

FRESHMAN EXPERIENCE AT A COMMUNITY COLLEGE: ITS RELATIONSHIP
TO ACADEMIC PERFORMANCE AND RETENTION

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Abstract

FRESHMEN EXPERIENCE AT A COMMUNITY COLLEGE: ITS RELATIONSHIP TO ACADEMIC PERFORMANCE AND RETENTION.

This study investigated an optional new student orientation program, Freshmen Experience, at a rural, public, community college. The results of academic performance, attrition, and retention of participants and non-participants were examined through an ex post facto study of student participation over two semesters: Fall 2004 and Fall 2005. Two groups of first-time freshmen students, an orientation group and a comparison group, were tracked through their first semester and the start of their second semester to determine the programs effectiveness. Three hypotheses were tested using independent *t*-tests and *z*-tests. Results indicated that no significant differences existed between groups for the variables of academic performance (grade point average, GPA) and attrition; however, positive significant differences were found with the variable of retention. These findings have important implications for institutional program planning, the identification of potentially unsuccessful students, retention, and early alert and referral services.

Dedication

This dissertation is dedicated to my family, my beautiful wife Carolyn, and my two wonderful children Kathryn and Andrew. Throughout this entire process they have been a tremendous source of inspiration and encouragement.

To my parents Margaret and Sidney Hall I cannot put into words the gratitude I owe them for their encouragement and dedication in helping me reach this goal. Their confidence in me and support has given me the courage to believe that I can reach whatever goals I set for myself.

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Chapter 1

Introduction

This study was designed to determine if students participating in the Freshmen Experience, an optional orientation program at a community college, achieved results similar to non-participant students in academic performance, retention, and attrition. Students come to community colleges with diverse purposes in mind: receiving the first two years of classes before transferring to a four-year institution, obtaining a two-year degree or certification, or taking a class for personal development. However, many withdraw for equally diverse reasons and in generally high numbers. Student dropout has had negative implications for both the institution and the student. Brawer (1996) found that statistics remain fairly constant with approximately 50% of the freshman enrolled in colleges and universities dropping out before completing their programs. Institutional support of students' academic, social, and personal development is fundamental to student success and college persistence. This study examines whether students participating in the Freshmen Experience, an optional orientation program at a community college, achieved results similar to non-participant students regarding academic performance, retention, and attrition. This study is based on the premise that the developmental needs and characteristics of the student must be understood before designing appropriate intervention strategies (e.g., orientation programs).

Background of the Study

Colleges and universities have ethical responsibilities to help the students they have admitted accomplish their educational goals. In order for colleges and universities

to accomplish these goals, they need to establish a campus-wide commitment to retention, while simultaneously implementing a variety of strategies to help students. It is important for community colleges to focus on those students most at risk for adverse academic outcomes because these students are more likely to withdraw from school (Osborne, 1997). Rowser (1997) described the key to providing assistance to attrition-prone students as early identification and intervention. Institutions that are most successful with this early identification group have proactively sought to identify them and deliver retention services within the first semester. Glass and Garrett identified the Freshman year as a critical time for identifying and initiating work with students who needed support and upgraded skills in order to persist (1995). One possible strategy for integrating new students into the college environment and encouraging their continued enrollment is to offer an orientation program.

College Retention Efforts

As of 2001, in the United States there were 1,462 community colleges: 1,047 public and 415 private. Community colleges, enrolling 47% of all students (5.6 million) in higher education (U.S. Department of Education, 2001), have been particularly hard hit by under-prepared and therefore high-risk students. In 2001, attrition was an ongoing problem for higher education in general and for community colleges in particular. As open-access institutions by virtue of their mission to serve any student with a high school diploma or Graduate Equivalent Diploma, community colleges admitted a larger percentage of part-time students, nontraditional students, students in need of remediation, and other high-risk students than did colleges with more selective admission policies. The inability of many students to respond effectively to academic and personal

challenges was evidenced by poor performance and high attrition rates from an institutional standpoint. In an early study Astin (1972) found that of 217 two-year institutions, one-third of the entering freshmen did not return for their second year. Even more sobering was the trend reported by Bers (1986), who stated that the 50% retention rate in community colleges from one term to the next was considered high.

Statement of the Problem

Webb found that studies of college student retention/attrition are based on data from four-year residential colleges or universities (1988). Although there is a significant amount of research gathered for four-year institutions regarding retention and attrition, there is a relative dearth of such research for two-year institutions. The literature yielded little evidence about the effectiveness of any particular retention strategy. Smart and Hamm (1993) concluded that there is “a virtual void of research on the effectiveness of two-year institutions” (p.40). Researchers studying two-year institutions indicate that the dropout rate tends to be even higher for community colleges than for four-year colleges and universities (Bean & Metzner, 1985; Sydow & Sandel, 1998; Tinto, 1993).

Congos and Schoeps wrote that the effectiveness of an institution of higher education is often measured by the institution’s ability to maintain the current enrollment of students (1997). Maintaining the enrollment of students is affected, to a great degree, by the process of interactions between students and the institution. Students’ decisions to discontinue educational pursuits at the community college raise the question: what, if anything, might colleges do differently to maintain enrollment? With the push for institutional effectiveness at colleges and universities, the accountability for all students becomes an issue, as efforts are made to encourage student success. Four-year

institutions of higher education across the nation have placed an increased emphasis on the coordination of a new student orientation program (Congos and Schoeps, 1997). It appears that community colleges should better understand the potential importance and outcomes of such programs. This study was designed to determine whether participants in the Freshmen Experience, an optional orientation program at the community college, achieved outcome results similar to non-participants with regard to academic success, attrition, and retention.

Research Questions

The following research questions were used to guide the study:

1. To what degree do differences exist in first semester academic performance (grade point average, GPA) between new students who participated in the orientation program and students who did not participate in the program?
2. To what degree do differences exist in attrition (dropout rate during the first semester) between students who participated in the orientation program and students who did not participate in the program?
3. To what degree do differences exist in retention (second semester rate of return) between students who participated in the orientation program and students who did not participate in the program?

The Professional Significance of the Study

A review of the literature reveals that the majority of studies have evaluated orientation programs at four-year institutions. Current studies also reveal that orientation programs primarily consist of two types, semester-long orientation classes and one-week

boot camp orientations that take place at the beginning of the semester. Studies also show that college dropout rates are highest during the first semester of the freshmen year. The major shortcomings of research in this area are the lack of theoretical groundings and the shortage of empirical studies of community college programs. Therefore, there is a need to conduct research at the community college level regarding orientation programs that focus on the first critical semester of a student's educational experience.

This study was designed as a quantitative study, examining the differences and relationships between new students who participate in the Freshmen Experience orientation program at a community college and those who do not. Variables examined include subsequent academic performance, attrition, and retention.

This study seeks to advance the research in the area of orientation program evaluation by: (a) providing empirical data on community colleges retention rates; (b) evaluating an orientation program that focuses on the first semester of students educational experiences; (c) studying academic performance at the end of the "critical" first semester, including attrition and retention and second semester return rate.

Operational Definitions

1. *Academic Performance*-- The level of success determined by the cumulative grade point average and ratio of completed courses between the groups studied.
2. *Attrition*-- The number of students not completing their current semester of enrollment. This refers to keeping students in school for the duration of the semester. Students who finish the semester with a grade of A, B, C, D, or F are considered to have completed, while students who receive grades of W (withdraw) or I (incomplete) are considered not to have completed the coursework.
3. *Community Colleges*-- Publicly supported institutions offering comprehensive programs and career-related, remedial, and freshmen and sophomore studies, along with community services. The highest degree offered is the associate degree in arts or science.
4. *Credit Hour*-- Standard measuring unit for college work that leads to a degree or certificate.
5. *Dropouts*—Are students who discontinue their enrollment for an infinite period of time and do not re-enroll into college/university to continue their education.
6. *Good Academic Standing*-- The academic status given a student who achieves a minimum cumulative grade point average of 2.0 at the end of the semester.
7. *Freshmen Experience*-- An optional student orientation program offered at the community college in this study. Freshmen experience serves as an entry system for new students and provides an opportunity for them to learn more about campus resources, to identify opportunities for individual growth, (study habits,

time management, stress management), and to meet more people who are in positions to help them.

8. *Freshmen Student*-- Any high school or GED graduate who is attending the community college for the first time who has earned six or fewer previous college academic credit hours.
9. *Grade Point Average*-- The total number of quality points resulting from letter grades of A through F obtained in college courses divided by the total number of course credits completed. For the purposes of this study, grade point average will be determined at the end of the semester.
10. *Orientation Programs*-- Programs that are offered under various titles at various colleges and universities with the primary purpose of integrating first-time college students into the college or university environment.
11. *Persistence*-- The act of will individually required in order to continue in the pursuit of a desired goal. Any action taken by a student to associate with an institution may be understood to be evidence of incipient persistence.
12. *Retention*-- Students returning to the institution following their first semester of enrollment, as well as for subsequent semesters. Retention results when the institution is successful in supporting student persistence. Every action taken by the institution to enhance the probability of students' re-enrollment may be understood either as support or hindrance of continuous enrollment.
13. *Stopout*-- Students who discontinue their enrollment for a finite period of time and then reenroll into college/university to continue their education.

14. *Two-Year colleges*-- Two-year colleges are junior colleges, technical institutes, and community colleges.

Chapter 2

Review of Related Literature

Upon review of the literature the researcher identified areas of previous research that were not comprehensive and proved that there is an additional need to conduct research at the community college level. The proposed study will fill a demonstrated need.

This chapter begins with a review of the literature related to theoretical framework and models. This is followed by general attrition/retention studies, literature on student characteristics and variables affecting persistence, and a review of community college research and freshmen interventions. This chapter then describes orientation and reviews the success of special orientation programs designed to assist students in their successful transition to college. Finally, an explanation of Freshmen Experience was presented.

Bean's Attrition Model

Bean (1982) outlined flaws found among five types of student attrition models. First, descriptive models were not based on theory and did not attempt to establish causation for attrition or academic performance. Empirical generalizations about the characteristics of dropouts were made. Second, pre-matriculation characteristics models used input characteristics of students to determine correlates of attrition and not to determine attrition causes. Outcomes of these models focused on strategies for admission, not retention. Third, synthetic models involved four groups of variables (background, organizational, environmental, and attitudinal/outcome). Testing this

model would have been impractical and costly because of its complexity. Fourth, person-role fit models, based on theory by Rootman (1972), ascertained that students with a high level of person-role fit were likely to have a high level of academic and social integration in an institution. This required psychological tests of students to develop profiles of the student role and questionnaires to determine fit. This approach was, therefore, very costly and impractical. It also did not take into account that institutions do not have control over the personality types of students admitted. Finally, longitudinal-process models were based on a theory of social and academic integration of the student within the institution (Spady, 1970; Tinto, 1975).

Evaluation outcomes using these models enabled researchers to determine if intervention, integration programs, or entry characteristics make a difference in attrition and whether social or academic variables contribute most to drop out decisions. These widely cited and tested models explain the reasons why students leave, not just student characteristics. Both the synthetic and longitudinal models provide a structure for assessing the differential effects of several types of variables on the drop out decision.

For the purposes of this study, a longitudinal model of attrition has been selected. Understanding the individual student and his or her academic and developmental needs is important for effective and supportive student support program design. Programs such as new student orientation that are built around the needs of the entering first-year student have made a significant difference in individual and overall student retention.

Bean and Metzner (1985), Chickering (1969), Spady (1970, 1971), and Tinto (1975) have formulated models that are longitudinal in nature and designed to increase understanding of the interaction of the student regarding the decision to remain or to drop

out. Student development theories provide structure and a basis for formulating first-year student orientation programs. Effective first-year orientation programs have enhanced student persistence by meeting individual social and academic developmental needs of the student (Yockey & George, 1998).

Bean and Metzner's Model of Student Attrition

Bean and Metzner (1985) developed a model of attrition specifically applied to nontraditional students. Their model, while similar to Tinto's (1975), considers the attrition of nontraditional students as affected less by integration into the academic environment and more by environmental factors (outside of the academic environment). Environmental factors include family responsibilities, opportunity to transfer, finances, and hours of employment.

Bean and Metzner's model differentiates between the psychological outcomes of satisfaction, utility, stress, and goal commitment, and the outcome variable of GPA. This model concludes that a student's dropout decision is primarily based on four sets of variables: (a) intent to leave, influenced primarily by psychological outcomes and academic variables, (b) grade point average, (c) environmental variables, which are expected to have substantial direct effects on dropout decisions (d) and background and defining variables, primarily high school performance and educational goals (Bean & Metzner, 1985).

