpersonal Relationship Inventory* based on Chickering's developmental vectors correlated with the MIR task at .37. This finding lends support to the MIR's validity, but also suggests that the two assessments do not measure exactly the same constructs (Winston & Miller, 1987). The MIR was found significantly correlated with 9 scales of the *Omnibus Personality Inventory* (Winston & Miller, 1987). Five items found on the *Omnibus Personality Inventory* that significantly correlated with MIR include: (a) seek friends who are quite different from me (.48), (b) accepting of differences in other people (.39), (c) avoid associating with people from different races and/or cultures when I can (-.33), (d) often depend on parent(s) to tell me what to do (-.33), and (e) attending college only to get a diploma (Miller & Winston, 1987).

AA was also found to correlate with two standardized tests, the *Omnibus Personality Inventory* and the *Iowa Developing Autonomy Inventory* (Miller & Winston,

1987). Miller and Winston (1987) report many items positively related to AA including: (a) educationally motivated (.43), (b) manage time satisfactorily (.43), (c) intellectually stimulated by college (.34), (d) thoughtful, careful and self-motivated (.32), (e) committed to accomplishing goals (.32), (f) seek in-depth educational experiences (.32), (g) self-motivated (.32), (h) in control of important areas of my life (.30), and (i) assertive (.28). AA was also correlated with two subtask scales, (1) confidence (.49) and (2) habits (.49).

The SDTLI has passed through several phases of development and at least three revisions since its inception in 1973 (Winston & Miller, 1987). The Student Development Task and Lifestyle Assessment (SDTLA) is the most current edition of the SDTLI. Watt and Vodanovich (1999) reported that the newest version of this instrument, the SDTLA was copyrighted in 1999 and is designed to assess psychosocial development among traditional college age students.

The Condensed Student Developmental Task Inventory (CSDTI-2), a shortened version of the original SDTLI instrument developed by Winston, Miller, and Prince was administered in order to measure the achievement of certain behaviors associated with the satisfactory achievement of certain developmental tasks (Appendix C). This version was found in a doctoral dissertation by Michael Gass, published in 1986. The researcher has received written permission from the instrument's author to use the condensed version of the instrument (Appendix D).

During Gass' (1986) research the number of items for the CSDTI-2 was reduced from 140 to 70; this was done to decrease perfunctory responding by the participants and in order to minimize the potential for tedium. Gass (1986) reported that items included in

the shortened version of the instrument represent each task category. Items were selected on their ability to correspond to the content that they measure and the curricular emphases of the orientation program, thereby providing the highest validity possible for the instrument (Gass, 1986).

Gass (1986) assessed the CSDTI-2 reliability using the Cronbach's Alpha Procedure (Gass, 1986). By dividing the number of test items in half, the test reliability for the CSDTI-2 was lowered from .92 to .79 as shown on the Spearman Brown chart for calculation (Gass, 1986). Since the study is based on the comparison of the four treatment group means and will not be used clinically, the decrease in reliability was not a major concern for this project. The safeguards specified in Public Law 91-513 (Privacy Act) were followed to ensure the confidentiality and security of all information obtained regarding the participants.

Data Collection

Data were collected twice during the fall semester of 2000. A pre-test was administered for use as a covariate during the regularly scheduled opening session of freshman orientation in August and a post-test occurred five weeks later during the conclusion of orientation, as part of a regular classroom activity. Students participating were asked to sign a consent form prior to data collection in order to obtain the respondent's permission to participate in the study. Anyone who chose not to complete a consent form was removed from the sample pool. All contact with the subjects concerning measurement was accomplished with the assistance of the college,

minimizing the possibility of a threat to the external validity of the experiment by being as unobtrusive as possible.

The CSDTI-2 was administered in August 2000 to freshman students during the opening session of the orientation program, one week prior to fall term classes beginning. Permission was obtained from the Vice President of Student Development and the Associate Academic Dean at the institution to administer the CSDTI-2 to each of the 18 sections of OR 110. Students were seated in an auditorium according to their OR 110 section number to sign consent forms and take the assessment. Peer mentors (one upper-class student assigned to each section) assisted in the distribution of paperwork necessary to complete the survey. Each subject was provided with a packet containing: 1) a form to consent to participation (Appendix E); 2) a demographic questionnaire (Appendix F); 3) the CSDTI-2 survey; 4) written instructions; 5) a number two pencil; and, 6) a scan sheet answer form. In addition to written instructions, the researcher verbally administered directions to assist the subjects on how to complete the survey appropriately. The completion time for the instrument was estimated at approximately thirty minutes. An additional fifteen minutes was allotted for instruction and administration of the survey.

All adventure orientation programs began in the afternoon following completion of the pre-test by the freshmen participants and a break scheduled for lunch. The four expedition sections left campus immediately after lunch to begin their three-day backpacking experience in the Great Smoky Mountain National Park. The remaining sections of OR 110 began their combination adventure orientation experience on the challenge course located on campus.

Following completion of the orientation program, four weeks into the fall semester of 2000, outcome measures were collected. A post-test was conducted in each section of OR 110 on the final day of class. The orientation instructors and peer mentors facilitated the second data collection procedure on the last day of class. Orientation instructors were provided written instructions as to how to administer the CSDTI-2 to the students in their section. Upon receipt of any data, several steps were taken to assure the rights of the participants in the study. After checking for errors and verifying the subject's willingness to participate in the study, the researcher coded the answer sheets and separated the consent forms from any identifying materials. Each survey was checked to make sure all items are completed. All further information from the instrument or any other associated data (covariate material) was recorded in a manner that did not allow the participants to be identified. All data were analyzed and reported as group data in this study.

The participant's high school grade point average was obtained through the office of the Registrar during the fall semester of 2000. Additional demographic information was collected from the Admissions Office during the fall of 2001 (Appendix G). All demographic information and instrument data was then entered into a computer to create a data spread sheet. Data were entered into a computer using SYSTAT software to administer the statistical analyses.

Data Analysis

Raw scores were transferred into standard scores using the SDTLI Manual to create normative data. This data was used to elaborate upon research findings and to

evaluate program effectiveness. For the purposes of this study a higher student development task score indicates greater achievement in that developmental task.

To test for possible differences among group means, a three-way 2 X 3 X 4 Analysis of Covariance (ANCOVA) was employed on each of the three task scores identifying developmental growth (PUR, MIR, AA) as the dependent variable. The independent variables included gender (Female and Male); high school grade point average (High, Medium, Low); and adventure orientation program type (Expedition, Rock-climb, Canoe, Alpine Tower). To control for initial differences in developmental level among the groups, pre-test scores from the Condensed Student Developmental Task Inventory (CSDTI-2) were used as a covariate. Data analysis was performed using the SYSTAT statistical package, version 4.1, copyright 1989. All statistical testing was conducted at the .05 Alpha level. Demographic data were used to provide descriptive statistics that illustrate characteristics of the sample population.

CHAPTER IV

RESULTS

In this chapter, the results of the statistical analysis will be reported in eight sections. The first section summarizes the descriptive statistics gathered as demographic data related to the sample population. The remaining seven sections will report the findings of each research question, as well as the findings related to retention.

Descriptive Statistics

The participants for this study N=120 consisted of 60 female and 60 male freshmen students. Demographic data were gathered from participants via a self-reported questionnaire (Appendix F) and completed prior to taking the developmental assessment show that: 1) seventy-three percent of the subjects live on the college campus; 2) sixty percent considered themselves to be from a rural area as opposed to the 40% who considered themselves to be from an urban area; 3) one quarter of the subjects reported having backpack experience in the Smoky Mountains prior to participating in orientation; 4) thirty percent selected to participate in the expedition; and 5) seven percent reported being admitted conditionally as part of the Academic Success Program (Figure 1). Additionally, demographic data illustrating a profile of the sample population used for

this research project were collected from the Vice President of Admissions (Appendix G).

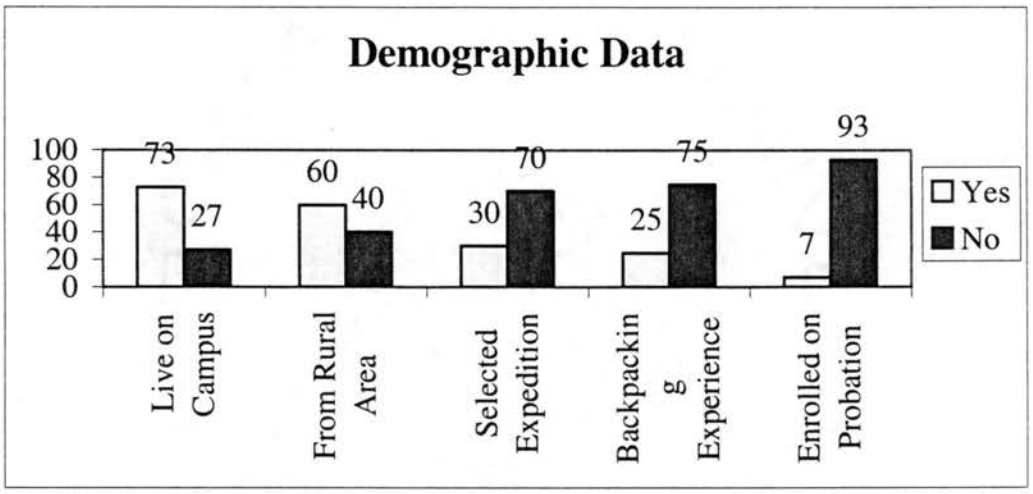

Figure 1. Data presented for descriptive statistics.

