AN EXAMINATION OF FRESHMAN PARTICIPATION IN A STUDY SKILLS

COURSE AND RETENTION AT A FOUR-YEAR

SOUTHEASTERN UNIVERSITY

Except where reference is made to the work of others, the work described in this dissertation is my own or was done in the collaboration with my advisory committee. This dissertation does not include proprietary or classified information.

_____

Mark E. Nabors

Certificate of Approval:

_____

Margaret E. Ross
Associate Professor
Educational Foundations,
Leadership and Technology

_____

Maria Martinez Witte, Chair
Associate Professor
Educational Foundations,
Leadership and Technology

_____

James E. Witte
Associate Professor
Educational Foundations,
Leadership and Technology

_____

Olin L. Adams
Assistant Professor
Educational Foundations,
Leadership and Technology

_____

Stephen L. McFarland
Dean
Graduate School

AN EXAMINATION OF FRESHMAN PARTICIPATION IN A STUDY SKILLS COURSE AND RETENTION AT A FOUR-YEAR SOUTHEASTERN UNIVERSITY

Mark E. Nabors

A Dissertation

Submitted to

the Graduate Faculty of

Auburn University

in Partial Fulfillment of the

Requirements for the

Degree of

Doctor of Education

Auburn, Alabama
August 7, 2006

AN EXAMINATION OF FRESHMAN PARTICIPATION IN A STUDY SKILLS

COURSE AND RETENTION AT A FOUR-YEAR

SOUTHEASTERN UNIVERSITY

Mark E. Nabors

_____

Signature of Author

_____

Date of Graduation

DISSERTATION ABSTRACT

AN EXAMINATION OF FRESHMAN PARTICIPATION IN A STUDY SKILLS COURSE AND RETENTION AT A FOUR-YEAR SOUTHEASTERN UNIVERSITY

Mark E. Nabors

Doctor of Education, August 7, 2006
(M.S., The University of Tennessee, 1999)
(B.S., East Tennessee State University, 1997)

117 typed pages

Directed by Maria Martinez Witte

The issue of student retention remains a fundamental concern for both educators and administrators around the world. While most institutions tend to agree that retention is an important concern, they may differ in determining the specific population to focus retention efforts upon. The first year student population, or freshman, is generally the most vulnerable to the pitfalls that befall many college students.

As retention concerns grow, educators often implement various first year student programs designed to assist students with their transitions to college life. Due to a lack of funding or support many of these programs are abandoned before an accurate assessment can be completed to determine if they are indeed making a difference in terms of retention and graduation rates.

In this study students were grouped into two categories: those who completed a study strategies course and those who did not. Four consecutive academic years, beginning Fall 2001 semester and ending Spring 2005 semester, including summer terms, were reviewed. Analysis of grade point averages and graduation status was completed. The effect of the variables gender, ethnicity, and age on graduation and retention rates was also reviewed and reported. For students who successfully completed the course, the Learning and Study Skills Inventory (LASSI) scores were reviewed and analyzed.

The results of the statistical analysis demonstrated that students who completed a study strategies course were more likely to graduate and have more favorable GPA's than students who did not complete the course. The results from a Pearson Chi Square Test indicated that there were statistically significant differences in graduation based on gender and age. The results of the statistical analysis also demonstrated that students who scored higher on the LASSI scales: attitude, anxiety, concentration, and motivation were more likely to graduate that students who scored lower on those same scales.

ACKNOWLEDGEMENTS

I wish to acknowledge and express my sincere gratitude to my committee members, Dr. Olin Adams and Dr. James E. Witte, for their continued support throughout my graduate studies. Dr. Margaret Ross is recognized for her time, direction, and assistance with analyzing the data collected for this study. Special recognition to my major professor and chair of my dissertation committee, Dr. Maria M. Witte whose patience, guidance, and encouragement have facilitated the development and completion of my dissertation. Finally I would like to thank my wife, my family, my friends, and fellow colleagues for their support and encouragement.

Style manual or journal used: Publication Manual of the American Psychological Association, 5th Edition.

Computer software used: SPSS 10, Windows 2000, and Microsoft Word 2000

TABLE OF CONTENTS

Page

LIST OF TABLES

Table Page

CHAPTER I

INTRODUCTION

The issue of student retention remains a fundamental concern for both educators and administrators around the world. This universal consideration for solving the retention challenge can be found throughout all types of higher educational institutions, whether they are public, private, two-year junior colleges, or four-year universities (Pascarella & Terenzini, 1991). According to Lau (2003), "Since the 1980s, American institutions have experienced a major problem retaining students, particularly under-represented minorities" (p. 126). When students fail to remain in college and complete their degree requirements, in order to successfully graduate, they may find themselves facing a considerable disadvantage when competing against their peers for jobs, particularly when their peers are equipped with college degrees (Doucette & Dayton, 1989). Often these students who lack college degrees, will end up earning less money throughout their lives than their competitive counterparts who have earned degrees (Stephenson & Laycock, 1993).