Chickering's Theory of Student Development and Program Design

Chickering's (1969) theory of student development is based on personal identity. His theory includes seven vectors. Chickering proposed that stimulation of these areas is necessary for a student to achieve personal growth. The vectors include developing purpose, achieving competence, managing emotions, developing autonomy, establishing identity, developing integrity, and freeing interpersonal relationships. Chickering believed that through enhancement of these vectors, a student develops priorities for life planning, a sense of intellectual and interpersonal competence, and a capacity for compassion and understanding of others. In addition, these vectors help a student develop the ability to positively deal with personal emotions, independence with recognition of interdependence needs, self identity, others who were different, personal values and beliefs, and friendships.

Chickering (1993) also suggested that institutions of higher education influence student development. His research identified seven main areas of focus: (a) size of the institution (which directly affects opportunities for student participation and involvement); (b) policy, programs, and activities (which should be consistent and provide a sense of continuity); (c) impact of an institutional program (which increases if the design is comprehensive and clear); (d) friendly and frequent interaction between student, faculty, and administration (which promotes development); (e) interaction with peers (which influences student development); (f) residence hall program designs (which promote community and involvement as part of a campus-wide effort); and (g) curriculum design needed to be such that students involve themselves in their own learning.

Noel, Levitz, and Saluri: A Theory Based Model

This developmental model, created by Noel, Levitz, and Saluri (1985), identified seven factors believed to affect a student's decision to persist in college. The seven factors included: having an inability to adjust to the institution; perceiving that the education received is irrelevant; having limited or unrealistic expectations about college; being academically under-prepared; uncertainty about a major or career choice; academic boredom; and/or a poor match between student and institutional characteristics.

The Spady Model of Student Persistence

One of the most widely accepted and received models of the dropout process is based on research by Spady (1970, 1971). Spady based his theory on the assumption that lack of student persistence can be best understood through the analysis of an individual student's interaction with the college environment. He developed a model based on longitudinal data with 683 first-year students that described a process of interaction between an individual student's attributes and his or her support network, which includes friends and family. Each student's attributes, interests, and skills were subject to the expectations and influences of peers, family members, faculty, and administrators. The degree of a student's integration into the social and academic systems of the college was dependent on this interaction process.

Spady (1970) stressed that a student's decision to withdraw depended on the extent of rewards that were available in each system. In the social system of the college environment, a student felt rewarded and defined success if her or his personality dispositions, attitudes, and interests were mostly similar to those of the institution's environment. Within the academic system, grades were the most visible form of extrinsic

reward. Although more subjective, intellectual development was found to be an intrinsic reward that played a more important role in a student's personal development. Spady defined these rewards as normative congruence. Other factors or rewards within the social system were the ability to develop close relationships with peers, support, or friendship.

The Tinto Student Persistence Model

The Tinto model extends a model advanced by Spady (1970, 1971) and incorporated work done by Rootman (1972). This model also views the social and academic integration of an individual into an institution and the student's interaction with these systems as the primary determinants of persistence. Tinto based his interactive-oriented theory on Durkheim's 1897 theory (as cited in Jones, 1986). Tinto (1975, 1982, 1987, 1990, & 1993) extended Durkheim's theory to state that dropping out of college is a multidimensional process resulting from a poor interactive-integrative process between the student and the institution. He suggested that the quality of a student's interactions with the academic and social systems of the college determines the degree of integration into the college environment. Thus, the conclusion suggests the higher the degree of integration, the greater the match and commitment to the college goal and to the institution. He further theorized that as these commitments increase, persistence at the institution increases.

Institutional commitment is usually strong if attendance at that institution is necessary to fulfill a student's goals (e.g., military school). For other students, institutional commitment does or does not develop, depending on institutional experiences following entry. As a result, departure usually results from a lack of

institutional commitment, not a lack of goal commitment. For the purpose of the researcher's study, re-enrollment after one semester was used as an indicator of institutional commitment.

Table 1

Theories of Student Persistence

The following table compares the different theories of persistence. The theorists looked at various reasons for why students do not persist in school.

<i>Bean's Attrition Model</i>	Model uses generalizations not theories; uses for admissions not retention; does not look at institution as cause for dropping out of school.
<i>Bean and Metzner's Model of Student Attrition</i>	Looks only at nontraditional students; focuses only on environmental factors (sickness, divorce) for why students drop out.
<i>Chickering's Theory of Student Development</i>	Institution affects persistence; self-actualized, self-adjusted students do better and stay in school.
<i>Noel, Levitz, and Saluri: A Theory Based Model</i>	Self-adjustment to school affects persistence; goal-oriented students persist.
<i>Spady Model of Student Persistence</i>	A lack of positive peer and family influences affect persistence; low grades cause students to dropout.
<i>Tinto Student Persistence Model</i>	Social and academic integration is important for student persistence; higher integration = higher persistence.

General Attrition/Retention Studies

While some students may leave one school in order to attend another, their leaving impacts the institution that has invested resources in terms of admission, academic advising, and possibly financial aid. Also, once an institution has admitted a student, it has an obligation to provide experiences that enhanced that student's success (Congos & Schoeps, 1997; Sidle & McReynolds, 1999). Some of the reasons that students drop out prior to the attainment of a college degree can have positive results (getting married or running a successful family business). However, the negative implications for the student can be costly, both personally (dealing with self concept and family disappointments) and financially (reduced earning potential and opportunities for advancement over the lifetime).

Webb (1987) stated that “excellence and involvement in one's education are synonymous, and retention is the by-product” (p. 7). In agreement, Congos and Schoeps (1997) found that “retention is an outcome, a result, a by-product of effective educational programs and services in and out of the classroom (p. 2). In general, a high rate of student departure from an institution raises questions about the environment of the institution and how well students are being integrated into that environment (Noel, 1985). A review of the literature revealed four recurring causes of college attrition: (a) uncertainty both about what to expect from college and its rewards, (b) financial difficulties, (c) academic under-preparation, and (d) transition problems

(Hensley & Kinser, 2001; Lords, 2000). Attrition in higher education is the loss of students from the institution during the normal course of their program. Retention efforts attempt to reduce the size of this loss and retain a greater number of students until their educational goals have been met.

Colleges and universities have become more concerned about retaining those students they have admitted (Sydow & Sandel, 1998). The attrition of students creates not only a need to recruit other students, but also financial loss due to lost tuition. Exploring the contributing factors initiating student drop out is significant to the institution in determining whether or not attrition is manageable. Jones (1988) found reducing student attrition is not easy, but it not impossible. Reducing student retention is not magic but requires institution-wide awareness, administrative commitment, and a well-organized system.

Sydow and Sandel (1998) indicated, “an institution committed to student success must also be committed to student retention, for often the key to success for many students is mere persistence” (p. 635). Tinto (1993) concurred, stating that many studies have been conducted regarding the relationship between collegiate student experiences and success in college, with success often defined as persistence to graduation. Lanni (1997) agreed, stating, “students drop out of college for a wide variety of reasons, most of them non-academic...” (p.136). Summerskill (1962) reviewed 35 attrition studies conducted over a 40-year period from 1914 to 1953. His findings showed that nearly 31% of students withdrew from college during or at the end of the first year. In addition, he documented that approximately half of the students first matriculated in college were not enrolled by the end of four years. Summerskill found that the percentage of students

leaving college over a four-year period did not change significantly in the four decades studied. Approximately 10 years later, Cope and Hannah (1975) observed that the national attrition rate had continued to be high for over 50 years and seemed to change little over time. Student retention in higher education remained a critical issue to colleges and universities. Brawer (1996) found, “while the statistics remain fairly constant, approximately 50% of the freshman enrolled in colleges and universities drop out before completing their programs” (p.3).

The literature of the 1970s and 1980s concerning student retention, although largely theoretical in nature, suggested a number of useful conclusions. First, writers in the field concluded that not all attrition was bad and that efforts should have been directed at particular target groups for whom persistence was an appropriate goal. Second, action programs to enhance retention were most effective when multiple strategies were used to retain students, such as developing a retention office on campus or developing an intramural sports program. Third, attrition was the result of an intricate interaction among a large number of variables, some were academic (teacher support and freshmen experience courses) and some were student services (tutoring and counseling) in nature.

Beal and Noel (1980) reported the results of a national survey of 947 institutions. They found that multiple-action programs were the most successful, particularly in the areas of advising and peer programs, career assistance, learning support centers, faculty development and expanded orientation activities.

According to Jones (1986), of the plethora of student and academic services identified in the literature, very few have been tried by a significant number of

institutions. Jones encouraged each college to develop an institution-specific plan to predict and prevent unnecessary attrition. He indicated that community college students are four times as likely to drop out for non-academic reasons as for academic ones.

Trying to identify the cause of attrition, student retention theorists have changed their foci from psychological to environmental to interactional explanations during the past 50 years (Biggs, Torres, & Washington, 1998). Tinto (1990) suggested that if there is a secret to the development of successful retention programs, it lies more in knowing what types of programs to employ than it does in understanding why it is that some institutions have been able to successfully employ those programs when other institutions have not. Jones (1986) also stated that successful retention programs seem to have a number of commonalities, not so much in the services and activities, but in the method of operation (teaching to different learning styles) and the attitudes of those who provide the services (having positive and encouraging instructors who teach freshmen experience courses) .

Windham (1994) concluded that regardless of other common character traits found among different segments, the community college student body, in order to be successful in higher education, students must remain enrolled. Tinto (1988) reasoned, the higher the degree of the student's integration into the college academic and social system, the greater the student's commitment to the institution and the goal of college completion. Upcraft and Gardner (1989) agreed, stating that institutions can keep students if students develop a sense of community and connection to the institution early on. Roueche and Roueche (1998) also found that research indicates that freshman retention can be improved by more than 20% if orientation programs pair students with faculty and

student mentors and if entering students leave the orientation program feeling positive about their decision to enroll in the college.

Noel (1985) and Tinto (1993) concurred that it is well documented in the literature that the freshman year is a critical time with respect to the attrition of students. Astin (1993) discovered that many research studies indicate the decision of the student to persist or drop out of college is made during this time. The stress from adjusting to college may be sufficient to discourage those students who lack a commitment to college from remaining enrolled (Tinto, 1987). However, Noel et al. (1985) found that by the time most "at risk" students were exhibiting behavioral cues, it was often too late for the institutions to find out which forces of attrition were at work for a particular student. Windham (1994) concluded, regardless of the reason students dislike college and regardless of characteristics of the community college, in order to be successful in higher education students must remain enrolled.

Defining Persistence

Persistence in higher education is notoriously difficult to identify. Lack of a universal definition for persistence poses a serious difficulty to research (Hensley & Kinser, 2001). College administrators often refer to the terminology, "student persistence," as retention. There seems to be little agreement among institutions or researchers that persistence means consistent and constant attendance at college from entrance through goal completion. Rather, persistence is generally defined in a way that meets the needs of the individual institution. A persistence statistic might be positive only if the student enrolled and then graduated in four years. For another institution, a persistence statistic might be positive if the student was enrolled inconsistently

throughout several years, but still eventually achieved graduation. The differences in institutional and student characteristics have made it impossible for each institution to totally adhere to a single national standard. A single national standard for the definition of persistence in colleges and universities would aid in retention research statistics by enabling researchers to more accurately compare statistics between schools.

The national norms, discussed by Astin (1977), use three measures for retention: (a) did students receive a bachelor's degree by a specified date?; (b) did they receive a degree or complete four years of college by the same date specified?; (c) did the students receive a bachelor's degree, complete four years of college, or remain enrolled by Fall of the designated date? This method established "degree of persistence" for research purposes.

It has been necessary that the planning institution know the characteristics and needs of the population who must first be identified as requiring support for persistence (Astin, 1996). One basis for effective program design is to understand and establish a definition of persistence. For example, if a student intends to graduate at some point but is not consistently enrolled during consecutive terms from entrance to graduation, is the student considered to be a dropout, or not to persist? Consideration must be given to the type of college and the national retention rate in order to accurately compare data and develop programs. In studies of persistence, Astin (1996) agreed that the rate of student retention should to be considered by researchers and program planners for each specific institution.

College persistence is affected, to a great degree, by the process of interactions between students and the institution. In a study conducted by Tharp (1998), non-

persisters are defined as those who do not maintain continuous enrollment at an institution from one semester to the next, summer terms excluded. A substantial body of research has led scholars to report that integration into the social and academic systems of the college or university is essential to academic success and achievement (Astin, 1977, 1993; Bean & Metzner, 1985). Yet, how students achieve integration is not clear (Tinto, 1987). According to Bushnell (1991), the more a student is acclimated into the positive community aspects of the college, the more connected the individual is to the institution. Student persistence is also affected by other external forces (e.g., family obligations, work, and financial situation). The effect of peer group and faculty interaction is important to consider in the overall process of the student bonding to the college and her or his commitment to the educational way of life.

Tinto (1987) viewed persistence as a longitudinal process of interactions between the individual and social systems. Modification of institutional commitments and goals supports student persistence. For the purpose of this study, persistence was defined as what the student must exhibit, the act of will individually required in order to continue in the pursuit of a desired goal. Any action taken by a student to associate with an institution may be understood to have been evidence of incipient persistence.