Results of Data Analysis

A 3-way analysis of variance (ANOVA) was conducted at the .05 Alpha level, for each of the three developmental tasks (PUR, MIR, AA) to answer the following research questions:

Research Question 1

Does the comparative effectiveness of the four types of adventure orientation programming change in relationship to gender and HSGPA on the participants' developmental tasks (PUR, MIR, AA)?

A three-way ANOVA was conducted to analyze the relationship between treatment, gender, and high school GPA for each developmental task (PUR, MIR,

AA). As shown in Tables 4.1 – 4.3, the mean interaction scores for treatment x gender x GPA was compared to determine any real differences for developmental tasks: PUR, MIR, AA. No significant treatment x gender x GPA interaction was found when assessing the comparative effects of the three independent variables with each developmental tasks. No further conclusions were drawn from this data based on the small number of subjects in each cell (n=5).

TABLE 4.1

MEANS AND STANDARD DEVIATIONS FOR PUR
TREATMENT BY GENDER
BY HIGH SCHOOL GPA

	High GPA		Medium GPA		Low GPA	
	F	M	F	M	F	M
Expedition						
Mean	62.4	66.6	62	67.8	56.8	56.2
SD	5.9	9.21	6.63	7.33	7.29	5.45
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5
Rock-climb						
Mean	56	57.8	55.6	59	52.8	51.8
SD	13.96	10.4	15.09	13.1	9.15	9.31
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5
Canoe						
Mean	68.2	58	65	63.4	54.4	56.8
SD	9.36	6.75	6.67	11.63	17.62	7.69
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5
Alpine Tower						
Mean	62.6	51.6	55.8	55.6	58.8	63.2
SD	8.08	11.08	7.5	7.09	7.29	9.07
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5

TABLE 4.2

MEANS AND STANDARD DEVIATIONS FOR MIR
TREATMENT BY GENDER
BY HIGH SCHOOL GPA

	High GPA		Medium GPA		Low GPA	
	F	M	F	M	F	M
Expedition						
Mean	55.2	55.2	51.4	49.5	46.2	43.4
SD	4.76	11.69	2.88	10.47	6.57	11.67
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5
Rock-climb						
Mean	53	50.6	54.4	48.2	49.2	44.2
SD	7.84	14.22	4.51	9.52	5.67	11.69
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5
Canoe						
Mean	52.2	52.8	45.2	45.4	46.2	47.6
SD	7.26	9.09	9.28	3.58	3.35	7.33
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5
Alpine Tower						
Mean	54.2	49.5	46.6	43	46.2	49.2
SD	5.31	7.14	8.96	6.32	6.57	8.5
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5

TABLE 4.3

MEANS AND STANDARD DEVIATIONS FOR AA
TREATMENT BY GENDER
BY HIGH SCHOOL GPA

	High GPA		Medium GPA		Low GPA	
	F	M	F	M	F	M
Expedition						
Mean	57.8	63	56	56	56.8	52.6
SD	7.53	14	6.36	13.6	7.29	4.02
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5
Rock-climb						
Mean	54.2	57.8	47.2	54.2	52.8	50.6
SD	16.66	4.02	15.09	12.68	9.15	9.91
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5
Canoe						
Mean	59.6	61.2	54.4	54.4	54.4	50.6
SD	4.93	9.96	11.39	9.45	17.62	4.93
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5
Alpine Tower						
Mean	66.2	52.6	52.6	54.2	58.8	45.8
SD	11.28	17.87	9.91	7.53	7.29	9.11
	n = 5	n = 5	n = 5	n = 5	n = 5	n = 5

Research Question 2

Are there differences among the four types of adventure orientation programs on the student developmental tasks including a sense of purpose (PUR), mature interpersonal relationships (MIR) and academic autonomy (AA)?

PUR, MIR and AA scores were compared for each adventure orientation treatment type (Expedition, Rock-climb, Canoe, Alpine Tower) to determine any

real differences (Table 4.4). No significant difference was found among the treatment groups for the participant's developmental levels: PUR, MIR, or AA.

TABLE 4.4

MEANS AND STANDARD DEVIATIONS FOR DEVELOPMENTAL TASKS

		Expedition	Rock	Canoe	Tower
PUR	Mean	61.90	55.50	60.96	57.93
	SD	7.83	11.27	10.90	8.75
		n = 30	n = 30	n = 30	n = 30
MIR	Mean	55.46	52.73	54.6	54.86
	SD	8.88	9.29	7.16	7.57
		n = 30	n = 30	n = 30	n = 30
AA	Mean	50.20	49.93	48.23	48.40
	SD	10.88	10.27	9.47	11.69
		n = 30	n = 30	n = 30	n = 30

Note. Maximum Score for PUR = 76, MIR = 70, AA = 73. The higher the score is, the greater the developmental level.

Research Question 3

Are there differences between female and male participants on their developmental tasks (PUR, MIR, and AA)?

PUR, MIR and AA scores were compared for male and female participants to determine any real differences (Table 4.5). No significant difference was found among type of gender for the participant's developmental levels: PUR, MIR, or AA.

TABLE 4.5

MEANS AND STANDARD DEVIATIONS
BY GENDER

		Female	Male
PUR	Mean	59.20	58.98
	SD	10.30	9.78
		n = 60	n = 60
MIR	Mean	50.00	48.38
	SD	6.82	9.39
		n = 60	n = 60
AA	Mean	54.41	54.41
	SD	10.06	11.06
		n = 60	n = 60

Note. Maximum Score for PUR = 76, MIR = 70, AA = 73.
The higher the score is, the greater the developmental level.

Research Question 4

Are there differences among participants with high, medium and low high school grade point average (HSGPA) on their developmental tasks (PUR, MIR, AA)?

PUR, MIR and AA scores were compared for high, medium and low GPA to determine any real differences (Table 4.6). No significant difference was found among participant's high school grade point average for the participant's developmental levels: PUR, MIR, or AA.

TABLE 4.6

MEANS AND STANDARD DEVIATIONS BY HIGH SCHOOL GRADE POINT AVERAGE

		High School Grade Point Average		
		High	Medium	Low
PUR	Mean	60.4	60.52	56.35
	SD	10.20	10.02	9.45
		n = 40	n = 40	n = 40
MIR	Mean	53.05	48	46.52
	SD	8.26	7.46	7.62
		n = 40	n = 40	n = 40
AA	Mean	59.05	53.62	50.57
	SD	11.50	9.42	8.9
		n = 40	n = 40	n = 40

Note. Maximum Score for PUR = 76, MIR = 70, AA = 73. The higher the score is, the greater the developmental level.

Research Question 5

Do the four types of adventure orientation programs have a similar effect for female and male participants for their developmental tasks (PUR, MIR, AA)?

Each developmental task (PUR, MIR, AA) was compared with the interaction between adventure orientation treatment type (Expedition, Rock-climb, Canoe, Alpine Tower) and gender. As shown in Tables 4.7 – 4.9, the mean interaction scores for treatment type and gender were compared between groups to determine any real differences for developmental tasks: PUR, MIR, AA. The results of the data analysis indicated a significant gender x treatment interaction for MIR, $F = 3.963$, $p < 0.05$ (Table 4.10).

TABLE 4.7

MEANS AND STANDARD DEVIATIONS FOR PUR
BY TREATMENT AND GENDER

		Expedition	Rock	Canoe	Tower
Female					
	Mean	60.4	54.8	62.53	59.07
	SD	6.68	12.11	12.79	7.63
		n = 15	n = 15	n = 15	n = 15
Male					
	Mean	63.53	56.2	59.4	56.8
	SD	8.78	10.74	8.8	9.89
		n = 15	n = 15	n = 15	n = 15

TABLE 4.8

MEANS AND STANDARD DEVIATIONS FOR MIR
BY TREATMENT AND GENDER

		Expedition	Rock	Canoe	Tower
Female					
	Mean	50.93	52.2	47.86	49
	SD	5.98	6.14	7.28	7.6
		n = 15	n = 15	n = 15	n = 15
Male					
	Mean	49.46	47.66	48.6	47.8
	SD	11.24	11.41	7.27	7.75
		n = 15	n = 15	n = 15	n = 15

TABLE 4.9

MEANS AND STANDARD DEVIATIONS FOR AA
BY TREATMENT AND GENDER

		Expedition	Rock	Canoe	Tower
Female					
	Mean	53.73	51.27	53.8	58.87
	SD	9.06	10.3	10.15	10.13
		n = 15	n = 15	n = 15	n = 15
Male					
	Mean	57.2	54.2	55.4	50.87
	SD	12.53	10.39	9.02	12.1
		n = 15	n = 15	n = 15	n = 15

TABLE 4.10

ANOVA SUMMARY TABLE FOR MIR
TREATMENT BY GENDER

Source	*SS*	*df*	*MS*	*F*	*p*
Treatment X Gender	573.171	3	191.057	3.963	0.010 *
Error	4579.948	95	48.210		

* $p < 0.05$

These results illustrate that the comparative effectiveness of the adventure orientation program was not similar for males and females on the mature interpersonal relationship (MIR) task. A follow-up conducted with a simple main effect analysis revealed that females scored significantly higher in the Rock-climb group than for the Expedition, Alpine Tower or Canoe groups. There were no significant interactions for the developmental tasks PUR or AA.