Over the past thirty years there have been numerous reports dealing with higher educational administrators' concerns over decreasing graduation rates (Strauss, 2000). A variety of approaches have been discussed and implemented during this time period with varied results (Pitkethly & Prosser, 2001). This issue remains significant as educators struggle to integrate new ideas and concepts designed to improve graduation rates.

Higher educational institutions are severely affected when graduation rates drop (Burke & Modarresi, 2001). Low graduation rates may lead to the larger concern of having an uneducated society with limited chances for economic stability (Landrum, 2003). In addition the institution itself may face economic sanctions of its own if graduation rates remain a low priority.

At some institutions declining retention rates and declining graduations rates will lead to decreased amounts of funding made available to that institution (Burke, 2000). At most public institutions at least a portion of operating revenues are obtained through allocations provided to the institution from the budget of their respective state governments. This reserve of money is comprised of tax collections made from the citizens of that respective state (Burke & Serban, 1998). As legislators and budget analysts determine the yearly amounts that will be given to the colleges and universities within their states, they often will turn to a variety of statistical outputs to support any decisions that are made (McMurtrie, 2000). When this occurs, factors such as retention and graduation rates may differentiate the amounts that competing institutions may obtain from these government budgeted dollars. As state budgets become stretched tighter each year, legislators tend to use these statistical measures to demonstrate to their constituents that they are being more responsible or accountable with their tax dollars (Nora & Cabrera, 1993).

As state legislators become more accountable towards their constituents they in turn demand the same fiscal responsibility from educators and administrators in educational settings. As educators look for ways to be financially frugal, retention concerns leap to the forefront as a justifiable way to cut expenses (DeBerard, Spielmans,

& Julka, 2004). It is typically more cost effective to keep current students enrolled rather than constantly trying to replace them with new students each semester (Cabrera, Nora, & Castaneda, 1993). While most institutions tend to agree that retention is an important concern, they may differ in deciding the specific population to focus retention efforts on.

When examining the issue of student retention, one particular population seems to be affected more than any other (McInnis, James, & McNaught, 1995). The first year student population, or freshman, are most vulnerable to the pitfalls that befall many college students. Students who leave college before graduation will typically do so before the end of their first academic year (Noel, Levitz, & Saluri, 1985). The freshman year carries with it a host of new challenges and hurdles when combined with the academic rigors of college that might cause some students to end their studies prematurely. Some of the more prevalent reasons found within the literature that lead students to dropping out include: having grade point averages under 2.0, not enrolling in a college or university immediately after graduating from high school, being a first generation college student from their family, and working at full-time jobs during the time period they are attending college (Astin, 1984; Chickering & Reisser, 1993; Dervarics & Roach, 2000; Pace, 1984; Pascarella, 1985; Pascarella & Terenzini, 1991; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Tinto, 1987, 1993).

Aside from these reasons there are additional circumstances why students fail to complete their academic studies. As Terenzini, Springer, Yaeger, Pascarella, & Nora, (1996) proposed: some students leave for financial reasons, to change career goals, or because they lack the ability to successfully assimilate within the college environment.

As Lau (2003) suggested, “Freshmen might lack the motivation to do well in school because they do not understand the importance of education, and/or do not know how to apply classroom-learned theories to real life problems” (p. 132).

Research indicates that a consistent relationship between college academic achievement and retention exists (Chickering & Reisser, 1993; Kern, Fagley, & Miller, 1998; Tinto, 1993). Higher performing students will typically complete their studies to a greater degree than lower achieving peers (Kirby & Sharpe, 2001; McGrath & Braunstein, 1997; Ryland, Riordan, & Brack, 1994). Some researchers agree that retention is a fundamental indicator of students success (Braxton & Brier, 1989; Paulsen & Feldman, 1999; Ryland, Riordan & Brack, 1994; Swigart & Murrell, 2001; Thompson & Thornton, 2002). Due to the significance of this relationship it becomes important to identify potential areas where retention problems are apparent. Once these areas have been identified the probability will increase that a successful intervention program can be developed into a fully functional program (Ortiz, 1995; Owen, 2003; Strauss, 2000).

The United States Department of Education also provides incentives for colleges and universities to track and improve their retention and graduation rates (Burke & Modarresi, 2001). Under consideration is a plan which will determine an institution’s eligibility to award federal financial aid based on that institution’s retention and graduation rates (Howard-Hamilton & Sina, 2003). As Owen (2003) contends, “The implications of tying financial aid to student retention and graduation rates are potentially profound, particularly for community colleges and public universities, which typically enroll greater numbers of at-risk students” (p. 184).