Student Characteristics and Variables Affecting Persistence

Research that has investigated attrition and retention of students in community colleges gathered data on student demographics in order to discover the typology of students who are likely to persist or not persist. Most studies in this area attempt to discover and pinpoint the characteristics of students who remain in school and those who are at risk of dropping out. Existing research indicates that community college students

who become attrition statistics have common characteristics. They typically attend school part time, are employed full time, often need remedial courses, and are older than traditional students (Windham, 1994). In a study of community college students who do not persist, 43% worked full time and 74% were enrolled part time (Seppanen, 1995).

These same characteristics are found in nontraditional students, at-risk students, and the general population attending community colleges. The traditional student in a two-year college is nontraditional by virtue of his or her age, life situation, or both. Even younger students enrolled in a two-year or community college often have obligations that preclude them from devoting the same time and effort to their studies as their traditional counterparts. These students may be single parents or self-supporting. They may have the luxury of being immersed intellectually, emotionally, or physically in the academic environment. Though the numbers of such students are increasing, the reality is that nontraditional students are far less likely to leave the institution with degrees because this latter group is not immersed in the academic experience. (Bean & Metzner, 1985).

The importance of social factors in college retention is documented by findings indicating that students who are more socially integrated or involved in college life and feel they were part of the campus community are more likely to persist to graduation (Astin, 1975; Tinto, 1987). Astin (1972) purported that first-year students who are involved in student activities outside of class are most likely to be retained. Observing students' membership in extracurricular activities, such as fraternities and sororities and participation in varsity athletics, led Astin to discover that community colleges that typically do not offer extracurricular opportunities have a greater degree of attrition.

The importance of social factors in college retention led researchers such as Astin (1975, 1977) to look at a number of approaches for involving students more in the life and environment of the institution, including: freshman orientation, counseling and advisement, financial aid, part-time campus employment, extracurricular activities, and housing. Other researchers such as Cofer and Somers (2000) stressed the importance of involving adult students, particularly well represented at community colleges, to help them feel connected to and therefore committed to the institution. Perhaps one of the most significant findings by Astin (1977, 1985) concerning social factors in college retention is that frequent interaction with faculty members is more strongly related to satisfaction with college than any other type of involvement, student characteristic, or institutional characteristic.

Eagle (1982) studied variables that served as early predictors of persistence. Through his research, results of dozens of studies show factors that appear to be important for student persistence: SAT scores, class rank, high school GPA, scholarships, college environment, and the relationship between student needs and psychological characteristics. Factors that appear to be marginally important are parental education, study habits, gender, peer influence, individual personality characteristics, and both motivational and educational goals.

The most important factor in predicting persistence is academic success (GPA). Tharp discussed that first semester GPA is one of the key predictor for student success (1998). Astin (1975) and Ramist (1981) stated that GPA is more closely related to persistence than any other variable. They also noted through their research that, its effect is directly independent of ability and other background characteristics.

Other factors influencing student success are student's grades in high school. Astin (1971, 1993) stated that first-year students' GPAs have been predicted with moderate accuracy from knowledge of average grades in high school and scores on major college admission tests. High school grades have been shown to carry more weight in predicting college grades than aptitude test scores. With respect to value in the prediction of academic achievement during the college freshman year, the National Merit Scholarship Qualifying-test, the Scholastic Aptitude Test, and the American College Test are essentially interchangeable. Composite scores of aptitude tests work as well as separate or subtest scores when used as predictors of first-year student academic success. High school grades and aptitude test scores appear to carry about equal weight in prediction of academic success.

Prediction of first-year GPA slightly improves with the addition of a wide range of information about the student's family background, religion, future plans, and personal attitudes and values. Generally, students do slightly better than predicted from high school grades and test scores if they demonstrated good study habits in high school and if they regard themselves as having high academic ability and maintain a high degree of motivation for achievement (Astin, 1971, 1977, 1993).

A number of developmental needs, as shown by the research, exist for first-year college students. Researchers discovered a number of factors they believe affect potential student persistence. Collectively, researchers have determined that student attrition is a complex phenomenon that cannot be understood or predicted with single variables. However, a large amount of research supports the general observation that

community college students are more likely to drop out if they have no specific educational goals, work full time, and attend college part time.

Community College Research

The philosophy, purpose, missions, and nature of the community college once clear cut with precise definition, has gradually changed since their beginnings in the early 1900s (Baker, 1998). Values of the community college have included, being student centered, having open-door admissions, being focused on teaching, being adaptive, being responsive and being connected to the larger community (Campbell & Leverty, 1999).

Over the years the community college has catered to a changing population of students. As the variety of students attending the community college continues to evolve, there is a need to explore innovative strategies for the continued growth and development of the institution. How to establish and maintain a sense of community with the changing population that enhances retention is the crucial question. Maintaining and increasing student enrollment continues to be the challenge for community colleges (Absher & Crawford, 1996). This issue compels institutions to explore the factors that draw students to the community college in pursuit of their education and to identify the motivation for their retention.

Community colleges continue to attract students with diverse educational purposes in mind. These purposes include: receiving the first two years of classes at the community college before transferring to a four-year institution, obtaining a two-year degree or certification, and taking a class for personal gain. Many have departed for equally diverse reasons, but in generally high numbers compared to the traditional four-year institution. Student decisions to discontinue their educational pursuits at the

community college raise the question: What, if anything, might the college do differently to maintain enrollment?

Baker (1999) suggested that community colleges, when revisiting institutional missions and values, look for ways to invent unique strategies to increase enrollment and retention rates. It is important to identify the factors that individuals find attractive and entice their enrollment in the community college. This information is valuable when examining enrollment and retention information.

Why have students not persisted at community colleges? This question has prompted many research efforts (Price, 1993). One way to improve persistence at community colleges is to focus on collaborative efforts between the academic and student affairs domain (Astin, 1996). Astin suggested this leads to campus-wide unification and fosters educational excellence. While institutional size has been linked to negative outcomes (community colleges are typically small in comparison to universities and do not have on-campus living), Astin (1996) found that four-year colleges have retention advantages over two-year institutions resulting from greater resources in residence halls, financial aid, work opportunities, and academic prestige.

Tinto (1987) found that experiences that promote students' social and intellectual integration into the college community are likely to strengthen commitment and persistence. To make the freshman connection, institutions must adopt the concept of front loading: putting the strongest, most student-centered people, programs, and services in the freshman year (Levitz & Noel, 1989). The better the student's integration into the academic and social systems of the college, the more likely she or he is to continue attending until graduation.

The struggle to fit in, academically and socially, may be an unyielding task (Glass & Garrett, 1995). Assisting the community college student to succeed is of prime importance for the student and the college. Community colleges have provided such assistance through the new student orientation experience. Students having completed freshman orientation have been found to possess higher grades than those students not having participated in it (Yockey & George, 1998).

Historically, community colleges have provided little opportunity for their students to be integrated into the college culture (Glass & Garrett, 1995). Attempting to break these traditions, community colleges have worked to adapt and seek guidance and direction from national organizations. The Commission on the Future of Community Colleges endorsed a national report issued by the American Association of Community and Junior Colleges (AACJC) and found support for the freshman orientation course in the following statement; “we urge that every community college give more attention to student retention. Every college should develop a comprehensive first-year program with orientation for all full-time, part-time, and evening students” (Cuseo, 1997, p. 38).

Students in community colleges need freshmen orientation and socialization more than any comparison group of learners in American higher education (Roueche and Roueche 1994). Tinto wrote that education (which includes improving study skills, providing school information, and tutoring), remains the primary reason for providing freshman orientation, not just retention (1993). Freshman student success is greatly influenced by the types of encounters (with teachers, staff, study groups, friends) experienced during the first year (Upcraft & Gardner, 1989). Gilson (1990) concurred stating, by bridging the cultural chasm between student affairs and academic affairs,

programs for the moral development of students have accomplished both practical and long-term benefits.

Freshman Interventions

Any proposed method of integration should involve all facets of the campus community and portray a student-friendly environment, a supportive atmosphere, and the initiation of cooperative peer interactions to acquire the desired results of student success and retention at the institution. As described by Cohen (1985), students no longer have the right to fail. The decline of the "right to fail" era of the 1960s and 1970s has led to the mushrooming of a variety of strategies to help students stay in school and complete courses successfully. Rounds (1984) identified the critical need for early identification and intervention programs to prevent heavy attrition of students, particularly at community colleges. From his evidence, Tinto (1982) suggested, that on any campus there are groups of students who face distinct problems in accomplishing what they came to do, problems that require specific forms of intervention, as well as particular research methodologies to illuminate the characteristic persistence/dropout process.

Creating positive interactions is critical on the community college campus to help with student retention. The community college has a special directive to connect the student with the institution. Without the programming and developmental opportunities provided by a residential campus environment, the typical community colleges are at a disadvantage and need to develop approaches that promote success and persistence for commuter students. Roueche (1989) also expressed concern that the most selective universities provide both more structure and more support for freshmen than do open-door institutions.

With the current knowledge about student adjustment concerns and retention factors, numerous programs have been developed more effectively to introduce students to the college environment (Gordon & Grites, 1984). These programs focus on three major areas: academic stimulation and assistance for students, personal future building for students, and student involvement experiences. Beal and Noel (1980) summarized the most successful retention action programs under five categories: (a) faculty awareness and development activities, (b) "significant other" peer programs, (c) career assistance programs, (d) learning support centers and activities, and (e) expanded orientation activities. Orientation programs are recommended under several of these categories. Cohen (1985) listed some of the major retention strategies in higher education as orientation combined with mandatory testing and placement, tutoring, integrated support services, special activities within classes, and levels of classes according to ability.

Identifying the characteristics of those who persist and those who do not is not always an easy task. Focusing on intervention strategies represents an alternative method of approaching retention and attrition and over time may have a greater impact. Intervention strategies in which colleges have engaged take on a variety of styles and types. One possible strategy for integrating students into their environment and thereby encouraging their continued enrollment, is to offer a new student orientation program.

Orientation Program Research

Since the establishment of the first orientation program in 1888 at Boston University, colleges and universities have been interested in providing programs that assist in the adjustment of first-year students. Institutions have been encouraged to offer programs that assist students in transition. Without an intervening agent (activity or

person), the first-year student is left to use trial-and-error behavior with limited information to adjust to a new environment. Brophy's (1984) research strongly suggests that when orientation activities are combined with counseling or advising, the fit between the student and the institution is increased, producing an enhanced commitment, sense of belonging, and personal satisfaction. He postulated that orientation programs, both prior to enrolling and during the first year of college, have had merit in preparing and meeting students' needs in adjusting to college.

Orientation's primary purpose, as stated by Titley (1985), is to ease the transition to college and to aid students during this initial adjustment period. It introduces students to the components of the environment, giving them the information necessary to explore the environment and discover how it can meet their educational needs. Freshmen orientation outlines the services available to facilitate survival in the environment. Freshmen orientation is an introduction to college life (Astin, 1985). Butts (1971) described orientation as part of the process of human development concerned with shifting environments. The need for orientation in higher education is emphasized in a 1924 editorial in the *Harvard Alumni Bulletin* espousing the need to help young people "find themselves" in a new environment (Gordon, 1989). When applied to higher education, orientation is usually defined in terms of helping students adjust to their new physical and social surroundings and to academic expectations.

Orientation should be a traditional campus function instrumental in maximizing the ecological fit. Pascarella, and others (1986) found that participation in orientation has an indirect positive effect on satisfaction and persistence of college students. Tinto

(1987) reported that when contacts occur on a continuing basis outside the formal domains of institutional life, they are linked to the quality of one's education.

According to Tinto, there are several critical periods in the typical college students' career when actions on the part of the institution may be particularly effective in preventing student departure (1987). These include the time prior to entry, during application and pre-orientation programs, and in the first semester of college when individuals are required to separate themselves from past forms of association and make the transition to the social and intellectual life of the college.

Strumpf and Hunt's (1993) research indicates that, the retention rate of students enrolled in an orientation course is higher than for students who do not enroll in the course. Noel indicated that through campus-wide participation in these activities, a total campus atmosphere of warmth, friendliness, and sincere caring is created. Research has influenced institutions to begin to view the orientation process as an important retention activity (1985).

Most research on introductory college orientation programs is conducted at four-year colleges and universities, with an emphasis on description and prescription, rather than theory or empiricism. One researcher, Butts (1971), described three basic formats for orientation programs. These formats were as follows: pre-arrival and/or summer orientation (1 to 3 days), arrival/Fall orientation (up to a week), and expanded/continuing orientation (usually a one-term course or workshop). Tharp (1998) stated that the results from a number of studies have indicated higher persistence rates and GPAs for subjects who have completed extended orientation classes. Regardless of the time frame or format, Titley (1985), proposed that orientation leads students to greater developmental

independence and to more effective participation in the educational process. It also leads institutions to a greater awareness of the needs of incoming students. Orientation enables them to enhance the learning and staying qualities of the campus.