When further examining the means of the treatment types for each gender to determine the cause of this variation, it can be seen that over two-thirds of females fell above the mean for the Rock-climb group and the Alpine Tower group (Table 4.11). Additionally, the overall mean reported for each treatment group indicates that over half of the participants on the Expedition scored above the mean more often contrasted with the Canoe group which had less people score above the mean than any other treatment group, approximately one-third (Table 4.8). In summary there was a significant difference between gender and the type of adventure orientation participants were involved with.

TABLE 4.11

PERCENTAGE OF SCORES ABOVE MEAN
FOR MIR BY GENDER

Treatment Type	Overall	Female	Male
Expedition	66.7%	66.7%	66.7%
Rock-climb	56.7%	73.4%	40%
Canoe	33.4%	33.4%	33.4%
Alpine Tower	60%	73.4%	46.7%

Research Question 6

Do the four types of adventure orientation programs have a similar effect for participants with high, medium and low HSGPA on their developmental tasks (PUR, MIR, AA)?

PUR, MIR and AA scores were compared for each treatment group based on participant's high school GPA to determine any real differences. As shown in

Tables 4.12 – 4.14, the mean interaction scores for treatment type and high school grade point average were compared between groups to determine any real differences for developmental tasks: PUR, MIR, AA. There were no significant interactions found.

TABLE 4.12

MEANS AND STANDARD DEVIATIONS FOR PUR
BY TREATMENT AND HIGH SCHOOL GPA

	Expedition	Rock	Canoe	Tower
High GPA				
Mean	64.5	56.9	63.1	57.1
SD	7.62	11.65	9.39	10.83
	n = 10	n = 10	n = 10	n = 10
Medium GPA				
Mean	64.9	57.3	64.2	55.7
SD	7.26	13.44	8.98	6.88
	n = 10	n = 10	n = 10	n = 10
Low GPA				
Mean	56.5	52.3	55.6	61
SD	6.08	8.72	12.88	8.1
	n = 10	n = 10	n = 10	n = 10

TABLE 4.13

MEANS AND STANDARD DEVIATIONS FOR MIR
BY TREATMENT AND HIGH SCHOOL GPA

	Expedition	Rock	Canoe	Tower
High GPA				
Mean	55.2	51.8	52.5	52.7
SD	8.42	10.9	7.76	6.2
	n = 10	n = 10	n = 10	n = 10
Medium GPA				
Mean	50.6	51.3	45.3	44.8
SD	6.42	7.75	6.63	7.55
	n = 10	n = 10	n = 10	n = 10
Low GPA				
Mean	44.8	46.7	46.9	47.7
SD	9.05	9.06	5.43	7.33
	n = 10	n = 10	n = 10	n = 10

TABLE 4.14

MEANS AND STANDARD DEVIATIONS FOR AA
BY TREATMENT AND HIGH SCHOOL GPA

	Expedition	Rock	Canoe	Tower
High GPA				
Mean	60.4	56	60.4	59.4
SD	10.95	11.59	7.46	15.8
	n = 10	n = 10	n = 10	n = 10
Medium GPA				
Mean	56	50.7	54.4	53.4
SD	10.01	10.06	9.87	8.34
	n = 10	n = 10	n = 10	n = 10
Low GPA				
Mean	50	51.5	49	51.8
SD	10.07	9.31	7.99	9.26
	n = 10	n = 10	n = 10	n = 10

Research Question 7

Does the relative performance of female and male participants remain the same for those with high, medium, and low HSGPA on their developmental tasks (PUR, MIR, AA)?

PUR, MIR and AA scores were compared with participant gender based on their high school GPA to determine any real differences. As shown in Tables 4.15 – 4.17, the mean interaction scores for gender and high school grade point average were compared between groups to determine any real differences for developmental tasks: PUR, MIR, AA.

TABLE 4.15

MEANS AND STANDARD DEVIATIONS FOR PUR BY GENDER AND GPA

		High School Grade Point Average		
		High	Medium	Low
Female				
	Mean	62.3	59.6	55.7
	SD	10.01	9.77	10.52
		n = 10	n = 10	n = 10
Male				
	Mean	58.5	61.45	57
	SD	10.29	10.42	8.46
		n = 10	n = 10	n = 10

TABLE 4.16

MEANS AND STANDARD DEVIATIONS FOR MIR
BY GENDER AND GPA

		High School Grade Point Average		
		High	Medium	Low
Female				
	Mean	53.65	49.4	46.95
	SD	6.01	7.44	5.39
		n = 10	n = 10	n = 10
Male				
	Mean	52.45	46.6	46.1
	SD	10.15	7.4	9.48
		n = 10	n = 10	n = 10

TABLE 4.17

MEANS AND STANDARD DEVIATIONS FOR AA
BY GENDER AND GPA

		High School Grade Point Average		
		High	Medium	Low
Female				
	Mean	59.45	52.66	51.25
	SD	11.06	8.7	8.69
		n = 10	n = 10	n = 10
Male				
	Mean	58.65	54.7	49.9
	SD	12.22	10.2	9.28
		n = 10	n = 10	n = 10

The result of the data analysis indicated a significant interaction between gender and high school grade point average for PUR, $F = 4.695$, $p < 0.05$ (Table 4.18). These results indicated that the relative performance on the sense of purpose (PUR) task for female and male students changed as participants moved from a high to low GPA ranking. Male and female students scored differently on their sense of purpose based on their level of ranking for high school grade point average. Females with a high GPA scored higher on their sense of purpose than males; whereas, males scored higher on the sense of purpose task in the medium and low GPA categories. There were no significant interactions for the developmental tasks PUR or AA. No further conclusions were drawn from this data based on the small number of subjects in each cell (n=10).

TABLE 4.18

ANOVA SUMMARY TABLE FOR PUR
GENDER BY GRADE POINT AVERAGE

Source	*SS*	*df*	*MS*	*F*	*p*
Gender					
X GPA	451.054	2	225.527	4.695	0.011 *
Error	4563.276	95	48.034		

* $p < 0.05$

Attrition Data

Records obtained from the Director of Institutional Research indicated a positive difference in the retention rate of students who had participated in the 3-

day expedition over those who participated in three individual day adventure experiences as part of freshmen orientation. A fall-to-spring expedition retention rate of 93.1% appears to be notably higher than the non-expedition rate of 88.15% (Figure 2). Further analysis of the fall-to-spring retention show 54 out of 58 students involved in the expedition returning after one semester as opposed to the 186 out of 211 students who did not participate in the expedition. Overall fall-to-spring retention rates show 89.2% of students returning to the institution for a second semester.

The fall-to-spring retention rates demonstrated more favorable percentages than the fall-to-fall retention rates. The overall fall-to-fall retention rate was 69.88%; furthermore the expedition fall-to-fall rate was 72.4%, representing a return of 42 out of 58 students and the non-expedition fall-to-fall retention rate was 75.55% which represents a return of 146 out of 211 students (Figure 2). In general the expedition retention rates were slightly higher than any other retention data collected.

Overall retention data collected from the Office of the Registrar indicate that the class used for this sample population began with 269 students during the fall of 2000. During the spring of 2001, 240 students out of the original 269 returned to continue their collegiate studies at the institution being researched. These findings indicate that 89.2% percent of the student body returned after one semester (Figure 2).

The sample population was followed an additional semester to determine the number of students returning to the institution after one academic year. Out of

the original 269 students who began in the fall of 2000, 168 returned to campus the following year to begin a second year at the college. These findings indicate a 69.88% retention rate from the fall of 2000 to the fall of 2001 (Figure 2).