As colleges and universities seek ways to counter this growing retention problem, one particular targeted student population is that of first year college students (McGrath & Braunstein, 1997). The focus on first year students has been a long-standing commitment at several acclaimed universities. These universities include: the University of Minnesota's General College which originated in 1932; the University of Notre Dame's First Year of Studies program which was created in 1962; and the University of Michigan's Lloyd Scholars program which was also established in 1962. The First Year Experience movement was established at the University of South Carolina in the early seventies. Even with a history stretching back to the beginning of the twentieth century, a majority of prevailing first year student programs were either established or expanded in the late 1990's (McInnis, James, & Hartley, 2000).

Student attrition and retention are complex phenomena with many root causes. This complexity is compounded by the inadequate way in which most institutions are able to measure student stopout, dropout, or transfer (Bean, 1980). Over the past two decades, thousands of first year programs have been created with increased retention rates as the primary outcome (Cutright, 2002). Although many of these programs are successful for certain student groups, as measured by group-specific retention figures, the overall national dropout rate of approximately 33 percent has been consistent for the past several years (Barefoot, 2000).

Many first year students have a difficult time making the transition from high school to the college classroom (Lenning, Beal, & Sauer, 1980). One aspect of the college experience that may add to this challenge is that of choice and the motivation that

leads students to make choices. Much of the motivation for academic success in high school is grounded in extrinsic motivation (McCombs, 1991). Some examples of the extrinsic motivators used may include: grades, credits earned, and honors acquired. This may not always be the case in a college environment. Although grades, honors and credits are still meaningful, the student experiences much more freedom in the choices they are allowed to make (Paulsen & Feldman, 1999).

This newly gained freedom of choice is often demonstrated in behavioral patterns that contour to some type of accepted norm (Pitkethly & Prosser, 2001). Some examples might include the adherence to attendance policies, student decisions regarding dropping out of courses before completion, or the ability to retake those same courses at some point in the future. When these activities occur the student must find some sort of internal motivation in order to drive them to complete a scheduled task (Bandura & Schunk, 1981). With motivation viewed as a significant factor in first year student success, it becomes more critical to determine if intervention strategies consisting of first year programs and courses, are fostering intrinsic motivation within students.

Statement of the Research Problem

Currently there is a lack of research examining first year student courses such as Study Strategies and determining if these courses are providing a long-term positive affect on student retention. As retention concerns grow, educators may propose the implementation of various first year student programs designed to assist students with their transitions to college life. Due to a lack of funding or support many of these programs are abandoned before an accurate assessment can be completed to determine if

they are indeed making a difference in retention and graduation rates. Completing a longitudinal investigation to examine the impact of study strategies courses on freshmen retention, grade point averages, and graduation rates at this southeastern, state-supported, land-grant university is both vital and relevant to the academic community.

For this study two groups were observed: a control group consisting of students who did not complete a study strategies course and an intervention group consisting of students who did complete a study strategies course.

The primary population for this study was 336 freshman students who were enrolled in a southeastern university during the semester of Fall 2001. The freshman students enrolled during that semester successfully completed a one credit hour study skills course. The students were distributed among 15 course sections. The average class size was 22.4 students, with the highest class number at 26 and the lowest with 14 students. From the group 158 were males and 178 were females. The average age of the students was 18 years old.

The secondary population was comprised of approximately 336 students who were enrolled at the same university during the semester of Fall 2001. The students from this group did not complete a study skills course during the same time period that the intervention group had done so. This group consisted of 154 males and 182 females. The average age of the students from the secondary population was also 18 years of age.

Research Questions

In this study Freshman students were grouped into two categories: those who completed a study strategies course and those who did not. Four consecutive academic

years, beginning Fall 2001 semester through Spring 2005 semester, including summers were reviewed in this longitudinal study. The following research questions were used:

1. What is the relationship between those that participated and those that did not participate in a study strategies course and graduation?
2. What is the relationship between those that participated and those that did not participate in a study strategies course and grade point averages?
3. What is the relationship between those that participated and those that did not participate in a study strategies course to gender, ethnicity, and age?
4. What is the relationship between graduation and learning style scores as measured by the LASSI, for those who completed a study strategies course?

Significance of the Study

The significance of this study was to examine the relationship between freshman participation in study skills courses and academic success at a southeastern university. A unique aspect of this study was the longitudinal review of academic progress of a group beginning with their first year of study through 11 consecutive semesters. The impact of a study skills course on student grade point averages, graduation, and retention rates was examined. In previous studies, the primary concern has been to examine the effects of freshman orientation courses on first year students (DeBerard, Spielmans, & Julka, 2004; McGrath & Braunstein, 1997; Pascarella, Bohr, Nora, & Terenzini, 1995). However, there has yet to be a formal study to determine the effects of study skills courses, in a

longitudinal investigation, on first year student success.