Perigo and Upcraft (1989) divided orientation into a three-phase effort: pre-admission, pre-enrollment, and initial enrollment. The pre-admission phase includes marketing materials designed to promote the school and on-campus visitation programs. Pre-enrollment programs help students learn more about the college and prepare them for enrollment. Freshmen orientation programs that are conducted just before the start of class are termed “initial” enrollment programs.

Twale (1989) described five time frames into which orientation programs have been grouped. The first of these, summer programs, include reading programs, camps, conferences, coursework for credit, and parent orientations. Summer programs tend to be informal and relaxed with an outdoor experience that helps the group bond. They aid in camaraderie, the forming of friendships, and facilitate a better adjustment to campus. The second time frame, the freshmen week, has a philosophy designed to orient people to people, not to buildings. The third type is the orientation seminar or workshop. Fourth is the semester or term survey course. The last of these time frames are categorized as year-long and ongoing programs.

There has been much research documenting the positive effects of various orientation programs on promoting the retention of freshmen (Astin, 1996; Seppanen, 1995; Tinto, 1987; Titley, 1985). According to Astin the role of an effective orientation program enhances the early socialization of entering students and facilitates academic adjustment, which increases the likelihood of persistence and degree completion (Astin,

1993). In addition, incoming freshmen need to know where to find someone who can help them to contend with the problems they undoubtedly face during the first few weeks in college (Webb, 1987).

Almost all major universities require orientation of entering freshmen.

Universities require orientation in an effort to socialize, acculturate, and embed the values held dear by the university culture. Community college students, by contrast, have had less reason to anticipate success and have needed more orientation than any comparison group of learners in American higher education (Cohen & Brawer, 1996).

Universities and community colleges realize that developing a campus of satisfied students begins with a positive orientation experience. These satisfied students stay longer and have lower attrition rates, higher graduation rates, and a greater overall sense of satisfaction with the quality of their academic preparation (Glass & Garrett, 1995).

Tinto (1986) suggested that orientation programs focus on relationship building. According to Cellucci and Price (1986), the single most important variable in the persistence and eventual success of high-risk students was adequate adjustment to the college environment and the demands it made upon them. High-risk students need information about expectations in the college experience. As Jones (1986) stated, establishing a college/student linkage appears to be the most critical element to successful retention efforts. Among the range of programs and services recommended at the front-end of the college experience are orientation workshops and courses (Noel et al., 1986). Titley (1985) suggested that an orientation course is the single most effective intervention technique available to colleges for enhancing freshman success. Noel (1986) found it important to make every effort to get students immediately involved in the institution.

One intervention strategy is thought to have a significant impact in encouragement of student persistence during this time period, namely, freshman orientation (Brawer, 1996; Fidler & Godwin, 1994).

Boudreau (1992) examined the relationship between attendance and completion of the University Experience course at the University of South Florida (USF). He also examined subsequent retention, academic performance, and graduation. This orientation program consisted of a semester-long orientation course for first-time-in-college students. The total sample consisted of 1286 first-time-in-college students who enrolled during the Fall semesters of 1987, 1988, 1989, and 1990. The sample was equally divided into the treatment group that completed the University Experience course and the comparison group that did not. The comparison group was matched to the treatment group based on race, gender, admissions qualifications (high school GPA and test scores), admission status (regular or alternate), and university major. Both the treatment and comparison groups were divided into four cohorts based on their semester of entry. The outcome variables of retention rate, GPA, and graduation rate were measured at the end of the Spring 1991 semester.

Results indicate that the retention rates for all participants compared to all non-participants were significantly higher for the Fall 1989 and Fall 1990 cohorts. When participants were compared to non-participants by ethnicity, gender, and admission status, the retention rates in the last three cohorts, Fall 1988, 1989, and 1990, were significantly higher for participants in the University Experience course.

With regard to academic performance, results indicate that only the Fall 1989 cohort showed a significantly higher percentage of University Experience course

participants in good standing. These results also indicate a lower percentage of students on probation or dismissed as compared to non-participants. Comparisons of mean cumulative GPA and mean total credits completed indicate significant positive differences for participants, depending on their gender, admission status, and cohort term.

Burns et al. (1996) examined the relationship between completion of an orientation course and higher retention, persistence, student satisfaction, and attainment of academic goals for new college students. Findings indicate that completing an orientation course helped students make adjustments to student life and helped new students establish expectations, knowledge, and behaviors that could lead to the attainment of academic goals. This study found that each campus community must tailor its orientation programs to the needs of its participants (students, parents, and community). Many different program structures, time frames in which they were offered, and types of program content were evident in the 273 colleges this study surveyed across the United States. These differences show that a range of important student needs is being met with these orientation programs. In this study, the weight of evidence suggests a statistically significant positive correlation, at the .05 level, between exposure to various orientation experiences and persistence. This study covered, both freshmen to sophomore years and from freshmen year through attainment of a bachelor's degree. It also found that significant improvements in orientation programs can be implemented by conducting a thorough assessment of the needs of incoming students and their parents. To the extent that orientation programs were based on such an understanding of participant needs, it is likely that they were serving a valuable role in not only enhancing the curricular, but also the co-curricular learning of new students. Finally, the study

found that involvement, a critical factor in success and retention, is increased through participation in orientation programs.

Cabrera, Castaneda, and Hengstler (1992) combined the Student Integration Model and the Student Attrition Model to determine the convergent viability of both theories in understanding why students stay in college. The Attrition Model theorizes that dropping out of college is a result of student and school environment interaction. On the other hand, the Integration Model compares student attrition to employee turnover, as an effect of student behavior or choice. Results of the study found that because both models are similar in all respects, except regarding the effect of external factors or social and psychological factors, a convergent model is most effective for understanding why students remain enrolled.

In another study, Devlin (1996) examined the effects of a short Outward-Bound-type program on college freshman. Participants included 72 freshmen who selected a four-day wilderness orientation program and 65 freshmen who did not take part in the program. All participants completed a survey at the end of college orientation, the end of their freshman year, and also at the end of their senior year. This study found that the most long-lasting effect of the program appeared to be friendship. Of the 37 participants who completed a questionnaire at senior year level, 27% reported the program helped give them a head start on making friends. A similar percentage found it made the transition to college easier. Another 24% indicated the program initially helped adjustment to college, but that the effects were negligible over time. Twenty-one point six percent pointed to an improvement in self-confidence as a result of the program. Ten point eight percent indicated an increased awareness of the environment.

Dougan (1981) conducted a study to determine the effects that a comprehensive, 14-week orientation program had on the quality of effort that students manifested in using available resources and opportunities on campus. Dougan also examined the rate of retention among urban commuter college freshmen that enrolled in the workshop orientation program at the University of Michigan-Dearborn (UM-D). The experimental group that participated in the orientation program was composed of 14 students. The control group was composed of 42 students who did not experience the orientation, but were administered the College Student Experience Questionnaire (CSEQ), an instrument designed to measure the quality of effort of college students. The orientation course was listed as Independent Studies 102, (Career Planning and Personal Development). In this course, students received one hour of elective credit for the successful completion of the course. The course utilized speakers (faculty and community resources), discussions, audio-visual media, and other resources. The topics discussed included career planning, study skills, and personal development (assertiveness training, relaxation techniques, and values clarification).

In addition to the CSEQ, which was administered to all students in the study during the final week of classes, evaluations of students were also made based on grades, attendance, percentage of attempted and earned credits, retention, and personal interviews. A one-tailed *t*-test was used to test for differences. The level of significance for testing the hypotheses was .05.

The investigation revealed that students in the orientation group experienced higher retention rates than did control group students. However, the difference between the scores for both the experimental and the control group students were not found to be

statistically significant. The un-hypothesized findings as a whole yielded little difference between the experimental and the control group students. Interviews with dropouts revealed that they were basically satisfied with the university but left due to financial problems or changes in educational plans.

Glass and Garrett (1995) examined the relationship between completion of an orientation course, higher retention, and GPAs for new community college students. Findings indicate that completing an orientation course during the first term of enrollment appears to promote retention and improve grades among community college students. Retention and GPA were found to be unrelated to gender, ethnicity, age, employment status, college attended, or college major.

Lords (2000) conducted a study to determine the relationship between varying new orientation programs at Texas Community College. This study surveyed 680 students on their satisfaction level with the old traditional orientation process. Half of the respondents to the five-question survey perceived that the orientation was helpful, 25% did not, and 25% had no opinion. A year later, the college surveyed students who had been enrolled during 1995-97, to ensure that they had experienced both the old and the new orientation processes. The new orientation was on CD-ROM and allowed students to orient themselves whenever they wanted. If students did not remember where to park or how to use the library, they could always get the help they needed on CD-ROM year-round. Of the 590 respondents, 95% rated the new system as "good" or very good," 83% preferred the new system to the old system, and 82% reported no registration problems. In another survey, in the Spring of 1998, advising again received high ratings. Texas Community College reported that it planned to continue surveying its new students

regarding the new orientation system, and track the effects of retention, satisfaction, and goal attainment.

Nelson (1990) indicated that Valencia Community College in Florida developed an extended orientation course that focused on student success. Between 1987 and 1992, 81% of the students who enrolled in the extended orientation course passed their first-term courses, compared to 56% of the students enrolled in other college preparatory courses and 67% of all other students. After four terms, 65% of the students who enrolled in the extended orientation course were still enrolled at the college.

Patton's (1980) study was initiated to assess the effectiveness of an orientation program with the purpose of reducing the anxiety of entering freshman and easing their adjustment to the campus environment. The criteria of evaluation were retention, satisfaction, and academic achievement. The 486 subjects were first-time freshmen from outside Tarrant County entering Texas Christian University in the Fall of 1980. Half of the subjects participated in the experimental program, Operation Welcome, and the other half served as the control group. Those in Operation Welcome were grouped in teams with eight other freshmen, two upperclassmen serving as a big brother and big sister, and a local alumni family. Each freshman in the program received letters of welcome prior to leaving home and participated in special events upon arrival to campus.

The effectiveness of the program was determined by attrition after the first semester, academic achievement as indicated by GPA, and satisfaction as measured by the College Student Satisfaction Questionnaire (CSSQ). There was no significant difference in the academic achievement of the experimental and control groups. The other two measures, however, indicate a significant positive effect of the program. The

overall score and the subscale scores of the CSSQ of the experimental and control groups were compared using a *t*-test with .05 as the level of significance. The participants of Operation Welcome were significantly more satisfied with the university in every area measured: working conditions, compensation, quality of education, social life, recognition, and overall satisfaction. There was no significant difference in the effect of the program on the satisfaction of males and females or on Texans and non-Texans. Differences in attrition were compared using a *z*-test of independent proportions with significance at the .05 level. Attrition in the experimental group was significantly lower than in the control group when measured at the beginning of the 1980 Spring semester. Moreover, the pre-matriculation correspondence during the summer had a positive effect on the number of experimental subjects actually enrolling in the 1979 Fall semesters. When the attrition was factored by gender and place of residence, the program was shown to have a significant effect on females and on Texans, but not on males or non-Texans.

Sidle and McReynolds (1999) examined the relationship between participation in an institution's freshman-year experience course and student retention and success for first-year students who enrolled in the course. They used a control group of similar first-year students who elected not to enroll in the freshman-year experience course. The population consisted of all first-year students (N=3,084) admitted and enrolled for Fall 1993, Fall 1994, and Fall 1995 at a medium-sized, regional, predominantly white, public, four-year university in the Midwest. The experimental group (N=431) consisted of first-year students enrolled in the institution's freshman-year experience course for Fall 1993, Spring 1994, Fall 1994, Spring 1995, Fall 1995, and Spring 1996 semesters. The

researchers purposefully selected the control group and used quantitative data in the form of reports generated by the office of Admissions and Records. Also, a qualitative survey was administered to the experimental group. The design was appropriate for determining the relationship between participation in an institution's freshman-year experience course and student retention.

The authors concluded that several factors might have contributed to the increased likelihood of persistence for the students in the experimental group. For example, students who elected to enroll in a freshman year experience course tended to be more highly motivated to succeed than those who did not. Furthermore, the authors pointed out that student success can be measured in ways other than GPA and credits earned. This study supported the findings from earlier studies of colleges and universities across the country that freshman-year experience courses are an effective strategy for increasing the success and development of students during their first year of college.

Freshmen Experience

In addition to the establishment of traditional programs, alternative methods of student orientation have been utilized (Gass, 1987, 1990). O'Keefe (1989) found that although reducing attrition, promoting a positive transition into college, and introducing a college's resources are frequently cited reasons for continuation of these programs, all of the programs were designed to provide the best possible introduction to each particular college (Emilio & Joseph, 1997; Lords, 2000; Patton, 1980). Freshmen Experience is no different. The community college being studied offers a program called Freshmen Experience. This program is offered as an optional orientation program for entering new

students with programmed activities that are largely academic, but are also social in nature.