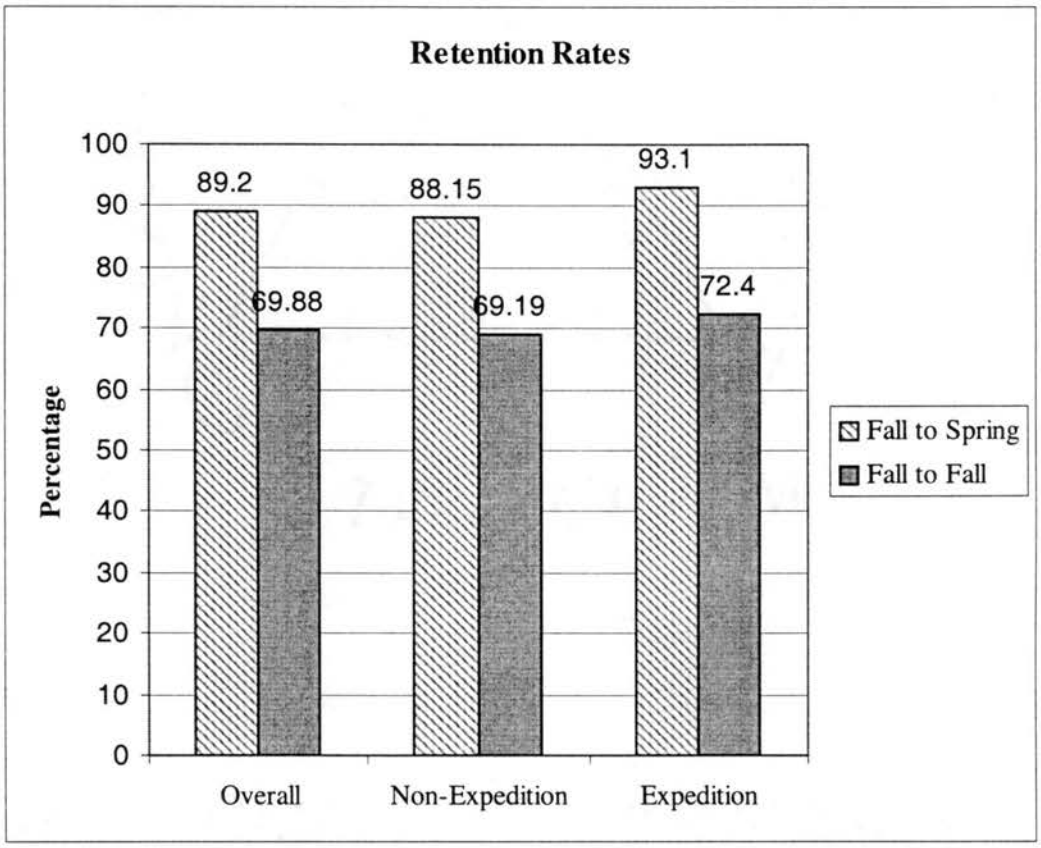

Figure 2. Percentages demonstrate the overall retention (n = 269), non-expedition retention (n = 211) and expedition retention (n = 58).

CHAPTER V

CONCLUSIONS

The purpose of this study was to evaluate and compare the effects of four adventure orientation program types on the retention and developmental growth of first year students at a small-private liberal arts college in the southeast. The four adventure orientation program types consisted of a 3-day backpacking field expedition and three-combination adventure programs, which encompassed three individual day outdoor experiences. More specifically, this study was an attempt to examine whether psychosocial growth would differ as a result of the adventure orientation program type that participants experienced on the basis of their score on the CSDTI-2's three developmental task areas (PUR, MIR, AA).

Chapter V presents: (1) a review of the study highlighting the major findings, and (2) a discussion of the data summarizing the conclusions and recommendations.

Major Findings

1. Females in the Rock-climb adventure group scored higher than males on the mature interpersonal relationship (MIR) task, but there were no gender x treatment differences found for the tasks PUR and AA.

2. Females ranked in the high GPA category indicated a higher sense of purpose (PUR) than males, but males ranked in the medium and low GPA classification indicated a higher sense of purpose (PUR) than the females in their classification.
3. Overall students participating in the Expedition scored above the mean more often for the MIR task than students participating in the other adventure orientation experiences.
4. Approximately half as many students participating in the Canoe adventure combination experience scored above the mean on the MIR task as students participating in the Expedition.
5. Students participating in the expedition had a higher rate of retention for both one semester and one year when compared to the retention rates of non-expedition participants and the overall student retention rates for the sample.
6. One quarter of the participants in the research sample reported having previous backpacking experience in the Smoky Mountains.

Discussion

This study contains statistical findings that illustrate differences between male and female participant's scores on the mature interpersonal relationships (MIR) task based on their treatment type. Most notably, females in the Rock-climb adventure orientation experience scored higher than males on the MIR task. Subjects who participated in the Rock-climb group experienced a 1/2-day

challenge course experience, ground-belay training, a day trip to a local climbing site and a day hiking trip.

Females in the Rock-climb treatment group scored highest on the MIR task demonstrating a greater ability to have relationships characterized by independence, frankness and trust. According to the SDTLI Manual (1987), these relationships reflect an appreciation for differences and reveal developed confidence by individuals in their own ideas and feelings. These individuals are typically not easily influenced by pressure to conform to group norms or conceal an opinion that is different from others in the group.

Communication skills play an essential role in climbing. In addition the mechanisms of mountain climbing taught during the Rock-climbing experience emphasize a need for effective communication. This type of activity requires a belay rope technique to secure the safety of the climber. In order for the support system to operate successfully the belayer and the climber must be involved in constant communication.

Preexisting social skills, specifically communication skills support one explanation as to why female participants scored higher in the Rock-climb group. Gender differences in development may also illustrate why the female participants rated higher on the mature interpersonal relationships (MIR) task than the males for the Rock-climb group. Additional rationale to explain these results may include the influence of the instructors responsible for the adventure program experienced by the Rock-Climb group or simply a chance finding within the results.

This study includes further statistical findings that illustrate differences between male and female participant's scores on the sense of purpose (PUR) task based on their high school grade point average. The second major finding within this study indicated that the relative performance for female and male students on the sense of purpose (PUR) task changed as participants moved from a high to low GPA ranking. Male and female students scored differently on the sense of purpose task based on their level of ranking for high school grade point average. Females with a high GPA scored higher on their sense of purpose than males; whereas, males scored higher on the sense of purpose task in the medium and low GPA categories than the females within the same categories.

Data from the SDTLI Manual (Winston & Miller, 1987) illustrates that students who have high achievement on the PUR task: (1) have well-defined thoroughly explored educational goals and plans and are active, self directed learners; (2) have synthesized knowledge about themselves and the world of work into appropriate career plans by taking steps now to allow realization of career goals; (3) have established a personal direction in their lives and made plans for their futures that take into account personal, ethical, and religious values, as well as future family plans and vocational objectives; (4) exhibit a wide range of cultural interests; and (5) structure their lives and manipulate their environment. These individuals are well rounded and achieve a sense of balance by applying time management, fitness and wellness practices into their weekly routine. They are resourceful, independent, goal-oriented and self-directed learners.

Current statistics show female graduates outnumbering males (Fletcher, 2002). Christina Hoff Sommers, author of *The War Against the Boys* has identified these statistics as an indication of a gender switch within our educational system as well as a problem for our society (as cited in Fletcher, 2002). These ideas call to question if primary education is preparing girls for college more successfully than boys. Logically one might draw the conclusion that individuals with a high GPA ranking would score well on the PUR task. However, explaining why males with a medium or low GPA ranking scored higher than females on the sense of purpose task seems best understood when considering the determination and persistence it may have taken those males to simply to get into college. One might infer that having a high sense of purpose arose for students from characteristics that resided within the students before they arrived, or confidence gained from new opportunities presented at college.

The PUR statistical results were based on a small number of participants within each cell (n=10); this may preclude these results as valid data. Results from this study could also merely be due to chance findings. Lastly, the findings based on PUR task scores and GPA is incompatible with Gass's (1987) research. Gass (1987) reported no significant effect on students in the area of developing purpose after participating in a wilderness orientation program.

As previously mentioned this study includes findings that show differences between male and female participant's scores on the mature interpersonal relationships (MIR) task based on their treatment type. These findings are similar to Gass's (1987) work that illustrates the ability of a

wilderness orientation program to develop interpersonal relationships skills for both male and female participants. Not only did female participants in the Rock-climb group score higher than males on the MIR task; supplementary data illustrated the spread of overall MIR mean scores for each treatment group indicated that subjects who participated in the Expedition scored above the mean more often than the other treatment groups. Students involved in the 3-day Expedition also experienced a 1/2-day challenge course experience.

When considering overall mean scores, the Expedition group ranked the highest with sixty-six percent of participants scoring above the mean. The Alpine Tower group ranked second with sixty percent of the participants scoring above the mean. The Rock-climb group had 10% fewer subjects score above the mean than the Expedition group; leaving the Rock-climb group to rank third with fifty-six percent of the MIR task scores falling above the mean.