Students who perform poorly academically during their freshmen year tend to be potential candidates for dropping out of school. If study skills courses can foster academic skills within first year students, their likelihood of staying in school through graduation may increase exponentially. It is hoped that results from this study will assist with the planning and implementation of future courses designed to target first year students. In order to justify the continued use of intervention programs designed to increase student retention rates of college freshman an assessment should be completed to validate the continued existence of these programs.

Analysis of grade point averages of freshman enrolled in the Fall 2001, student retention rates over a period of 11 consecutive semesters (Fall 2001 through Spring 2005), and graduation status was completed. The effect of the variables gender, ethnicity, and age on graduation and retention rates was reviewed and reported. For students who successfully completed a study strategies course, LASSI (Learning and Study Skills Inventory) scores were also reviewed and analyzed.

Limitations of the Study

1. This study was limited to one southeastern four-year university: therefore, generalization beyond this institution should be undertaken with caution.
2. Data used in this study is limited to the semesters between Fall 2001 and Spring 2005.

3. Each of the 15 sections of the study skills courses was taught by a different instructor, therefore course delivery cannot be stratified in terms of a single universal approach used with every class.
4. The study examined retention data of full-time students only.

Definition of Terms

Attrition- when students are no longer enrolled in a college or university (Lenning, Beal, & Sauer, 1980).

At risk- students who enter the college environment with low admission test scores and low high school grade point averages (Bean, 1980).

Intervention- programs designed to provide academic and social support to students considered to be at risk (Cutright, 2002).

Learning and Study Skills Inventory- (LASSI) an instrument designed to measure students' use of learning and study strategies (Weinstein, 1987).

Retention- continuous enrollment until graduation or transfer (Braxton & Brier, 1989).

Retention rate- number of students that successfully complete requirements to graduate (Braxton & Brier, 1989).

Study Strategies Course- a course designed to impart students with academic skills that will enhance their classroom experiences, focusing on such concerns as: time management, note-taking skills, and controlling

test anxiety (Cutright, 2002).

Successful student- a student who meets academic requirements in order to graduate from an institution of higher learning (McInnis, 2001).

Organization of the Study

Chapter I provides an overview of the study. It describes the population that was examined as well as the reasoning behind the creation of the study. Chapter II reviews related literature that supports the relevance and significance of this study. Chapter III discusses the methods and approaches used to collect data and the empirical evaluation of the data. Chapter IV reveals the results of the study, description of the sample, and analysis of research questions. Chapter V presents a discussion of the study findings, limitations, and implications for higher education and research.

CHAPTER II

REVIEW OF LITERATURE

Introduction

College and university leaders been placing greater significance on retention concerns consistently for over the past twenty five years (Swigart & Murrell, 2001). Many educators consider student retention to be an important indicator of student success (Astin, 1984; Bandura, 1989; Braxton & Brier, 1989; Chickering, & Reisser, 1993; Creamer, 1989; Erikson, 1982; Kohlberg, 1984; Pascarella, & Terenzini, 1991; Tinto, 1987; Upcraft & Schuh, 1996). When students leave school early it can result in a reciprocal negative effect for the university. The institution may suffer financial losses due to a diminished enrollment while also receiving notoriety due to declining graduation rates (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999). Retention rates can also have multiple effects on a campus and its surrounding community. These rates may affect the way the institution is looked upon by students, parents, and alumni. If the institution has competing colleges or universities nearby, information of this nature might cause the school to lose students to their competitors (Lau, 2003).

The high cost of recruiting new students each year is an added incentive to retain currently enrolled students. As colleges and universities have begun to place greater emphasis on retaining these students the significance of retention efforts has increased exponentially (Lau, 2003). The connection between institutional commitment and

retention has been demonstrated throughout numerous studies (Astin, 1991; Bandura & Schunk, 1981; Bean, & Metzner, 1985; Deci & Ryan, 1985; Erikson, 1980; Noel, Levitz, & Saluri 1985; Pace, 1984; Terenzini & Pascarella, 1980; Tinto, 1993; Zemke, & Zemke, 1988). Consequently, the influences on student retention are shared among the wide range of institutions in higher education. Regardless of size, location, or scope of study colleges and universities share a common goal of wanting the students who enroll at their institutions to successfully complete their studies and graduate with an earned degree from their school (Cravatta, 1997). This desire to improve retention and graduation rates can be found at all institutional types including: public, private, two-year junior colleges, or four-year universities. Additionally this has caused an increase in literature relating to the improvement of retention or new intervention techniques (DeBerard, Spielmans, & Julka, 2004; Dervarics & Roach, 2000; Landrum, 2003; Lau, 2003; Owen, 2003).