One of the fundamental goals of Freshmen Experience is to expose students to the various opportunities and resources the college offers. Freshmen Experience is marketed as an opportunity for students to spend more time on campus, learn more about campus resources, identify opportunities for leadership experiences, and meet people who were in positions to help them. Interactions with faculty can also reveal how a student's academic expectations for college differ from those held in high school or another college previously attended.

Freshmen Experience is based on and built around the following factors: (a) studies of student persistence and success uniformly indicate that a significant number of new students leave college during their first semester, (b) the transition to a college regimen is particularly difficult for students who hold expectations that are shaped exclusively by their high school experiences and is also difficult for non-traditional students returning to school after a significant period of time, (c) programs designed to address attrition during this period demonstrate a significant level of success, (d) new students who are guided through unfamiliar surroundings and processes, as well as provided with a contact at the college, have shown significantly higher rates of persistence and success, and (e) the data collected from Freshmen Experience may be used for research purposes and statistical observations. Currently, little data exists on the results of the freshmen experience class.

During the Freshmen Experience, teachers distribute new student packets that include the orientation schedule and other information selected as being particularly

important to student success. During the first week of school, teachers answer frequently asked questions by new students, discuss areas of most concern, lead discussions based upon questions generated and encourage students to ask other questions. New students and teachers exchange phone numbers to facilitate ongoing communication and follow-up for future activities.

Freshmen Experience provides an opportunity for new students to interact with the college president, deans of academic and student affairs, division chairs, and numerous faculty and staff members. College representatives discuss various resources and departments within the college and encourage students to contact them with questions and concerns. During class, new students participate in a campus tour of important places and resources for student success in which they received items necessary or helpful in attending college: (a) parking permits, (b) library cards, (c) email accounts, and (d) applications for student clubs and activities.

Developing an optional orientation program like Freshmen Experience addressed new students' needs during the first critical semester. Programs that go beyond the traditional approach helped students by extending the orientation process and minimizing information overload. Innovative programs such as Freshmen Experience may assist new students by providing a common bond on which to build. At the time of the study, currently, no formal valuation to assess benefits from attendance had been undertaken.

Summary of Literature Review

This study was designed to determine if participants in Freshmen Experience, an optional orientation program at the community college, achieved results similar to non-participants with regard to academic success, attrition, and retention. This chapter began

with a review of the literature related to theoretical framework and models, followed by general attrition/retention studies and defining persistence. Next, the literature on student characteristics, variables affecting persistence, and specific characteristics of students who persist were considered. A review of community college research and freshmen interventions followed. Next, the chapter described orientation and reviewed the success of special orientation programs designed to assist students in their successful transition to college. Finally, an explanation of Freshmen Experience was presented.

A theory of student attrition can be used to predict which students are most likely to drop out of school. Student development theories consistently show that multiple factors relate to student development and student persistence in college. Student development theories provide structure and basis for formulating first-year student orientation programs. Longitudinal models provide a structure for assessing the differential effects of several types of variables on the dropout decision. For the purposes of this study, a longitudinal model was examined.

Lack of a universal definition for persistence posed a serious difficulty to research. College administrators often refer to the term “student persistence” as retention. Several researchers view persistence as a longitudinal process of interactions between the individual and social systems. College persistence is affected, to a great degree, by the process of interactions between students and the institution.

For the purpose of this study, “persistence” was defined as what the student must exhibit and the act of will individually required in order to continue in the pursuit of a desired goal. Any action taken by a student to associate with an institution is understood to be evidence of incipient persistence.

Attrition in higher education refers to the loss of students from the institution during the normal course of their program. Retention efforts attempt to reduce the size of this loss and retain a greater number of students until their educational goals had been met. Identifying exact reasons for student attrition can be an endless task. However, recognizing perceived traits leading to attrition may encourage retention.

A substantial body of research led scholars to report that integration into the social and academic systems of the college or university is essential to academic success and achievement. Research consistently indicates that the freshman year is the point when the greatest numbers of students are at risk of dropping out. The first few weeks of enrollment are the time of highest risk for non-persistence. Therefore, the first year appears to be a critical time for identifying and initiating work with students who need support and upgraded skills in order to persist. The key to providing assistance to attrition-prone students is early identification and intervention.

With the current knowledge about student adjustment concerns and retention factors, numerous programs have been developed to introduce students to the college environment more effectively. The goal of orienting students to the resources of the institution and facilitating their adaptation to the collegiate community has been the primary purpose of orientation programs. Orientation programs are believed to influence students' attitudes about higher education and help form the relationship between students and their institution. Effective first-year orientation programs may have enhanced persistence through meeting individual social and academic developmental needs of the student.

Orientation programs are usually divided into a three-phased effort: pre-admission, pre-enrollment, and initial enrollment. When applied to higher education, orientation is usually defined in terms of helping students adjust to their new physical and social surroundings and to academic expectations. Orientation's primary purpose is to ease the students' transition to college during this initial adjustment period, and therefore, increase the likelihood of persistence and degree completion. With orientation programs as the beginnings of the integration process, creating positive interactions on the community college campus is critical.

A literature review indicates gaps in previous research. The proposed study would fill a demonstrated need. A review of the literature reveals that the evaluation of orientation programs primarily consists of two types: semester long orientation classes and one-week boot camp orientations before the semester began. The majority of studies have evaluated orientation programs at four-year institutions. There remains a need to conduct research with community college orientation programs that focus on the first semester of a student's educational experience.

This study was designed to advance the knowledge base in the area of orientation program evaluation by: (a) providing empirical data on community colleges; (b) evaluating an orientation program that focuses on the first semester of a student's educational experience; (c) studying attrition, academic success, and retention.

Chapter 3

Methodology

Research Design

This study was designed as a quantitative study to examine an optional new student orientation program, Freshmen Experience, at a rural, public, community college. The results of academic performance, attrition, and retention of participants and non-participants were examined through an ex post facto study of student participation over two semesters: Fall 2004 and Fall 2005. The variables examined include subsequent academic performance, retention and attrition.

Having an ex post facto design, this study relied on observation of relationships between naturally occurring variations in the presumed independent and dependent variables. “Ex post facto” is a Latin phrase meaning “operating retrospectively” (Gall, Gall & Borg, 2003). Ex post facto research is systematic empirical inquiry in which the researcher does not have direct control of independent variables because their manifestations have already occurred (Kerlinger, 1973). The ex post facto design allows for the study of the relationship between elective participation and non-participation in this orientation program regarding retention and academic performance.

Setting

The orientation program examined was located at a comprehensive community college that was established to provide affordable and quality higher education opportunities for residents of upper East Tennessee. It is a public two-year institution and is a component of the State University and Community College System of

Tennessee, governed by the Tennessee Board of Regents. The college offers programs of study that lead to the Associate of Science, Associate of Arts and Associate of Applied Science degrees. The college has built degree programs on a general education foundation that emphasizes learning outcomes and provides information technology instruction across the curriculum. Students may receive a certificate of credit for programs of study of one year or less. It provides university parallel programs that prepare students to transfer to senior institutions. It also offers courses that prepare students for immediate employment in support of workforce development or prepare them to transfer to another college or university.

To facilitate student learning and transfer, the college maintains articulation, collaboration, and partnerships with public schools, technology centers, colleges, and universities. The college remains committed to the education of a non-racially identifiable student body and promotes diversity and access without regard to race, gender, religion, national origin, disability, or veteran status.

Context and Access

The college enrolls approximately 6,000 students. Enrollment statistics printed in the Fall 2006 catalog describe a population of students as coming primarily from ten rural counties that comprise its service area. For the Spring semester 2005, approximately 90% of the students maintained residences within the service area. An additional 9.0% resided within the state, and the remaining 1.0% was comprised of out-of state residents and foreign students. The ethnic composition of the student body was 95.3% white and 4.7% non-white; and gender composition was 63.5 % female and 36.5% male. The percentage of total enrollment by age category was as follows: under 18 (6.7%), 18 to 20

(31.7%), 21 to 24 (16.3%), 25 to 34 (23.9%), 35 to 64 (21.1%), and over 64 (0.3%). The mean age of the entire student body was 27.1%. Forty-seven percent of the students attended on a full-time basis, whereas 53% attend only part-time. The breakdown in percentages for degree versus non-degree seeking students was 67.5% and 32.5%, respectively. Five percent of the students enrolled in remediation courses exclusively. Most students were first generation college students with 11% of the population over 25 years of age having completed a bachelor's degree of higher. Seventy percent of the students attending this college received financial aid. The per capita household income was less than \$25,000 per year for the ten counties that the students come from to attend the college.

Freshmen Orientation Program

The Freshmen Experience at a community college is based on and built around the following concepts: (a) studies of student persistence and success uniformly indicate that a significant number of new students leave college during their first semester, (b) the transition to a college regimen is particularly difficult for students whose expectations are shaped exclusively by their high school experiences and for non-traditional students returning to school after a significant period of time, (c) programs designed to address attrition during this period have demonstrated a significant level of success, (d) new students who are guided through unfamiliar surroundings and processes, as well as provided with a contact at the college, have shown significantly higher rates of persistence and success.

Freshmen Experience serves as an entry system for new students. As all new students enroll, they are encouraged to enroll in Freshmen Experience. Students receive one credit hour at the end of the semester if completed.

During Freshmen Experience, one of the primary roles of instructors is to introduce new students by answering the top ten questions most frequently asked by new students. Also, instructors discuss areas of most concern and lead discussions based upon questions generated by the class. Students are always encouraged to ask other questions.

Freshmen Experience provides an opportunity for new students to interact with the college president, deans of academic and student affairs, division chairs, and numerous faculty and staff members. College representatives discuss various resources and departments and encourage students to contact them with questions and concerns. During these in-class sessions, new students receive items necessary or helpful in attending college: (a) computer information, (b) library cards, (c) email accounts, and (d) applications for student clubs and activities.

Developing an optional orientation program like Freshmen Experience addresses new students' needs during the critical first few weeks of their first semester. Innovative programs such as Freshmen Experience assist new students in providing a common bond on which to build, while at the same time increasing their knowledge of and contact with college programs and personnel.

To date, this college has no formal evaluation designed to assess student benefits gained from enrollment in Freshmen Experience courses. This study examined the relationship between participation and completion of Freshmen Experience

(orientation program) and academic performance, attrition, and retention, over two semesters, including Fall 2004 and Fall 2005.

Participants

This study examined the differences in first-year students at a selected community college who participated in a new student orientation program (Freshmen Experience). The study compared GPA, attrition, and retention of new students who participated in Freshmen Experience to those who did not participate in the program. The comparison group was also composed of similar first-year students. The sample for this study was identified through a computer search of the community colleges student academic database. The sample consisted of all new students admitted and enrolled in Freshmen Experience classes for the Fall 2004 and Fall 2005 semesters. To neutralize possible self-selection bias, the researcher purposefully selected the comparison group for the study by including students whose English placement test scores were similar to students in the orientation group.

The demographic composition of orientation participants resembled that of the institution's student population as a whole. Approximately, 33% of orientation participants were male; 67% were female. Of the students in the orientation group 92% were white, 3% were African-American, 3% were Hispanic, 1% were Asian, and 1% were other. Sixty-four percent of participants in the orientation group were of traditional age; 36% were categorized as non-traditional.

Fall 2004 Cohort

At the start of the 2004 Fall semester the freshmen experience group had 275 students and the comparison group had 275 students. At the end of the 2004 Fall semester the freshmen experience group had 255 students and the comparison group consisted of 252 students. When the students came back for the Spring semester, the freshmen experience group had 242 students and the comparison group had 220.

Fall 2005 Cohort

At the start of the 2005 Fall semester the freshmen experience group had 277 students and the comparison group had 277 students. At the end of the 2005 Fall semester the freshmen experience group had 258 students and the comparison group had 251. When the students came back for the Spring semester, the freshmen experience group had 228 students and the comparison group had 207.

Data Collection

The following data were collected on each student in the sample using the colleges Student Information System (SIS): placement test scores (i.e., math, reading, and writing), enrollment status (student enrolled or not), and cumulative GPA. To determine differences in retention (second semester rate of return) between students who participated in Freshmen Experience and students who did not, second semester enrollment data was collected for each student. The identifier for the group of students that participated in Freshmen Experience was the students' school identification numbers. The file containing the Freshmen Experience participants' school identification numbers was stored in the SIS (conducting an ACCESS data query) in order to obtain information on these students. Data from the institution's academic records database was collected

for all selected students at the beginning and completion of the Fall 2004, Spring 2005, Fall 2005 and Spring 2006 semesters.

Research Hypotheses

Ho1: There is no statistically significant difference in first semester academic performance, between students who participated in the orientation program and students who did not participate in the program.

Ho2: There is no statistically significant difference in attrition (dropout rates) during the first semester for students who participated in the orientation program and for students who did not participate in the program.

Ho3: There is no statistically significant difference in retention (second semester rate of return) between students who participated in the orientation program and students who did not participate in the program.