Unlike the Expedition group the Canoe group ranked forth fairing the least favorably. A mere thirty-three percent of the subjects in the Canoe group scored above the mean. Surprisingly, the percentage of participants who scored above the mean in the Canoe group totaled only half of the percentage the Expedition group reported scoring above the mean on the MIR task. Like the other treatment groups the Canoe participants experienced a 1/2-day challenge course experience, as well as ground belay school and a half-day on the Alpine Tower as well as, a combination day trip, which involved canoeing and hiking.

The Expedition lasted for three continuous days thereby challenging the students to operate outside of their comfort zones for a longer period of time. It

may be hypothesized that the Expedition encouraged individual and group development to flourish at a different rate than the development of individuals involved in the three separate adventure activity treatment groups. Students in the Alpine Tower, Rock-climbing and Canoe group were able to leave their respective group at the end of the day to return to the confines of their residence hall room. This may have allowed students not on the expedition to avoid dealing with group members in conflict. However, expedition participants, knowing they would be spending the next 48 hours together after the first day, may have been more pressed to deal with uncomfortable and demanding relationships within their group.

The expedition group members also came to rely on one another more frequently to problem-solve, make decisions as a group and simply endure the perceived risks of their adventure. Within the expedition groups students were assigned tasks that required them to care for the rest of their group. These tasks include cooking and cleaning for one another, setting up ground tarps to sleep under, and supporting and encouraging one another on physically demanding challenges such as hiking and water crossings.

Expedition Behavior was taught to each backpacking group as they prepared to begin their journey. The trip is expressly defined as a group experience, as opposed to an individual challenge. Concern for others, as equally as one cares for oneself is a key component of Expedition Behavior (Petzoldt, 1984). A cooperative atmosphere is fostered during this adventure experience to ensure the success of the group as a whole. These values taught on the expedition

may have subtly influenced the development of mature interpersonal relationship skills for the students participating in this treatment group.

As was earlier stated, the Canoe treatment group scored the least favorably on the MIR task. Communication skills arise again as a probable explanation for this finding. It is possible that canoeing may inhibit communication. When canoeing, individuals are not facing one another, leading to difficulty in delivering a message, being heard, and clarifying any understanding of a message. Instruction provided for the canoeing experience was primarily limited to safety tips and stroke technique. It is conceivable that no guidance was provided to participants on working together to maneuver the canoe. Rather the participants were expected to learn experientially through trial and error.

It must be considered that the canoeing trip faired less fortunately because students participated in too many experiences during that day. This may be explained by understanding that the Canoe group was asked to hike a couple of miles just to get to their canoe destination. Perhaps the students were just too exhausted to gain benefits from the canoe adventure. As it has been suggested in previous discussion the mean score findings could also simply be due to chance.

Moreover, the differing results identified in these research findings based on adventure orientation program type may be explained through a new theory proposed by Gavin (2002). In a recent study Gavin (2002) defines seven psychosocial dimensions, including: 1) Sociability; 2) Spontaneity; 3) Self-motivation; 4) Aggressiveness; 5) Competitiveness; 6) Mental Focus; and 7)

Adventurousness. Gavin (2002) suggested that these individual personal traits may be enhanced through participation in different sport and exercise programs.

In order to clearly define his theory he has developed a chart to identify which activities best develop each of the psychosocial traits. This chart includes 19 activities placed on a likert scale continuum for each of the seven psychosocial dimensions previously listed. While rock-climbing, climbing the Alpine Tower, canoeing, and backpacking are not specifically listed within the 19 activities Gavin (2002) profiles, the treatment activities are equivalent to many of the activities included within his chart.

Retention findings indicate that the Expedition had a marginally higher return rate for both fall-to-spring and fall-to-fall then the non-expedition groups and the overall sample population retention data. These findings are consistent with Gass' (1986) work that reported higher retention rates of students participating in an adventure orientation program. Brown (1996) also found that second semester retention rates were higher for outdoor orientation participants over those who had participated in a traditional or service-learning orientation program.

During demographic data collection one quarter of the participants in the research sample reported having previous backpacking experience in the Smoky Mountains. Each of the adventure orientation program types utilized the Great Smoky Mountain National Park for at least one component of their experience. The adventure programs varied from a 3-day backpacking expedition in the Park to a day hike or day trip spent rock-climbing in the Park.

Freshmen orientation (OR 110) is a prerequisite for Environmental Ethics, a required course for all freshmen students at the institution being surveyed. The outdoor adventure experience gained in the Smoky Mountains during OR 110 is considered a wilderness experience that will inform and prepare students to discuss the preservation of natural resources during Environmental Ethics.

This demographic data result verified only 25% of the incoming students had backpacking experience in the local area, the area utilized for both experience and study at the institution sampled. These findings are important in two ways. First, it can be concluded that the adventure experiences gained during OR 110 play a vital role in preparing students for further academic exploration and inquiry during Environmental Ethics. Second, the majority of students participating in the adventure experiences during freshmen orientation are being challenged to embrace a new situation, thereby creating an opportunity to foster skills needed in the transition from high school to college.

Adventure orientation programs are designed to introduce students to new experiences that will challenge them, prompting students to develop problem-solving skills and make adaptations to a new set of circumstances. These experiences can inform students of ways in which to approach other life situations that are also new and challenging, such as beginning their freshmen year in college.

Recommendations

Recommendations for future studies researching adventure orientation programs include replication of this study with modifications to the design and the procedure and use of a different instrument. Generalizing the results of this data to other groups has some disadvantages because of the small sample size drawn from a single institution. When replicating this study it is recommended that results from similar programs at comparable institutions be included in the research analysis. A control group is also recommended to strengthen the research design and to assist in interpretation of results. Lastly, it is suggested that during future replication participants be randomly selected for each treatment type instead of being allowed to self-select into a treatment group.

It is also suggested that specific treatment groups be selected based on gender or other normative values such as GPA, major, ethnic background or minority classification for future study. This conclusion is based on research findings within this study that were affected by gender. Further research based on gender and collegiate success needs to be conducted to determine strategies of success for both genders.

Future adventure orientation research projects could also benefit from conducting research to compare how differing lengths of time when participating in an adventure program and differing adventure activities effect student development and assist in meeting orientation outcomes. For example, does a sailing trip affect student growth differently then a day-camp experience? Or

does a ten-day pre-semester adventure program have a stronger impact on incoming freshmen than a three-day program? According to O'Keefe (1988), most adventure orientation programs last from 4-7 days, as compared to the adventure programs assessed for this project that lasted for three days; potentially indicating that shorter experiences may be less effective in facilitating change for participants. This recommendation parallels Gass's (1986) recommendation for future studies.

Procedures that were beyond the researchers control that may have had an impact on the group experience and influenced the results must be allowed to be controlled in future studies. The leader of each orientation section becomes a part of the treatment (Doyle, 1981) and must be trained to meet the outcomes of the institution. It is recommended that orientation leaders be trained sufficiently to administer research questionnaires as well as how to conduct group experiences both in and out of the traditional classroom. If adventure orientation programs are to be utilized by an institution orientation leaders should be taught Expeditionary Learning techniques and strategies for introducing expedition behavior to their groups.

It is also suggested that collaborative efforts be made in future institutional research. Literature supports cross campus collaboration for administrating an orientation program as a possible strength in program development. One of the most promising but underused opportunities for collaboration comes in the form of assessment (Banta & Kuh, 1998). Davis-Berman and Berman (1996) found a variety of results when polling 57 schools to determine program administration

location. Two-thirds of outdoor orientation programs can be found in single administration locations. The remaining one-third of the programs indicate joint operation with an outdoor program. Galloway (2000) suggested that the location of the administration of these programs might contribute to the lack of formal assessment. The institution being surveyed for this study could benefit from collaborative efforts between the academic and student development areas in preparation, training and program assessment for freshmen orientation.

Finally, it is suggested that a different instrument be utilized to repeat this assessment. Choosing a condensed instrument to save time had consequences pertaining to scoring and analysis of the results. The SDTLA, a revised addition of the instrument is currently available and is based on updated psychometric research and normative data. Additional changes suggested for the replication of this study include analyzing data with covariates that have been shown to correspond with the instrument, such as a test for communication, coping measures or adjustment to college.

Although few significant findings resulted from this research project, the researcher still believes in the value of employing adventure programming during freshmen orientation. Research sited in the review of literature supports continued efforts by colleges to incorporate adventure programming with educational processes to achieve institutional outcomes. Both Brown (1996) and Gass (1987) found significant support for the use of adventure programming during freshmen orientation. O'Keefe (1988) also documented the increased use of adventure programming during freshmen orientation by colleges and

universities. Clearly the use of adventure provides a metaphor for incoming students to understand the changes they are embracing as they enter college. Adventure programming also provides colleges with an attractive opportunity that interests students in finding out more about what the institution has to offer.

REFERENCES

Astin, A.W. (1984). Student involvement: A developmental theory for higher education. Journal of College Student Personnel, 24(4), 297-308.

Bagby, S.A., & Chavarria, L.S. (1980). Outdoor adventure education and juvenile delinquents. ERIC 191-639.