Conceptual Frameworks

The relationship between college students and the institutions they attend is another significant part of solving the retention challenge. This connection between college students and their host institutions has been documented throughout numerous studies within educational research (Astin, 1991; Chickering & Reisser, 1993; Evans, Forney, & Guido-DiBrito, 1998; Pace, 1984; Pascarella & Terenzini, 1991; Tinto, 1987). Generally, when students form positive feelings toward the institutions they are attending, their desire to remain at that school will usually be stronger. Typically these positive feelings will form during the initial time period that the student spends getting accustomed to the college or university, usually during their first few weeks on

campus (Astin, 1993). Conversely, when students are unable to form positive feelings toward their respective institutions, or if they form negative feelings, their desire to remain at the college or university will be strongly affected in a negative way (Bean, 1980). Usually when this happens the student may choose to leave the school for an extended period of time or transfer to another college or university (Pascarella & Terenzini, 1991).

Within the research concerning college student retention, it has been reported that only a few general concepts exist that involve the influences of the college experience related to student outcomes (Volkwein & Lorang, 1996; Volkwein, Szelest, Cabrera, & Napierski-Prancl, 1998). As Strauss and Volkwein (2004) asserted, "The most traditional view is that pre-college characteristics such as student backgrounds, academic preparedness for college, and clear goals are the main factors accounting for differences in academic performance, persistence behavior, and other educational outcomes" (p. 10). By following this line of reasoning higher educational administrators have historically tended to focus retention efforts on the first year student population (Fazey & Fazey, 2001; McInnis, James, & Hartley, 2000; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Pitkethly & Prosser, 2001; Thompson & Thornton, 2002).

By focusing efforts on the first year student population, researchers can look for specific at-risk characteristics that incoming students may have upon arrival at the academic institution. Concurrently, this will enable any intervention strategy being considered to become more efficient and relevant to the unique needs of this population (Smith, 1993). Because there are a variety of higher educational institutions, each intervention strategy should be implemented while maintaining awareness of the

specific needs of that unique college or university setting (Ortiz, 1995). Student populations can also vary among institutions. For example, the needs of students who attend a college in a rural area of the country will differ from the needs of students who are attending college within the backdrop of a bustling metropolis (Owen, 2003).

Another way researchers can clarify objectives when researching retention concerns of first year student populations is by grouping the influences of those students' college experiences together with their student outcomes (Lu, 1994). A common method for carrying out this method is by using one of the student-institution fit models (Pascarella & Terenzini, 1991). A significant contributor towards this body of research is Vincent Tinto. Within Tinto's (1982) research, emphasis was placed on the concept that a student's likelihood of remaining at their respective college or university until graduation, is … "dependent upon that student's ability to feel accepted and validated within the academic and social structures of their campus environment" (p. 694). This line of reasoning is consistent with the findings of several other researchers from within this body of knowledge (Astin, 1977; Chickering & Reisser, 1993; Deci & Ryan, 1985; Lenning, Beal, & Sauer, 1980; Noel, Levitz, & Saluri, 1985; Pace, 1979).

Tinto (1987) proposed the dynamic Model of Institutional Departure, which promoted the idea that the student retention process is clearly dependent on the student's institutional experiences. It was his assertion that, students who are satisfied with the academic and social systems placed within the structure of a college or university tend to stay in school. Tinto (1993) affirmed that students who have negative interactions and experiences tend to become disillusioned with college, withdraw from peers, and eventually the institution itself. This line of reasoning is consistent with the work of Bean

(1980) who maintained that when students become estranged from their respective college or university, the student will often choose to leave the school for an indefinite time period or for the remainder of their college careers.

Additional models within this construct may tend to focus on the significance of student involvement and effort (Astin 1984; Pace 1984). Other researchers have tended to focus on the additional aspects of student outcomes, which involve factors such as: student satisfaction with the institution and student ability to adapt within the college environment smoothly (Terenzini, & Pascarella 1980; Terenzini, Springer, Yaeger, Pascarella, & Nora 1996; Volkwein & Lorang, 1996).

Several studies, within the area of higher education research, have also demonstrated the significance of factors which are related to campus climate (Astin, 1993; Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999; Hassel & Lourey, 2004; McGrath & Braunstein, 1997). Areas of discussion within this body of research tend to focus on factors such as: demographic, academic, social and financial concerns. As McMurtrie (2000) illustrated these factors can play a pivotal role when attempting to solve retention concerns or when attempting to implement an intervention strategy. By first identifying any external problems that a student is experiencing, the administrator can more easily determine what type of strategy will be most effective in assisting that student with their unique needs (Thompson & Thornton, 2002).

Pascarella and Terenzini (1991) explained how "campus mission, size, wealth, complexity, productivity, and selectivity exert significant influences on a variety of internal transactions and outcomes including student values, aspirations, and educational and career attainment" (p. 84). Pascarella's (1985) model, illustrated how campus

organizational behaviors and structural characteristics could act as influences on student outcomes. This is similar to the findings of Pace (1984) who theorized that "…the experiences and events that influence college outcomes are closely associated with student perceptions of the institutional environment or psychological climate provided by the institution" (p. 32).