Data Analysis

An independent sample *t*-test was conducted to determine significant differences in academic performance as measured by G.P.A. between students who participated in orientation and those who did not. The results of the *t*-test determined there were no statistically significant differences between these two groups regarding G.P.A. for the 2004 and 2005 Fall semesters. Final class grades were used to measure academic performance. G.P.A. data for students enrolled in the Freshmen Experience group were compared to G.P.A. data for the comparison group.

Attrition data was measured after the completion of the first semester. Attrition data for the Freshmen Experience group was compared to that of the comparison group. A *z*-test was performed to determine whether there was a significant difference between

the Freshmen Experience group and the comparison group on the dependent variable of retention. An alpha level of .05 was used to measure whether the differences were significant.

Retention was evaluated by whether students returned for the following semester. Retention data was compared between the Freshmen Experience group and the comparison group. An alpha level of .05 was used to measure whether the differences were significant.

Chapter 4

Findings

This study examined the differences in first-year students at a selected community college who participated in a new student orientation program (Freshmen Experience). The purpose of this study was to compare academic performance (GPA), attrition, and retention between new students who participated and those who had not participated in a community college orientation program.

The independent variable examined in this study was participation in Freshmen Experience, a new student orientation program. The dependent variable of academic performance (GPA) was measured at the end of the first semester of participation in the study. The dependent variable of attrition was measured at the end of the first semester of participation in the study. The dependent variable of retention, second semester rate of return, was measured after the completion of the student's third week (state-aid day) of enrollment in the second semester.

Null Hypotheses

When testing the following three hypotheses, the researcher decided to report the results of two cohorts separately and then combined when testing for significance. The first research question concerned academic success.

1. There is no statistically significant difference in first semester academic performance, between students who participated in the orientation program and students who did not participate in the program.

An independent sample t -test was conducted to determine significant differences in the academic performance (as measured by GPA) between students who participated in orientation and those who did not. The results of the independent sample t -test suggested that there was no statistically significant difference between these two groups regarding GPA for 2004 Fall cohort or the 2005 Fall cohort or the combined cohorts. The outcome of the Fall 2004 analysis was $t(507) = 0.3641$. The outcome of the Fall 2005 analysis was $t(509) = 0.8461$. The combined GPA of the two cohorts was $t(1,016) = 0.1661$. Results of all three tests were shown not to be significant.

Table 2

Summary of Independent Sample t -test Results for Academic Performance (G.P.A.)

Fall 2004 Semester

<i>Variable</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>df</i>	<i>p</i>
Comparison Group	255	2.21	1.14	0.9084	505	0.3641
Orientation Group	252	2.30	1.09			

Table 3

Summary of Independent Sample t -test Results for Academic Performance (G.P.A.)

Fall 2005 Semester

<i>Variable</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>df</i>	<i>p</i>
Comparison Group	258	2.32	1.16	0.0952	507	0.8461
Orientation Group	251	2.33	1.21			

Table 4

*Summary of Independent Sample t-test Results for Academic Performance (G.P.A.)**Fall 2004-2005 Semesters*

<i>Variable</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>df</i>	<i>p</i>
Comparison Group	513	2.22	1.15	1.3858	1,014	0.1661
Orientation Group	503	2.32	1.15			

The second research question concerned attrition. Attrition data was measured at the end of the Fall semesters. Attrition data for the Freshmen Experience group were compared to the comparison group. A two sample z -test was performed to determine whether there was a significant difference between the Freshmen Experience group and the comparison group on the dependent variable, attrition. An alpha level of .05 was used to measure whether the differences were significant.

2. There is no statistically significant difference in attrition (dropout rates) during the semester of students who participated in the orientation program and students who did not participate in the program.

For the 2004 Fall semester the $z = .4765$ with $p = .3168$. There was no statistically significant difference between the students who dropped out of either group before the end of the semester in the 2004 Fall semester.

For the 2005 Fall semester the $z = 1.08$ with $p = .1739$. There was no statistically significant difference between the students who dropped out of either group before the end of the semester in the 2004 Fall semester.

For the two semesters combined the $z = 1.09$ with $p = .1357$. There was no statistically significant difference between the students who dropped out of either semester.

Table 5

Fall 2004 Semester Attrition Results

Variable	Orientation	Comparison	Total
Number of Students	275	275	550
Dropped out	20	23	43
Percent Attrition	7.3%	8.3%	7.8%

Table 6

Fall 2005 Semester Attrition Results

Variable	Orientation	Comparison	Total
Number of Students	277	277	554
Dropped out	19	26	45
Percent Attrition	6.9%	9.4%	8.1%

Table 7

Combined 2004 and 2005 Semester Attrition Results

Variable	Orientation	Comparison	Total
Number of Students	552	552	1,104
Dropped out	39	49	88
Percent Attrition	7.0%	8.8%	7.9%

The third research question concerned differences in retention between students who participated in orientation and students who did not. A two-sample z -test was performed to determine whether there was a significant difference between the Freshmen Experience group and the comparison group on the dependent variable of retention. An alpha level of .05 was used to measure whether the differences were significant.

3. There was a statistically significant difference in retention, second semester rate of return, between-students who participated in the orientation program and students who did not participate in the program.

The results of the z -test suggested that there was a statistically significant difference between these two groups regarding retention for the 2004 Fall and 2005 Fall semesters. The results of the z -test suggest that the students who participated in the Fall orientation were more likely to re-enroll for the following Spring semester. Results of the 2004 Fall orientation group were, $z = 2.558$ with $p = .0053$.

The results of the 2005 Fall semester z -test suggest that there was a positive statistically significant difference in retention for students who participated in orientation.

The 2005 Fall orientation group results were, $z = 2.1721$ with $p = .0149$. The results were also positively significant for both semesters combined, $z = 3.3156$ with $p = .0000457$.

Table 8

Fall 2004 Semester Retention Results

Variable	Orientation	Comparison	Total
Number of Students	275	275	550
Number of students that did not re-enroll	33	55	88
Percent Retention	88.1%	80.0%	84.2%

Table 9

Fall 2005 Semester Retention Results

Variable	Orientation	Comparison	Total
Number of Students	277	277	554
Number of students that did not re-enroll	49	70	119
Percent Retention	88.3%	74.7%	78.6%

Table 10

Fall 2004 and 2005 Semester Retention Results

Variable	Orientation	Comparison	Total
Number of Students	552	552	1,104
Number of students that did not re-enroll	82	125	207
Percent Retention	85.2%	77.4%	81.3%

Chapter 5

Summary, Conclusions, and Recommendations

Introduction

The purpose of this study was to compare academic performance (GPA), attrition, and retention between new students who participated in a community college orientation program and those who had not.

This study addressed the differences between students who participated in Freshmen Experience and students who did not participate, is summarized in this final chapter. This chapter begins with an overview of the study followed by a summary of the findings. Next, the discussion and conclusion sections are considered. Finally, recommendations for future research and practice are presented.

Overview of the Study

The review of related literature, although mixed, suggests a possible relationship between participating in a new student orientation program and academic performance, attrition, and retention. While previously cited studies strongly suggested that the freshman year, specifically the first semester, was critical to the later success and retention of students, most of those studies had evaluated orientation programs at four-year institutions.

Major shortcomings of research in this area involve the lack of theoretical grounding and a shortage of empirical studies on community college programs. A review of the literature revealed that while the vast majority of studies have evaluated orientation

programs at four-year institutions, there was a need to conduct research at the community college.

This quantitative study examined variables including subsequent academic performance, attrition and retention between new students who participated in Freshmen Experience, an optional orientation program and those who did not. The remainder of this overview section reviews the research questions, research hypotheses, methods, and results of the study.

Methods

In order to minimize the differences in academic ability, the Freshmen Experience group and the comparison group were matched to the colleges placement test scores (i.e., math, reading, and writing). The two groups were also matched on new student status. The two identified new student cohorts (Fall 2004 and Fall 2005) were followed through their first semester.

The results for each research question were reported by 2004 Fall and 2005 Spring semesters. The rationale for testing Fall instead of Spring semesters was based on previous research studies (Glass & Garrett, 1995; Tharp, 1998; Windham, 1994), which indicated significant differences between students who enrolled for the first time in the Fall semester versus Spring semester first-time enrollment with regard to academic performance, attrition, and retention.

Discussion

Three main sections of this discussion of findings address the results regarding the three research questions. The first relates to GPA of students who participated in orientation. The second section examines attrition. The third section involves retention,

second semester rate of return, for orientation participants. Conclusions and a discussion of implications for research and practice follow this discussion.

Academic Performance (GPA)

The first research question addressed differences in academic performance between students who participated in orientation and students who did not. In order to answer this question, GPA was defined by grades at the end of the first semester on a 4.0 scale. The results of an independent sample *t*-test indicated that there were no statistically significant differences between the academic performance of Freshmen Experience students and non-participants for both Fall and Spring semesters. Although differences in GPA were not statistically significant according to the independent sample *t*-test, a slightly larger percentage of students who participated in Freshmen Experience earned higher grades than students who did not participate in orientation. This is compatible with Patton's (1980) findings that there was no significant difference in academic performance between students who participated in orientation and students who did not. The effectiveness of Patton's program was determined by GPA at the end of the first semester. Rispoli (1989) and Devlin (1996), too, found no significant difference in academic performance between orientation participants and non-participants. Similar to the present study, Boudreau (1992) indicated that out of the four Fall semesters of 1987, 1988, 1989, 1990, only Fall 1989 showed a significantly higher GPA for students completing an orientation program. Also, in line with the present study, Dougan's (1981) investigation revealed that students in the orientation group earned higher academic scores than comparison group students, though the difference was not found to be statistically significant.

Tharp (1998) stated that the results from a number of studies have indicated higher GPAs for students who have completed extended orientation programs. In contrast to the finding of this study, studies from four-year and two-year institutions that used only first semester GPA as a predictor variable have shown compelling results. Glass and Garrett (1995), Windham (1994), and Yockey and George (1998) studied the academic performance of orientation students at community colleges and concluded that completing an orientation program during the first semester improved students' GPA. However, these studies did not control for academic preparedness, as did the present study. Therefore, it is possible that academic preparedness was a confounding variable in these studies. The orientation students may have performed better because they were academically better prepared.

Attrition

The second research question addressed differences in attrition between students who participated in Freshmen Experience and students who did not. In order to answer this question, this study examined first semester attrition. Attrition was measured from state-aid day until the end of the semester. A two sample z -test was used to test whether there was a difference between orientation participation and first semester attrition.

The results showed no statistically significant difference regarding attrition (from state-aid day until the end of the semester) between students who participated in orientation and students who did not participate. This study was compatible with Voorhees (1987), Hippensteel et al. (1996), and Emilio and Joseph (1997), who found an increased within-year retention rate for community college students who had participated in orientation. The findings of the present study were in agreement with the research of

Tharp (1998). Tharp confirmed that the results from a number of studies have indicated higher persistence rates for students who have completed orientation programs. In agreement with Tharp and the finding of this study, Glass and Garrett (1995), and Penrose (2002) indicated that completing an orientation program during the first semester significantly improved persistence rates.

Retention

The third research question concerned differences in retention, second semester rate of return, between students who participated in Freshmen Experience and students who did not. Retention was measured after the completion of the student's third week (state-aid day) of enrollment in the second semester. A two sample z -test was performed to determine whether there was a significant difference between the Freshmen Experience group and the comparison group on the dependent variable, retention. The z -test showed a statistically significant difference regarding retention, second semester rate of return, between students who participated in orientation and students who did not participate. Students who participated in Freshmen Experience were retained to the second semester more often than those who did not.

Conclusion

Some colleges and universities have developed new student orientation programs in an effort to retain more of their entering students. Did these programs work? With resources scarce and the competition for students fierce, the answer to this question was vitally important. Most studies to date have evaluated orientation programs at four-year institutions and have evaluated semester- or year-long orientation programs, (Zarvell, 1991). Research based on programs at the community college is scarce. This study

examined a new student orientation program at a rural community college to determine its usefulness in academic performance, reducing student attrition, and improving student retention.

This study advanced the research in the area of orientation program evaluation by: (a) providing data on a rural community college; (b) evaluating an orientation program that focused on the first semester of students' educational experience and; (c) studying grade point average (GPA), and retention rates, based on orientation participation. Comparisons between students who participated and did not participate in orientation have implications for how the college might market support services and programs to students. Student retention efforts could be geared toward specific student populations including students who are most at-risk of dropping out of college. Educators can use this information to plan alternative early intervention strategies and improve the existing Freshmen Experience curriculum. The results of this study provided new student orientation data that can be used in future planning and that should assist the student services staff in developing appropriate orientation programs for new students.