Banta, T. W., & Kuh G.D. (1998). A missing link in assessment. Change, 30(2), 40-46.

Barefoot, B.O., & Fidler, P.P. (1992). National survey of freshman seminar programming, 1991, helping first year college students climb the academic ladder. National Resource Center for the freshman Year Experience, University of South Carolina.

Battistoni, S., Brown, D., Harris, B., Schneider, S., & Walsh, C. (1992). Freshman orientation at Salisbury State University: A comparison of first year semester G.P.A.'s of wilderness orientees and classroom orientees. Unpublished manuscript.

Berry, T. (1999). The great work. New York: Bell Tower.

Brown, D.A., & Armstrong, G. (1995). Recreational professionals and freshman wilderness orientation programs. NIRSA Journal, 19(3), 12-15.

Brown, D. A. (1996). Assessment of anticipated and actual college adjustment in freshman-oriented students. Unpublished Doctoral Dissertation, University of Maryland. University Microforms International: Ann Arbor, MI.

Bowers, P. J. (1997). An analysis of relationship of employment outcomes to developmental variables and job search strategies of college graduates. Unpublished Doctoral Dissertation, Oklahoma State University, Stillwater, OK.

Bunn, G. E. (2000). An examination of early departures on Colorado Outward Bound School courses. Unpublished Masters Thesis, Oklahoma State University, Stillwater, OK.

Chapman, D.W. & Pascarella, E. T. (1983). Predictors of academic and social integration of college students. Research in Higher Education, 19(3), 295-322.

Chickering, A.W. (1969). Education and identity. (2nd Ed.) San Francisco, CA: Jossey-Bass Publishers.

Childress, N.R. (1984). Comparing freshman orientation programs on initial campus retention. Unpublished Doctoral Dissertation, Oklahoma State University, Stillwater, OK.

Council for the Advancement of Standards for Student Services/Development Programs. (1988). Student Orientation Programs Self Assessment Guide, CAS, Office of Student Affairs, University of Maryland, College Park: Author.

Cousineau, C. (1978). The nature of adventure education. ERIC 171-474.

Cox, D. (1999). Camp cowboy. Oklahoma State University Magazine. Fall/Winter 1999.

Cuseo, J.B. (1991). The freshman orientation seminar: A research-based rationale for its value, delivery, and content. Paper written for the National Resource Center for the Freshman Year Experience, South Carolina University.

Davis-Berman, J., & Berman, D. (1996). Using wilderness orientation to facilitate adjustment to college: An updated description of wilderness orientation programs. Journal of Experiential Education, 19(1), 22-28.

Dewey, J. (1900). The school and society. Chicago, IL: University of Chicago Press.

Doyle, W. E. (1981). An outdoor-challenge experience and the affective development of college students. Unpublished Doctoral Dissertation, University of Connecticut.

DuFrene, D.D., Sharbrough, W., Clipson, T., & McCall, M. (1999). Bringing outdoor challenge education inside the business communication classroom. Business Communication Quarterly, 62(3), 24.

Erikson, E.H. (1959). Identity, and the life cycle. Psychological Issues, 1, 18-164.

Erikson, E.H. (1968). Identity: Youth and crisis. New York: Norton.

Fine, L.J. (1997). 25th Annual AEE International Conference Proceedings. Paper written for the Recreation Administration & Leisure Studies Program at California State University, Fresno.

Flavin, M. (1996). Kurt Hanh's schools & legacy. Wilmington, DW: The Middle Atlantic Press.

Fletcher, M.A. (2002). Female grads outnumber guys. The Commercial Appeal, Wed., June 26, 2002.

Galloway, Shayne (2000). Assessment in wilderness orientation programs: Efforts to improve college student retention. Journal of Experiential Education, 23(2), 75-84.

Gass, M. (1983). The value of wilderness orientation programs at colleges and universities in the Unites States. ERIC 242-471.

Gass, M. (1986). The effects of a wilderness orientation program on incoming students to a university setting. Unpublished Doctoral Dissertation, University of Colorado. University Microforms International: Ann Arbor, MI.

Gass, M. (1987). The effects of a wilderness orientation program on college students. Journal of Experiential Education, 10(2), 30-33.

Gass, M. (1990). The longitudinal effects of an adventure orientation program on the retention of college students. Journal of College Student Development, 31(1), 33-38.

Gavin, J. (2002). Change your body, change your mind. Strategies: A Journal for Physcial and Sport Educators, 15(6), 30-35.

Havighurst, R. J. (1972). Developmental tasks and education. (3rd ed.) New York: David McKay Company, Inc.

Henton, M. (1996). Adventure in the classroom. Dubuque, IA: Kendall and Hunt.

Higginson, L.C., Moore, L.V., & White, E.R. (1991). A new role for orientation: Getting down to academics. NASPA Journal, 91(1) 21-27.

Irvine, D., & Wilson, J.P. (1994). Outdoor management development: reality or illusion? Journal of Management Development, 13(5), 25-37.

Klingman, B.A. (1992). The call of the wild: Investigating the relationship between adventure education, character development, and the college curriculum. Unpublished Doctoral Dissertation, College of William and Mary. Dissertation Abstracts International, A 52/11.

Knefelkamp, L., Widick, C., & Parker, C.A. (1978). New directions for student services: Applying new developmental findings. San Francisco, CA: Jossey-Bass.

Kraft, R.J., & Kielsmeier, J. (1995). Experiential learning: In schools and higher education. Dubuque, IA: Kendall and Hunt Publishing Company.

Lanza, M. (1998). Outdoor oriented. Backpacker, 26 (6), 20 (2).

Mendel, W. (1993). Corporate training by adventure learning. Cornell Hotel & Restaurant Administration Quarterly, 34(3), 3-33.

Miles, J. (1987). Wilderness as healing place. Journal of Experiential Education, 10(3), 30-40.

Miles, J.C., & Priest, S. (1990). Adventure education. State College, PA: Venture.

O'Keefe, M. (1988). Freshman wilderness orientation programs: Model programs across the country. Paper presented at the 1988 National Conference on Outdoor Recreation, November 10-13, 1988, Ft. Collins, CO.

Pascarella, E.T., Smart, & Ethington (1986). Long-term persistence of two-year college students. Research in Higher Education. 24(1), 47-71.

Pascarella, E.T., Terenzini, P.T. & Wolfle, L.M. (1986). Orientation to college and freshman year persistence/withdrawal decisions. Journal of Higher Education, 57(2), 155-174.

Pascarella, E.T., & Terenzini, P.T. (1991). How college affects students: Findings and insights from twenty years of research. San Francisco, CA: Jossey-Bass Publishers.

Petzoldt, P. (1974). The wilderness handbook. New York: W.W. Norton & Company.

Petzoldt, P., & Ringholz, R.C. (1984). The new wilderness handbook. (2nd Ed.) New York: W.W. Norton & Company.

Priest, S. (1996). The relationships among change, program type and facilitation technique in adventure programming. Journal of Adventure Education and Outdoor Leadership, 13(2), 22-26.

Rodgers, R.F. (1991). Student development. Student services: A handbook for the profession. San Francisco, CA: Jossey-Bass Publishers.

Rummel, A., Acton, D. Costello, S., & Pielow, G. (1999) Is all retention good? An empirical study. College Student Journal, 33(2), 241-246.

Shanley, M. G. & Witten, C. H. (1991). University 101 freshman seminar course: A longitudinal study of persistence, retention, and graduation rates. National Association of Student Personnel Administrators Journal, 27(4), 344-352.

Stremba, B. (1989). Passages: helping college students matriculate through outdoor adventure. Paper presented at the 1988 National Conference on Outdoor Recreation, November 10-13, 1988, Ft. Collins, CO.

Stupka, E.H. (1986). Student persistence and achievement: An evaluation of the effects of an extended orientation course. A research study sponsored by the Northern California Cooperative Institutional Research Group, Sacramento City College, CA.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. Review of Educational Research, 45(1), 89-125.

Tinto, V. (1987). Leaving college: Rethinking the causes and cures of student attrition (2nd Ed.) Chicago, IL: University Press.

Wagstaff, M. (1997). Outdoor leader self-awareness and its relationship to co-leaders' perceptions of influence. Unpublished Doctoral Dissertation, Oklahoma State University.

Watt, J.D. & Vodanovich, S. J. (1999). Boredom proneness and psychosocial development. The Journal of Psychology, Provincetown, May.

Webster, S. (1989). Ropes course safety manual: An instructor's guide to initiatives, and low and high Elements. Dubuque, IA: Kendall and Hunt Publishing Company.

Winston, R. B., Jr., & Miller, T. K. (1987). Student Developmental Task and Lifestyle Inventory. Athens, GA: Student Development Associates.

Winston, R. B., Jr., & Miller, T. K. (1987). Student developmental task and lifestyle inventory manual. Athens, GA: Student Development Associates.

Winston, R. B., Jr. (1990). The student developmental task and lifestyle inventory: An approach to measuring students' psychosocial development. Journal of College Student Development, 31, 108-120.