The Pascarella (1985) General Causal Model designates five elements as significant influences on student learning and cognitive development. These elements include: structural/organizational characteristics of institutions, student background/pre-college traits (aptitude, personality, and high school experiences), interactions with agents of socialization (faculty and student peers), institutional environment (tolerance, safety), and quality of student effort (p. 41). When a student successfully maintains a balance among these five elements their potential for making a successful transition into college will increase dramatically. Inversely if one or more of these elements is out of balance, the student may become distracted from their studies and feel isolated from the college environment (Pascarella & Terenzini, 1998).

The Integrated Model of Student Persistence from Cabrera et al. (1993) merged several major components from the Tinto (1987) Student Integration Model and the Bean (1980) Student Attrition Model. The Cabrera model proposes that, "…institutional commitment is directly affected by academic integration and intellectual development, encouragement from significant others, financial aid, financial attitudes, and social integration" (p. 63). The model also opposes the view of previous researchers by reasoning that, "pre-college academic performance and college grade-point average have indirect effects on institutional commitment" (p. 72).

Landrum (2003) reviewed two key areas of research relating to retention concerns. The first concern involved beliefs freshman students had concerning the schools they were attending. The second concern related to institutional responsibilities in keeping their students motivated to remain enrolled in school through graduation (p. 204). These findings were consistent with the writings of Tinto (1987, 1993) who favored the judgement that the student retention process is dependent upon on the student's individual experiences when dealing with the institution. As student satisfaction with the institution is maintained it increases the chances of the student remaining in school (Terenzini & Pascarella, 1980).

Many studies have shown the significance of the social concerns that affect college student retention efforts (Bandura & Schunk, 1981; Bembenutty, 1999; Cabrera et al. 1999; Koestner, Bernieri, & Zuckerman, 1992; Lenning, Beal, & Sauer, 1980; Paulsen & Feldman, 1999; Strauss, 2000). At the same time there are separate concerns that play critical roles in the student decision making process. Academic concerns such as faculty to student interaction can also be crucial determinates of student satisfaction. As the Pascarella (1985) General Causal Model demonstrates, one of the five critical elements involves interactions with agents of socialization which is a direct reference toward the relationship between faculty members and students (Pascarella, Bohr, Nora, & Terenzini, 1995).

The factors that students and educators agreed upon as being most important were “good teaching; the quality of instruction; and faculty who are genuinely interested in students” (Landrum, 2003, p. 82). McGrath and Braunstein (1997) concluded in their study that the two most important factors for student retention were first-semester grade

point average (GPA) and students' impressions of other students. Clearly there are several different conditions that a variety of institutions of higher learning may consider to be the most important factors for improving student retention rates at their respective schools (Swigart & Murrell, 2001). Even so, as a united body each of these institutions share in their belief that whatever the solution for resolving retention challenges may be, it remains a vital concern which needs to be identified and researched further before an appropriate strategy can be implemented (Kern, Fagley, & Miller, 1998).

Significance of Using Development Theory

While examining the issue of student retention one must first acknowledge the theoretical background that researchers have contributed to the field of education under the area of student development. A clear understanding of these theories provides a greater insight towards the various aspects of the first year student population (Cabrera, Castaneda, Nora, & Hengstler, 1992). Over the past twenty five years a variety of theories have been used to describe the development of college students. Some examples of these theories include: learning theories, racial identity theories, and theories of moral and character development (Cravatta, 1997). Each of these theories carry with them unique insights and relevant information. However no single approach will work in every situation or at every college or university. For this reason it is best when educators can examine each of the development theories to learn which one is best suited for the unique challenges that their institutions are facing (McInnis, 2001).

When student affairs professionals decide to develop and administer any sort of intervention approach, it is imperative that they first seek to insure that the potential program is well-grounded in the fundamentals of student development theory (Ryland,

Riordan, & Brack, 1994). Before implementing any type of at-risk intervention program, administrators should also consider the role that student development theory will play when encountering their targeted college student population. When development theory is considered it will insure that all stake-holders are working together towards the same goal (Ortiz, 1995). As Evans, Forney, and Guido-DiBrito (1998) noted, "Interventions without a theoretical base risk being ineffective and inefficient" (p. 71). If administrators choose to disregard information obtained from development theories, it is quite possible that the proposed intervention strategy will result in a failure to reach its targeted population or even possibly further divide the intended population from the remainder of the college (Strauss & Volkwein, 2004).