Accountability and assessment have become universal facts of academic life during recent years. This study was significant since it pertained to the ability of one selected community college campus to allocate declining resources effectively. Institutions of higher education were struggling with the decreasing support from federal and state governments. Results indicated that colleges and universities, particularly public ones, had to look at alternative sources of funding. In addition to raising tuition, many have implemented personnel reductions or have not filled vacant positions. This has been especially evident for faculty members, who are essential to the learning process

and generally had more security at an institution whose primary mission was teaching and learning. When faculty are terminated, those remaining are often asked to assume additional responsibilities. Often this results in the termination of programs that colleges view as most expendable; many of these have been in the student services areas. Since results show that Freshmen Experience participation is statistically significant in reducing new student attrition and promoting positive indicators of retention, this information can be used to help justify the continuance of the orientation program and to market it more effectively to prospective students.

Collectively, researchers have determined that student attrition is a complex phenomenon that cannot be understood or predicted with single variables. A large amount of research supports the general observation that community college students are more likely to drop out if they have no specific educational goals, work full-time, and attend college part-time. This study supports the findings from earlier studies regarding colleges and universities across the country, that new student orientation programs have been an effective strategy for increasing the success and development of students during their first year of college.

The findings of the present study reveal that Freshmen Experience participants had lower rates of attrition at the end of the first semester. The more students participating in orientation and being retained to the second semester could have cost-benefit implications. The expense of recruiting a student to the college is far greater than retaining a student already attending that college (Webb, 1987). Congos and Schoeps stated, each time a student is lost to attrition, there is lost income to an institution until that student is replaced (1997). Sidle and McReynolds (1999) found that retaining 63%

of the students who would otherwise only persist at a rate of 56% meant that for every 100 students, seven more students returned to the institution, continued their enrollment, and continued to pay tuition and fees.

Creating positive interactions is critical to retention on the community college campus. The community college has a special need to connect the student with the institution. A student may spend less time at school than he/she does with work and satisfying family obligations. Without the programming and developmental opportunities provided by a residential campus environment community colleges must develop approaches to retention that promote success and persistence for commuter students.

Identifying the characteristics of those who persist, and those who do not is not an easy task. Focusing on intervention strategies represents an alternative approach regarding retention and attrition, which over time, may have a greater impact. Intervention strategies which colleges have initiated take on a variety of styles and types. One of these is to integrate students into their environment, and thereby encourage their continued enrollment through a new student orientation program.

Longitudinal-process models have been based on a theory of social and academic integration of the student within the institution (Spady, 1970; Tinto, 1975). Evaluation outcomes using these models enable researchers to determine if interventions, integration programs, or entry characteristics make a difference in attrition and whether social or academic variables contribute more to drop out decisions. These widely cited and tested models explain the reasons why students leave, not just student characteristics. Both synthetic and longitudinal models provide a structure for assessing the differential effects of several types of variables on the drop out decision.

For the purposes of this study, a longitudinal model of attrition was selected. Effective first-year orientation programs are designed to enhance student persistence through meeting individual social and academic developmental needs of students. Crucial to meeting those needs is an understanding of student development. Similar to this study, most student attrition studies have used correlation at a single institution. (Boudreau, 1992; Emilio & Joseph, 1997; Ingold 1990; Yockey & George, 1998).

Limitations/Delimitations of the Study

Limitations for this study included design of ex post facto research, generalization, and duration of time period studied. A more detailed explanation of the potential limitation follows: A potential limitation involved the problematic design of ex post facto research. The inability to randomly allocate a population into groups and the lack of experimental control over the treatment of variables makes ex post facto research subject to extraneous influences.

1. Since this orientation program is unique to the community college being studied the findings may not be generalized to other institutions.
2. The study is limited to examining the differences and relationships of the three research questions though completion of a new student's first academic semester and second semester rate of return.

Recommendations for Future Research and Practice

While the present study sought to answer questions regarding students who participate in orientation, other questions were raised. The results of this study can be considered as a basis for additional research on students participating in orientation programs. Also, the practice of educational administration will be impacted by the results of this and future research.

While there is a body of research on orientation programs at four-year institutions, more research is needed on community college orientation programs. This study examined the GPA, attrition, and retention of students that participated in orientation. It examined a new student orientation program at a rural community college that focused on the first semester of student's educational experience. Future studies should focus on replicating this study at other institutions and on clarifying these results.

Further research is recommended to examine the power of Tinto's model, explaining student attrition in two-year commuter colleges (Lenning et al., 1980; Sydow & Sandel, 1998; Tharp, 1998; Wyman, 1997; Yockey & George, 1998; Zhao, 1999). Tinto's study utilized a questionnaire to determine differences in the perceptions/degree of satisfaction with the institution between students who participate in orientation and students who do not participate.

Future studies should concentrate on incorporating the use of extended longitudinal analysis. Orientation program effects may evolve over time and the snapshot offered by the longitudinal analysis of one semester, while important, lacks the perspective of time. Programs such as the one evaluated at the college being studied should be judged on their merit, based on data after several semesters with several classes.

When studying variables of retention, general institutional databases may not be sufficient to measure critical differences in the student experience. The results of this study may have indicated that knowing only if a student has or has not participated in orientation was too broad a variable to determine what has impacted the developmental variables under consideration. A broader range of student information would have added insight to understanding the potential impact of the orientation process in facilitating the development of the academic and social community. Future research is recommended that involves examining additional retention variables, based on Tinto's theory, which can be easily incorporated into institutional databases. For example, knowing each participant's initial major and highest expected degree would provide a more complete view of the individual's intentions and aspirations. This was not possible in the present study due to the use of historical data.

This study was also restricted by the absence of random selection and random assignment. It is difficult to know if the student who voluntarily chose to participate in orientation was different than one who did not participate in orientation for his/her first semester. Future research of the college orientation program would be enhanced by an experimental, longitudinal design. Such a practice will provide validity for existing programs and add to the significant findings begun in this study.

This study has examined a critical period (first semester) in a student's adjustment to college. This period, indicated by researchers to be the most critical in terms of retention, needs additional research. The reduction in state funding to public institutions means administrators and faculty will be addressing these problems in order to reduce attrition. With the difficulty of predicting retention based on incoming student variables,

other techniques must be found which will add to the student persistence effort. New student orientation programs are one possible solution. The evaluation of such programs should continue.

While there was a body of research on orientation programs and the examination of their effect on student attrition, future studies should concentrate on examining attrition prior to state-aid day. Such a practice would provide validity for determining if orientation programs, retaining students to this point in the semester, impacted the financial resources of the institution.

This study has documented Freshmen Experience as a successful way of improving student retention, and reducing new student attrition. As a result of these findings and drawing from information obtained from the relevant literature, college personnel of the college studied should be better prepared to address the special needs of integration for new students. Educators can use this information to plan alternative early intervention strategies. The results of this study provided new student orientation data that can be used in future planning and should assist the student services staff in developing appropriate intervention strategies for new students.

Colleges may benefit by adopting Freshmen Experience as a mandatory class for incoming freshmen students. Freshmen Experience could be established as a requirement for all new students admitted, enrolled, and starting classes at the college. If orientation is not made a requirement for all new students attending college, establishing Freshmen Experience as a requirement for high-risk new students, those who score into development classes as a result of the placement test, would be beneficial.

If Freshmen Experience is to continue to have positive outcomes such as those found in this study, then facilitators should be specially selected from faculty and professional staff members at the college who are genuinely interested in the welfare of students. These facilitators should receive in-depth training on Freshmen Experience.

The findings of the present study reveal that Freshmen Experience participants had lower attrition at the end of the first semester. Having more students participating in orientation and being retained to the second semester could have cost-benefit implications for the college. Offering Freshmen Experience to increase retention could prove extremely beneficial. The findings of this study should be shared with college financial departments to examine the monetary impact Freshmen Experience could have on operating budgets.

References

- Absher, K., & Crawford, G. (Spring, 1996). Marketing the community college starts with understanding students' perspectives. *Community College Review*, 23, 59–67.
- Astin, A. W. (1971). *Predicting academic performance in college, selectivity data for 2300 American colleges*. London: The Free Press.
- Astin, A. W. (1972). *College dropouts: A national profile* (Ace Research Report 7, 1–10). American Council on Education.
- Astin, A. W. (1973). The impact of dormitory living on students. *Educational Record*, 54, 204–210.
- Astin, A. W. (1975). *Preventing students from dropping out*. San Francisco, CA: Jossey-Bass.
- Astin, A. W. (1977). *Four critical years: effects of college on beliefs, attitudes and knowledge*. San Francisco, CA: Jossey-Bass.
- Astin, A. W. (1985, July/August). Involvement: The cornerstone of excellence. *Change*, 17, 34–39.
- Astin, A. W. (1993). *What matters in college. Four critical years revisited*. San Francisco, CA: Jossey-Bass.
- Astin, A. W. (1996). Involvement in learning revisited: Lessons we have learned. *Journal of College Student Development*, 37, 123–134.
- Astin, A., Kom, W., & Green, K. (1987). Retaining and satisfying students. *Educational Record*, 68, 36–42.
- Baker, G. A., III. (1998, April/May). Keeping all generations happy: The xers, boomers, and beyond. *Community College Journal* 68, 10–16.

- Baker, G. A., III. (1999, February/March). Building the comprehensive community college. *Community College Journal*, 69, 32–38.
- Beal, P. E., & Noel, L. (1980). *What works in student retention*. Iowa City, IA: American College Testing Program and National Center for Higher Education Management Systems.
- Bean, J. P. (1980). Dropouts and turnover: The synthesis and test of a causal model of student attrition. *Research in Higher Education*, 12, 155–187.
- Bean, J. P. (1982). Conceptual models of student attrition. *New directions for Institutional Research*, 36, 17–33.
- Bean, J. P., & Metzner, B. S. (1985). A conceptual model of non-traditional undergraduate student attrition. *Review of Education Research* 55, 485–540.
- Beatty-Guenter, P. (1994, March/April). Sorting, supporting, connecting, and transforming: Retention strategies at community colleges. *Community College Journal of Research and Practice*, 18, 113–129.
- Bers, T. H. (1986). Confidence, commitment, and academic performance and retention of community college students. *Community Junior College Quarterly*, 10, 35–57.
- Biggs, S. A., Torres, A., Jr., & Washington, N. D. (1998). Minority student retention: A framework for discussion and decision-making. *The Negro Educational Review*, 48, 71–72.
- Boudreau, C. A. (1992). Academic performance and retention of participants in a freshman orientation course at the University of South Florida. (Doctoral dissertation, University of South Florida, 1992). *Dissertation Abstracts International*, 53, 3812.

- Boudreau, C. A., & Kromrey, J. D. (1994, November). A longitudinal study of the retention and academic performance of participants in freshman orientation course. *Journal of College Student Development*, 35, 444–449.
- Brawer, F. B. (1996), *Retention-Attrition in the Nineties*. Eric Digest. (Report No., EDO-JC-96-06). Los Angeles, CA: ERIC Clearinghouse for Community Colleges. (ERIC Document Reproduction Service No. ED 393510)
- Brophy, D. A. (1984). *The relationship between student participation in student development activities and rate of retention in a rural community college*. Rocklin, CA: Sierra Joint Community College District. (ERIC Document Reproduction Service No: 277 419)
- Burns, C. F., Gaw, K. F., & Robinson, D. A. (1996). Orientation Programs: A foundation for student learning and success. *New Directions for Student Services*, 75, 55–68.
- Bushnell, J. R. (1991). *Retention at the Community College*. Graduate Seminar Paper, University of Florida. (ERIC Document Reproduction Service No. ED 331 571)
- Butts, T. A. (1971). Personnel services review. *New practices in student orientation*. Ann Arbor, MI: ERIC Clearinghouse on Counseling and Personnel Services. (ERIC Document Reproduction Service No: 057 416)
- Cabrera, A. F., Castaneda, M. B., & Hengstler, D. (1992). The convergence between two theories of college persistence. *Journal of Higher Education*, 63, 143–165.
- Campbell, D. F., & Leverty, L. H. (1999, August/September). Future concerns key values for community colleges. *Community College Journal*, 70, 18–24.
- Cellucci, P. M. & Price, T. P. (1986). *IMPACT. A map for success. A high risk student retention plan*. Florence, SC: Florence-Darlington Technical College. (ERIC

Document Reproduction Service No. 278 440).