Witmer, J.M. & Sweeney, T.J. (1992). A holistic model for wellness and prevention over the lifespan. Journal of Counseling and Development, 71(2), 140-148.

APPENDIXES

APPENDIX A

ORIENTATION OUTCOMES

ORIENTATION OUTCOMES

Objective I. **MAKING CONNECTIONS**

- Familiarity with campus
  - Physical campus
  - People
  - Services & Programs
  - Resources
- A Sense of community and citizenship
  - College history & traditions
  - College Covenant
  - Rules & policies
  - Statement of purpose and Educational goals
- A sense of inclusion and belonging
  - Supportive orientation group experience
  - How to get involved with activities and organizations
  - Attendance at "Opportunities of a Lifetime Fair"
  - Mountain Challenge experience

Objective II. **RELATIONSHIPS**

- A sense of wellness
  - Alcohol and drug issues
  - Sexuality issues
  - Fitness & Nutrition
- An expectation for differences
  - Racial & Cultural
  - Gender
  - Sexual orientation
  - Religion
- An ability to understand and cope with new and challenging relationships
  - Roommates / Floor-mates
  - Parents & Family
  - Instructors
  - Dating
  - Friends

Objective III. **SELF-MANAGEMENT**

- Competency in various skills:
  - Time
  - Money
  - Stress
  - Study and exam preparation
  - Communication
  - Academic etiquette

APPENDIX B

INSTITUTIONAL REVIEW BOARD
LETTERS OF APPOVAL

Oklahoma State University
Institutional Review Board

Protocol Expires: 8/7/01

Date : Tuesday, August 08, 2000 IRB Application No ED00291

Proposal Title: THE EFFECTS OF AN ADVENTURE ORIENTATION PROGRAM ON THE DEVELOPMENTAL TASKS OF COLLEGE FRESHMEN

Principal
Investigator(s):

Jennifer Pierce
111 Colvin Center
Stillwater, OK 74078

Christine Cashel
111 Colvin Recreation Center
Stillwater, OK 74078

Reviewed and
Processed as: Expedited

Approval Status Recommended by Reviewer(s) : Approved

Signature : Carol Olson

Carol Olson, Director of University Research Compliance

Tuesday, August 08, 2000
Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modifications to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

MARYVILLE
COLLEGE
Established 1819

Vice President
and
Dean of the College

June 12, 2000

Oklahoma State University
Institutional Review Board
Stillwater, OK 74074

To Whom It Concerns:

This letter is in reference to Ms. Jennifer Pierce conducting research at Maryville College with the freshman class entering the College in the Fall of 2000. We are interested in and support the research efforts of Ms. Pierce. She has presented her research proposal and has received permission to proceed from our Human and Animal Subjects Review Committee. We are happy to allow her to administer the Condensed Student Developmental Task Inventory (CSDTI-2) to be used as a part of her dissertation data and evaluation of our orientation program.

Similar data collection and analysis is an integral part of our orientation program as we regularly conduct several personal and institutional analyses of our students. We are interested in Ms. Pierce's findings and hope to utilize them to revise our orientation program to better meet student needs. Because we normally use various inventories in the program, Ms. Pierce's data collection will not be outside the norm of our regular practice. Although entering freshmen are encouraged to participate in data collection, it is not required.

For your information, we expect our entering class to reflect our usual demographic representation with approximately equal numbers of males and females with an average age of eighteen. Almost 2/3 of the students are from Tennessee and there is a significant local concentration.

We are happy to work with Ms. Pierce and support her research efforts with our students. Please contact Dr. Mardi Craig for further information if needed.

Sincerely,

Dr. Martha Craig
Associate Dean
Director of Institutional Research and Planning

Dr. William Seymour
Vice President for Student Development

502 E. Lamar Alexander Parkway, Maryville, Tennessee 37804-5907 865/981-8007FAX 865/981-8010

APPENDIX C

CONDENSED STUDENT DEVELOPMENTAL TASK INVENTORY (CSDTI-2)

CONDENSED STUDENT DEVELOPMENTAL TASK INVENTORY

The Condensed Student Developmental Task Inventory (CSDTI-2) is designed to collect information concerning young adult college students' activities, feelings, attitudes, and relationships. It is composed of statements shown to be typical of many college students. The instrument is designed to help students learn more about themselves and for colleges to learn how to assist students more effectively.

Please respond to each statement honestly. Do not be concerned if there are statements about activities in which you do not participate, or about feelings which are not descriptive of you. It will require only about 20-30 minutes for you to respond to the instrument's statements.

DIRECTIONS

1. Mark all answers on the scan answer sheet provided. Use only the N0. 2 Pencil provided. Make heavy black marks that fill the circle completely. Do not make any stray marks on the answer sheet. Make all erasures cleanly.

2. Read each statement and decide whether the statement is TRUE (usually true) of you, or FALSE (not usually true) of you. If true, completely darken the (1) or (A) circle on the answer sheet next to the corresponding number; if false, completely darken the (2) or (B) circle on the answer sheet next to the corresponding number. Be sure the number of the statement corresponds to number on the answer sheet.

3. If you wish to change an answer, be sure to completely erase the first response and then mark the desired response.

4. Respond to all statements. For each question choose the response that most closely reflects your beliefs, feelings, attitudes, experiences, or interests.

5. Consider each statement carefully, but do not spend a great deal of time deliberating on a single statement. Work quickly, but carefully.

6. If you have no parent, substitute guardian or parent equivalent when responding to items about parent(s).

7. Place your orientation section number in the section titled SPECIAL CODES, and mark the appropriate sex circle. Omit the sections titled NAME, BIRTH DATE, IDENTIFICATION NUMBER, and GRADE.

Please DO NOT write on this page.

1. Within the past month I recall accepting criticism from another without getting upset.
2. Recently I made a poor grade in class due to my own neglect or lack of prior planning.
3. While working in a group problem-solving situation, I have personally contributed to the solution by suggesting a way for the group to solve the problem.
4. I have met with a person involved with academic planning (for example, my advisor, other faculty, etc.) at least three times this semester.
5. Within the past month I have visualized, from time to time, what it would be like to be employed in a particular occupation.
6. I find it easy to talk informally with members of the opposite sex.
7. I have listened attentively to a friend discuss a personal problem within the past month.
8. I always tell my friends how I feel when I am angry with them.
9. I feel guilty when I don't obey my parents' wishes.
10. I am satisfied with my ability to behave as a self-disciplined person.
11. Within the past two months I have undertaken either an independent study or service project on my own.
12. At least once in the past two months, I have been called upon by someone needing help to get a nonpaying job done and I agreed to help.
13. During the past year I have been involved in at least one civic project, or activity--cleanup campaign, United Fund, blood drive, Heart Fund, for example.
14. This semester I have successfully completed, or am presently working on a project specifically designed to improve my learning and study habits.
15. I am a member of at least one club or organization that is specifically related to my chosen occupational field.
16. I have thoughtfully decided the extent and frequency I will drink alcoholic beverages.
17. In the past month there has been an occasion on which I was unable to say the "right things" to a member of the opposite sex.
18. I have several close friendships with both men and women.
19. I can name three personal skills, which I have offered, as assistance to others.
20. I have identified several occupations in which I could be successful.
21. I express tender feelings toward others without personal discomfort.
22. I can accept teasing from my friends without becoming upset.

Please DO NOT write on this page.

23. I do not date some people because they are beneath my social status.

24. I have set up standards, which I feel most people should meet.

25. It embarrasses me to become emotional in front of others.

26. I have helped another person become involved in solving mutual problems at school or work within the past month.

27. This year I have participated in at least three campus activities, or programs, or organizations, although neither required nor directly related to an academic course.

28. I have sought out leisure time activities for the purpose of helping me obtain an indication of my career interests.

29. I feel as if I am just drifting along with life.

30. I often achieve to or beyond the limits of my ability.

31. I can name at least five close friends my age of the opposite sex in whom I have no romantic interests.

32. It sometimes bothers me if my leisure time activities are different from those of my friends.

33. When considering officer candidates in organizations of which I am a member, I always prefer a man as president.

34. I get very angry with some of the dumb things my parents do and say.

35. It is hard for me to work intently on something for more than a short time.

36. I initiated an activity in the past week designed to help me achieve something important in my life.

37. I participate in campus activities, which are neither required for, nor related to, my academic program.

38. I am planning to get practical experience while in college through part-time work, or summer job, or internship, or similar employment related to my educational goals.

39. A dating partner and I have discussed the limits to be placed on our physical relationship within the past two months.

40. In the past two months I have spent time with someone because I knew that he or she was lonely and needed company.

41. It is necessary that others accept my point of view.

42. I think most women tend to respond to situations emotionally, while men respond by thinking.

43. I treat my parents as well as I should.

Please DO NOT write on this page.