Before designing an intervention strategy the careful selection of the appropriate development model should be undertaken. Once the appropriate model has been selected the necessary components that the model will require should be recognized. Creamer (1989) suggested that a student development model should accommodate the necessary assessment requirements in order to function properly. These assessments should involve both the students within the research as well as the relevant environmental factors. Creamer (1989) also recommended that a quality assessment plan should contain, "…a pre-enrollment appraisal of student readiness, motivation, abilities, interests and goals; continuous monitoring of student progress with feedback to students and faculty; and appraisal of environmental conditions at the college such as facilities, services, and climate" (p. 42). At the beginning of the study, when these factors are taken into account, a more effective intervention strategy can be designed and successful implemented.

Because of the volume of research on student development theory, there are a variety of ways in which the theories can be organized (Doucette & Dayton, 1989). Quite frequently, development theories are grouped into concentrations of related theories. The three most prevalent categories of student development theory are psychosocial, cognitive-structural, and typological (Ortiz, 1995). Each one of these theories provides a guide, which illustrates the differences among the varied student populations and the experiences they encounter. At the same time, according to King & Howard-Hamilton (2000), each of one of these theories is, "guided by different assumptions about learning and development. While each also focuses on a different aspect of this process and often on different student outcomes" (p. 32).

Each one of these theories provides a conceptual framework for interpreting data on factors which include: student satisfaction, learning, and success (Braxton, Milem, & Sullivan, 2000). The benefit of this supplementary data is that it adds to the breadth of the knowledge used when assimilating the components of a successful intervention strategy. As Hassel and Lourey (2004) indicated:

> These models often tend to provide useful data on topics such as how well colleges and universities are achieving their goals of helping students learn how to make informed ethical choices, develop a healthy sense of identity, and to cultivate a deeper under-standing and appreciation for differences among other people they may come in contact with. (p. 11)

Psychosocial Development Theories

As King (1978) suggests, "Psychosocial theories focus on the specific issues that people address at different times in their lives, the 'what' of development" (p. 13). The psychosocial domain of theories explores "the content of development, the important issues people face as their lives progress, such as how to define themselves, their relationships with others, and what to do with their lives" (Evans, Forney, & Guido-DiBrito, 1998, p.74).

Institutional researchers often use psychosocial theories to resolve a variety of questions which might include: why students leave school early, why grade point averages (GPA's) vary among different student populations, and why certain student populations report greater measures of satisfaction upon leaving their institutions than others (Cravatta, 1997). When concerns such as these are addressed under the auspices of developmental theory, educators gain a better understanding of what an effective intervention strategy will require.

Psychosocial theories are most often used when addressing concerns of first year college students. Many first year students will spend their initial time on the college campus adjusting to the transitions they are experiencing which arise from a variety of sources (Bembenutty, 1999). These life transitions usually cause the student to reflect upon a multitude of decisions that need to be made under a short period of time. Before arriving at college, these students may never have had the opportunity to make decisions of this nature by themselves (Pitkethly & Prosser, 2001). Examples of these decisions might include: living away from home for the first time, choosing a major with an appropriate career path, finding a part-time job, and creating or changing their racial

identity (Richardson & Skinner, 1992). As King & Howard-Hamilton (2000) suggested, “The college years are often when students explore, establish, and consolidate new personal and professional identities” (p. 22).

Erik Erikson (1980) was a leading researcher within the area of psychosocial theory. Erikson's theory consists of what he views as, the eight stages of human development. These stages begin when a person is an infant and end when that person reaches late adulthood (Erikson, 1982). Each stage is distinguished by a distinct conflict that must be resolved by the individual before they can proceed to the next stage and experience growth as a person. As Howard-Hamilton and Sina (2003) wrote, “The resolution of the dichotomous crisis at each stage contributes to a strong, fully functioning ego identity” (p. 155). Erikson described identity as "a subjective sense of an invigorating sameness and continuity that allows one to have a coherent sense of self, distinct from others, and evaluated on one's own terms” (Erikson, 1968, p. 52). These conflicts occur when outside factors create demands on people. As Braxton and Brier (1989) implied:

> The person is faced with a choice between two ways of coping with each crisis, an adaptive, or maladaptive way. Only when each crisis is resolved, which involves a change in the personality, does the person have sufficient strength to deal with the next stages of development. (p. 51)

Upon reviewing Erikson’s eight stages and the conflicts that correlate with each of them, it becomes clear that each of the stages relates back to a specific situation in a person’s life. Stages one through five include: oral-sensory; muscular-anal; loco-motor; latency; and adolescence (Erikson, 1980). The conflicts that are identified, which each of

these stages include, are: trust versus mistrust, autonomy versus shame or doubt, initiative versus guilt, industry versus inferiority, and identity versus role confusion. The fifth stage, industry and identity, is considered to be the most consistent with issues faced by college-age students (Erikson, 1982). When college students successfully master this stage they become more likely to achieve success at their respective institutions. When these external pressures and outside conflicts are resolved the student can more easily adapt to the college environment while becoming a more productive member of the institution (Cabrera, Castaneda, Nora, & Hengstler, 1992).