- 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*. San-Francisco, CA: Jossey-Bass.
- Chickering, A. W. (1974). *Commuters versus resident students: Overcoming educational inequities of living off campus*. San Francisco, CA: Jossey-Bass.
- Chickering, A.W. (1993). *Education and identity* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Cofer, J., & Somers, P. (2000). Within-year persistence of students at two-year colleges. *Community College Journal of Research and Practice, 24*, 785–807.
- Cohen, A. M. (1985). Helping to ensure the right to succeed: An ERIC review. *Community College Review, 12*, 4–9.
- Cohen, A., Lufi, D., & Parish-Plass, J. (2003). Persistence in higher education and its relationship to other personality variables. *College Student Journal, 37*, 50–65.
- Congos, D. H., & Schoeps, N. (1997, Winter). A model for evaluating retention programs. *Journal of Developmental Education, 21*, 2–24.
- Cope, R. G. (1978). Why students stay, why they leave. In L. Noel (Ed.) *Reducing the Dropout Rate: New Directions for Student Services* (pp. 1–12). San Francisco, CA: Jossey-Bass.
- Cope, R. G., & Hannah, W. (1975). *Revolving college doors*. New York: Wiley.
- Cuseo, J. B. (1997). *Freshman orientation seminar at community colleges: A research-based rationale for its value, content, and delivery*. Los Angeles, CA: Marymount College. (ERIC Document Reproduction Services No. ED 411 005)

- Devlin, A. S. (1996). Survival skills training during freshman orientation: Its role in college adjustment. *Journal of College Student Development, 37*, 324–334.
- Dougan, Y.P. (1981). The effect of a comprehensive orientation program on the quality of effort and retention of urban commuter college freshmen. (doctoral dissertation, Wayne State University 1981) Dissertation Abstracts International, *43*, 1044.
- Drew, C. P. (1990, Spring). We can no longer love 'em and leave 'em: A paper on freshman retention. *Community College Review, 17*, 54–60.
- Eagle, N. (1982, May). *An attempt to optimize the early identification of the potential dropout. Use of dynamic predictors, differential criterion groups, and alternative discriminate function methodology.* Paper presented at the 22nd Annual Forum of Association for Institutional Research, Denver, CO.
- Emilio, S. R., & Joseph, B. B. (1997). The benefits of college discovery pre-freshmen summer bridge program for minority and low-income students. *College Student Journal, 31*, 161–173.
- Fidler, P. P., & Godwin, M. A. (1994, Spring). Retaining African-American students through the freshman seminar. *Journal of Developmental Education, 17*, 34–40.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction* (7th ed.). Boston, MA: Allyn and Bacon.
- Gardner, J. N. (1989). Starting a freshman seminar program. In M. L. Upcraft & J. Gardner, & Associates (Eds.), *The freshman year experience: Helping students survive and succeed in college* (pp. 238–249). San Francisco, CA: Jossey-Bass.
- Gass, M. A. (1987). The effects of a wilderness orientation program on college students.

Journal of Experiential Education, 10, 30–33.

- Gass, M. A. (1990, January). The longitudinal effects of an adventure orientation program on the retention of students. *College Student Journal*, 31, 161–173.
- Gilson, J. T. (1990). *Values education in colleges and universities: An overview of collaborative projects between student affairs and academic affairs*. Norman: University of Oklahoma. (ERIC Document Reproduction Services No. ED 332 231)
- Glass, A. C., Jr., & Garrett, M. S. (1995). Student participation in a college orientation course, retention, and grade point average. *Community College Journal of Research and Practice*, 19(2), 117–132.
- Gordon, H. (1989). *Impact of FAME program on recruitment and retention of black students into Florida Community College at Jacksonville*. Jacksonville, FL: Florida Junior College. (ERIC Document Reproduction Service No: 308 910)
- Gordon, V., & Grites, T. (1984). The freshman seminar course: Helping students succeed. *Journal of College Student Personnel*, 24(4), 315–320.
- Gorter, S. (1978). *Non-returning students, Spring 1978*. Trenton, NJ: Mercer County Community College. (ERIC Document Reproduction Service No. ED 161473)
- Greer, L. R. (1980). *Persistence and academic success among non-traditional age students at a junior college*. Paper presented at the annual forum of the Association for Institutional Research, Atlanta, GA. (ERIC Document Reproduction Service No. ED 189942)
- Hensley, L. G., & Kinser, K. (2001). Perspectives of adult learners on returning to college: A study of tenacious persisters. *Academic Exchange Quarterly*, 5, 181–

194.

- Hippensteel, D. G., St. John, E. P., & Starkey, J. B. (1996). Influence of tuition and student aid on with-in year persistence by adults in 2-year colleges. *Community College Journal of Research and Practice*, 20, 233–242.
- Ingold, S. (1990). An analysis of the effect of a sixteen week orientation program on student retention (Doctoral Dissertation, Florida International University, 1990). *Dissertation Abstracts International*, 51, 04A.
- Jones, R. A. (1986). *Emile Durkheim: An Introduction to Four Major Works*. Beverly Hills, CA: Sage.
- Jones, S. W. (1988). No magic required: Reducing attrition at- the community college, *Community College Review*, 14(2), 15–18.
- Kerlinger, E. N. (1973). *Foundations of behavioral research* (2nd.). New York: Holt, Rinehart and Wilson.
- Lanni, J. C. (1997). *Modeling student outcomes: A longitudinal study*. Paper presented at the Annual Forum of the Association for Institutional Research, Orlando, FL. (ERIC Document Reproduction Service No. ED 410870)
- Lenning, O. T., Beal, P. E., & Sauer, K. (1980). *Retention and attrition: Evidence for action and research*. Boulder, CO: National Center for Higher Education Management Systems.
- Levitz, R. & Noel, L. (1989). Connecting students to institutions: Keys to retention and success. In M. L. Upcraft, J. N. Gardner, & Associates (Eds.). *The freshman year experience: Helping students survive and succeed in college* (pp. 65–81). San Francisco, CA: Jossey-Bass.

- Lords, E. (2000). A revolution in academic advising at a Texas Community College. *Chronicle of Higher Education*, 47, 2–6.
- Murray, J. (1993, March). *Why students withdraw from university: A case study*. Paper presented at the 2nd Annual Canadian Institutional Research and Planning Conference, Vancouver, BC.
- Nelson, R. (1990). *The effect of SLS 1122 and faculty mentors on student persistence*. Orlando, FL: Valencia Community College. (ED 371778).
- Noel, L. (1985). Increasing student retention: New challenges and potential. In L. Noel, R. Levitz, D. Saluri, & Associates (Eds.) *Increasing student retention* (pp. 1–27). San Francisco, CA: Jossey-Bass.
- Noel, L., Levitz, R., & Saluri, D. (1985). *Increasing student retention*. San Francisco, CA: Jossey-Bass.
- O'Keefe, M. (1989). An assessment of freshman wilderness orientation programs in higher education: A descriptive delphi study. *Dissertation Abstracts International*, 50, 259.
- Osborne, J. W. (1997, Spring). Identification with academics and academic success among community college students. *Community College Review*, 25, 59–67.
- Pascarella, E., Bohr, L., Nora, A., Ranganathan, S., Desler, M., & Bulakowski, C. (1994, November/December). Impacts of 2-year and 4-year colleges on learning orientations. A preliminary study. *Community College Journal of Research and Practice*, 18, 577–589.
- Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research*. San Francisco, CA: Jossey-Bass,

- Pascarella, E. T., Terenzini, P. T., & Wolfe, L. M. (1986). Orientation to college and freshman year persistence/withdrawal decisions. *Journal of Higher Education*, 57, 155–175.
- Patton, C. R. (1980). The effect of a special orientation program for entering freshmen on attrition, satisfaction, and grade point average. (Doctoral dissertation, University of North Texas, 1980). *Dissertation Abstracts International*, 41, 2962.
- Penrose, A. M. (2002). Academic literacy perceptions and performance comparing first-generation and continuing-generation college students. *Research in the Teaching of English*, 36 (4), 437–461.
- Perigo, D. J., & Upcraft, M. L. (1989). Orientation programs. In M. L. Upcraft, J. Gardner, & Associates (Eds.), *The freshman year experience* (p. 82–94). San Francisco, CA: Jossey-Bass.
- Price, L. A. (1993). *Characteristics of early student dropouts at Allegany Community College and recommendations for early intervention*. Cumberland, MD: Allegany Community College. (ERIC Document Reproduction Service No. ED 361 051)
- Ramist, L. (1981). *College student attrition and retention*. (College Board Report 81, 1–15). College Entrance Examination Board.
- Rispoli, C. (1989). The effect of an orientation course on the anxiety levels, locus-of-control, and grade point averages of college freshmen. (Doctoral dissertation, Temple University, 1989). *Dissertation Abstracts International*, 50, 1573.
- Rootman, I. (1972). Voluntary withdrawal from a total adult socializing organization: A model. *Sociology of Education*, 45, 258–270.

- Roueche, J. E. (1989). *Leadership for 2000. Management report 1989-1990* Association of California Community College Administrators. (ERIC Document Reproduction Services No. ED 316 290)
- Roueche, J. E., & Roueche, S. D. (1998, April/May). Dancing as fast as they can. *Community College Journal*, 68, 30–35.
- Rounds, J. C. (1984). Attrition and Retention of Community College Students: Problems and Promising Practices. Marysville, CA: Yuba College Press.
- Rowser, J. F. (1997, May). Do African American students' perceptions of their needs have implications for retention? *Journal of Black Studies*, 27, 718–726.
- Seppanen, L. (1995). *Implications for retention strategies of differential student progress rate and the literature on student retention*. Olympia: Washington State Board for Community and Technical Colleges, Education Division Research. (Report No 954). (ERIC Document Reproduction Service No. ED 387 165)
- Sidle, M. W., & McReynolds, J. (1999, Summer). The freshman year experience: Student retention and student persistence. *National Association of Student Personnel Administration Journal*, 36, 288–300.
- Smart, J. C., & Hamm, R. E. (1993). Organization effectiveness and mission orientations of 2-year colleges, *Research in Higher Education*, 34, 489–502.
- Spady, W.G. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, 1, 64–84.
- Spady, W.G. (1971). Dropouts from higher education: toward an empirical model. *Interchange*, 1, 109–121.
- Strumpf, G. & Hunt, P. (1993). The effects of an orientation course on the retention and

academic standing of entering freshman, controlling for the volunteer effect.

Journal of the Freshman Year Experience, 5, 7–14.

Summerskill, J. (1962). Drop outs from college. In N. Sanford (Ed.), *The American College* (pp. 627–657). New York: Wiley.

Sydow, D. L., & Sandel, R. H. (1998, Fall). Making student retention an institutional priority. *Community College Journal of Research and Practice*, 22, 635–643.

Terenzini, P., & Pascarella, E., (1980). Toward the validation of Tinto's model of college student attrition: A review of recent studies. *Research in Higher Education*, 12(3), 271–282.

Tharp, J. (1998). Predicting persistence of urban commuter campus students utilizing student background characteristics from enrollment data. *Community College Journal of Research and Practice*, 22, 279–294.

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

Tinto, V. (1982). Limits of theory & practice in student attrition. *Journal of Higher Education*, 53, 687–700.

Tinto, V. (1986). Retention: An admission concern. *College and University*, 61, 290–293.

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

Tinto, V. (1988). Stages of student departure: Reflections on the longitudinal character of student leaving. *Journal of Higher Education*, 59, 438–455.

Tinto, V. (1990). Principles of effective retention. *Journal of the Freshman Year*

Experience, 2, 35–48.

- Tinto, V. (1993). *Leaving college: Rethinking and cures of student attrition* (2nd.). Chicago: University of Chicago Press.
- Titley, B.S. (1985) Orientation programs. In L. Noel, R. Levitz, D. Saluri, & Associates (Eds.), *Increasing student retention: Effective programs and practice for reducing the dropout rate* (pp. 221–243). San Francisco, CA: Jossey-Bass.
- Tinto, V. (1993). *Leaving college: Rethinking and cures of student attrition* (2nd ed.).
- Twale, D. (1989). Development in freshmen orientation: A time frame. *NASPA Journal*, 27, 160–167.
- U.S. Department of Education, National Center for Education Statistics. *Digest of Education Statistics 2001*. NCES 2000-130, by Thomas D. Snyder. Production Manager, Charlene M. Hoffman. Washington, DC: 2002.
Chicago: University of Chicago Press.
- Voorhees, R.A. (1987). Toward building models of community college persistence: A logistic analysis. *Review of Higher Education*, 26, 115–129.
- Webb, E.M. (1987, Spring). Retention and excellence through student involvement: A leadership role for student affairs. *NASPA Journal*, 24, 6–11.
- Webb, M.W., II. (1988). Freshman year retention at three campuses of a large urban community college district: 1983–1986. *Community/Junior College Quarterly of Research and Practice*, 12, 213–242.
- Wyman, F.J. (1997 Spring). A predictive model of retention rate at regional 2-year colleges. *Community College Review*, 25, 29–45.

Windam, P. (1994). The relative importance of selected factors to attrition at public community colleges. *Journal of Applied Research in the Community College*, 3, 65–78.

Yockey, F., & Gerge, A. (1998). The effects of a freshman seminar paired with supplemental instruction. *Journal of the First -Year Experience & student in Transition*, 10 (2), 57–76.

Zarvell, R. K., Kuskie, M., Bertram, R., Noel, L., Levitz, R., & Jones, N. (1991). A theoretical and practical guide to student development programs in enrollment management. In Alan Galsky (Ed.). *The role of student affairs in institution-wide enrollment management strategies* (pp. 87–102). Washington DC: National Association of Student Personnel Administrators, Inc.