44. I need to feel sure of the outcome before attempting something new or different.

45. I followed a systematic plan in making an important decision within the past thirty days.

46. I have joined with several people in achieving a solution to a mutual problem within the past month.

47. I seldom bounce ideas off other people in order to obtain their views of my ideas.

48. I have a mature working relationship with at least one member of the academic community (faculty member, student affairs staff member, administrator).

49. I know what I will be doing a year from now.

50. I am actively involved in two or, more different organized activities in addition to my academic studies.

51. I have successfully resolved major conflicts, which have arisen, in my dating relationship without destroying that relationship.

52. I expect my dating partner to always meet my personal needs.

53. I set up a daily plan or schedule in order to get done the things I need to do.

54. Most of the time I get bored and quit studying after working on an assignment for a short time.

55. I do not hesitate to seek help in dealing with the pressures of college life.

56. I am working at continuously improving my learning and study habits.

57. I have asked relatives, faculty members, or other persons to describe kinds of positions available in the fields in which they are working.

58. I have made a decision about reserving time each week for physical activity and/or exercise.

59. My dating partner and I regularly involve each other in decisions as to how we will spend our time together.

60. I believe that my dating partner should develop friendships with other members of my sex.

61. Generally I am able to communicate my true feelings to others.

62. I feel comfortable disagreeing with my parents on topics such as my sexual activity, or my career choice.

63. The primary thing that got my last major school project through to completion was the regular reassurance I received.

64. Within the past two months I have had a serious discussion with a faculty member concerning something of importance to me.

65. I am familiar with at least three college majors and their requirements in terms of required courses and their accompanying academic skills.

Please DO NOT write on this page.

66. I have recently examined the current labor market demand for people with a degree in the career areas I am considering.

67. I have listed a number of my specific personal abilities and limitations, which I can use as guidelines for narrowing the number of career areas I wish to explore.

68. I am currently involved in one or more activities, which I have identified as being of help in determining what I will do with the rest of my life.

69. I have identified at least three people, other than my family, whom I am confident will be influential in my post-college future.

70. I have shared some of my private fears and doubts with my dating partner during the last month.

The End

APPENDIX D

WRITTEN PERMISSION FROM AUTHOR OF INSTRUMENT

PMB 500
2351 College Station Road
Athens, Georgia 30605

STUDENT DEVELOPMENT ASSOCIATES, Inc.

May 20, 2000

Jennifer Pierce
807 Alexander Street
Maryville, TN 37804

Dear Ms. Pierce

This is written to authorize you to use the condensed version of the Student Developmental Task and Lifestyle Inventory (SDTLI) for your dissertation research project. In addition, you are authorized to include a copy of the instrument in the appendix of your dissertation with inclusion of reference to the fact that you were given permission by Student Development Associates, Inc. to include the condensed instrument with your dissertation and that the instrument should not be reproduced without permission.

The Associates wish you well on your research venture and hope to receive a summary of your research results when they are available.

Sincerely yours,

Ted K Miller

Ted K. Miller
SDA Director

APPENDIX E

CONSENT FORM

RESEARCH CONSENT FORM

I, _____, hereby authorize Jennifer Pierce, or assistants of her choosing, to perform the following procedure:

Instructions for completing the condensed Student Developmental Task Inventory (CSDTI-2) will be provided to me, and I will complete the instrument and demographic sheet as requested and return them to the person indicated in the instructions. Completion of the instrument will take about 30 minutes. The primary researcher will, to the best of her ability, protect the confidentiality of your responses. I realize that this research is to be used to improve the effectiveness of college orientation programs.

I understand that this research project is done as part of an investigation entitled, "The Effects of an Adventure Orientation Program on the Developmental Tasks of College Freshmen", and is being conducted through Oklahoma State University, in cooperation with Maryville College.

I understand that participation is voluntary and that I will not be penalized if I choose not to participate. I also understand that I am free to withdraw my consent and end my participation in this project at any time without penalty after notifying the project director.

For information regarding this research project or research subjects' rights I may contact the following resources at Maryville College: Jennifer Pierce at telephone number (865) 981-8297 or Mardi Craig at telephone number (865) 981-8167. I may also contact Sharon Bacher, IRB Executive Secretary, Oklahoma State University, 203 Whitehurst, Stillwater, OK 74078; Telephone (405) 744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: _____ Time: _____(am/pm)

Signed: _____
Signature of Subject

I certify that I have personally explained all elements of this form to the subject or his/her representative before requesting the subject or his/her representative to sign it.

Signed: _____
Project Director

APPENDIX F

DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONNAIRE

Peer Mentors Name_____ Consent Form Code #_____

DIRECTIONS:
Please **check one** of the following choices provided for each question.

1) Gender: _____ (Female) or _____ (Male).

2) You will be living: _____ (On campus) or _____ (Off Campus).

3) Do you consider yourself to be from a: _____ (Rural/Town) or _____ (Urban/City).

4) Did you select to participate in the three-day Mt. Challenge expedition during this orientation? _____ (Yes) or _____ (No).

5) Do you have backpacking experience in the Smoky Mountains? _____ (Yes) or _____ (No).

6) Are you involved with the Academic Success Program? _____ (Yes) or _____ (No).

Thank for your participation. Have fun, challenge yourself, and enjoy Maryville College.

APPENDIX G

DEMOGRAPHIC DATA FROM ADMISSIONS OFFICE

MARYVILLE COLLEGE
Freshman Class Profile
Class of 2004
Entering Freshmen: 269

SCHOOL BACKGROUND OF 268 FRESHMEN

243 students from public schools
26 students from private schools
141 different secondary schools
12 states 2 Foreign Countries

COMPOSITE ACT OF 231 FRESHMEN

	Men	Women	Class
Middle 50%	20-26	21-29	20-26

SAT OF 107 FRESHMEN

Verbal	Men	Women	Class
Middle 50%	490-580	490-630	490-610
Math			
Middle 50%	460-600	450-590	460-600

GENDER DISTRIBUTION

Men	137	51 %
Women	132	49 %

ETHNIC MINORITIES

African-American	17
Pacific Islander	0
Hispanic	2
% of class	7 %

RELIGIONS

Presbyterian	11	4 %
Baptist	91	34 %
Methodist	28	10 %
Catholic	28	10 %
Other	55	20 %
No Information	56	21 %

GEOGRAPHIC DISTRIBUTION

Tennessee	192	Virginia	6
Florida	15	S. Carolina	3
Georgia	19	Kentucky	5
Pennsylvania	1	Maine	1
Alabama	14	Ohio	7
New Jersey	1	India	1
N. Carolina	7	Ghana	1

In-state 71 %

GPA DISTRIBUTION

Over 3.50	144	54 %
3.0-- 3.49	84	32 %
2.5---2.99	33	12 %
2.0---2.49	5	2 %
Under 2.0	0	
Class Median		3.53
Class Average		3.45

CLASS RANK OF 130 FRESHMEN

Top 10%	40	31 %
Top 25%	86	66 %
Top 50%	115	88 %
Bottom 50%	15	12 %

PARENTS' EDUCATION

No college	82	32 %
Some college	44	17 %
College Degree	133	51 %

INTENDED MAJOR/ PROGRAM OF STUDY

Science	54	Social Science	20
Business	31	Humanities	24
Math/Eng	26	Psychology	14
Education	26	Interpreting	5
Fine Arts	11	Undecided	58

VITA

Jennifer Zimmerman Pierce 2

Candidate for the Degree of

Doctor of Education

Thesis: THE EFFECTS OF AN ADVENTURE ORIENTATION PROGRAM ON THE DEVELOPMENTAL TASKS OF COLLEGE FRESHMEN

Major Field: Applied Educational Studies

Biographical:

Personal Data: Born in Dixon, Illinois, On November 11, 1970, the daughter of Richard and Cecilia Zimmerman

Education: Graduated from Oregon High School, Oregon, Illinois in June 1988; received Bachelor of Arts degree in Public Communications and Human Relations from Western Illinois University, Macomb, Illinois in May 1993; received Master of Science degree in Physical Education from Western Illinois University, Macomb, Illinois in December 1994; completed the requirements for the degree Doctor of Education, Oklahoma State University, Stillwater, Oklahoma, December 2002.

Professional Experience: Graduate Assistant, Western Illinois University, Macomb, Illinois, 1993-1994; Instructor, Spoon River Community College, Macomb, Illinois, 1995; Graduate Assistant, Oklahoma State University, Stillwater, Oklahoma, 1996-1998; Adventure Education Instructor, Campus Recreation, Oklahoma State University, Stillwater, Oklahoma, 1996-1997; Adjunct Faculty, Maryville College, Maryville, Tennessee, 1998-2002, Adventure Education Instructor, Mountain Challenge, Maryville College, Maryville, Tennessee, 1999-2002; Student Development Staff, Maryville College, Maryville, Tennessee 1999-2002.

Professional Involvement: Wilderness Education Association, Association for Experiential Education, Wilderness First Responder, Leave No Trace Instructor, Southeast Adventure Education Consortium.