Cognitive-Structural Development Theories

Under the cognitive-structural theories, the emphasis is placed on how people perceive and interpret their experiences (Evans, Forney, & Guido-DiBrito, 1998). King and Howard-Hamilton (2000) concluded that, "Research using these theories has shown that the ways in which students think about their careers, problematic issues in their major fields of study, moral issues they face on the job, and so forth differ in complexity, breadth, and adequacy depending on their level of development" (p. 24).

Chickering and Riesser (1993) underscore the significance of college students achieving autonomy while mastering their intellectual, physical, and social needs. As reported, intellectual competence within a college environment should include "…mastery of course content, development of aesthetic application, and building skills of analysis, synthesis, and comprehension" (Chickering & Reisser, 1993, p. 134). By achieving fulfillment within each of these areas, the student will generally form a more

well-developed identity. Through the formation of this identity the student's will gain confidence in both their current abilities as well as their continued potential to succeed in future endeavors (Bandura, 1997).

This identity can further evolve as the student encounters the continuing challenges that the college experience will provide to them. Throughout their college careers, many first year students will achieve a sense of independence while gaining autonomy from their parents, in essence moving them towards a state of interdependence (Chickering & Reisser, 1993). Being away from home for the first time provides them with opportunities to grow both emotionally and socially. As Pitkethly & Prosser (2001) reasoned, it is during this period of time when first year students will face an abundance of new decisions whose resulting influences may have lasting repercussions on their lives. Additionally as college students encounter these decisions, often for the first time by themselves, the experience of just going through the encounter will force them to adjust to their expanded roles in society (Bandura & Schunk, 1981).

By accepting one of these new roles, the student will mature and move closer toward their next stage of personal development. However, if the student finds themselves unable to cope with the new role that society has assigned to them, their ability to continue making these type of decisions, solely on their own, will be diminished (Bembenutty, 1999). Often at this juncture the student will choose to withdraw from the environment that is causing the stress of adapting to a new role. At the college level when this occurs, the student may decide that being involved in a college or university is not the right choice for them (Fazey & Fazey, 2001). This is why retention efforts are so critical during the first year for students.

The intellectual and cognitive development of college students has also been explored in the theories of Perry (1970) and Kohlberg (1984). Perry considered that it was a significant goal to have a better understanding of how college students attempt to frame the modern world through the use of their own reference points (Perry, 1970). The population Perry and his colleagues studied was mainly comprised of traditional-aged, male, white students, with an upper-middle-class family background. These students were attending Harvard and Radcliffe universities during a period of time in the 1950's. Since that time, the modern description of the type of student generally attending college has changed dramatically in regard to age, ethnicity, gender, and race (Howard-Hamilton & Sina, 2003). Although Perry's research has severe limitations by today's standards, it became a significant building block upon which other researchers have continued the study of the cognitive development of college students (Howard-Hamilton, 1993; Pascarella & Terenzini, 1991; Paulsen & Feldman, 1999; Terenzini, Pascarella, & Lorang, 1982; Walker, 1980).

According to Perry's design, young adults follow a nine-position scheme of ethical and intellectual development in which they think "about the nature of knowledge, truth, values, and the meaning of life and responsibilities" (King, 1978). Interestingly, Perry chose to use the term position rather than stage. According to Perry (1970), "Stage refers to a relatively stable and enduring form, pattern, or structure of meaning making that pervades a person's experience" (p. 32). Perry and his colleagues made no assumptions about the duration of the position and indicated that it, "implies the place, or vantage point, from which the student views the world" (Perry, 1970, p. 56).

Perry's design was broken down into nine separate positions. Perry (1970) initially clustered them into three groups. He described positions 1, 2, and 3 as the transition from a right-wrong outlook to the recognition of relativism; positions 4, 5, and 6 as the development of the relativistic outlook; and positions 7, 8, and 9 as the development of commitments in a relativistic world (Perry, 1970). Recently, other researchers have clustered these positions into smaller groups for easier understanding. King (1978) suggested that one approach to understanding the nine positions is to divide them into four major groups consisting of: dualism (positions 1 and 2), multiplicity (positions 3 and 4a), relativism (positions 4b, 5, and 6), and commitment in relativism (positions 7, 8, and 9).

Perry (1970) also identified three alternatives to forward progress through the positions of his scheme which consisted of: temporizing, retreat, and escape. Temporizing occurs when a student remains in a particular position for a longer than usual period of time. The individual, out of fear or confusion, may unintentionally delay their progression to the next step. As Perry (1970) suggested, "Retreat refers to the movement back to the relative safety and security of dualism—a world where right and wrong are clear and ambiguity does not exist" (p. 47). The student may find comfort within this condition until the environment becomes less threatening. The student may also develop the ability to cope with fears and move forward.

The term escape depicts the act students are engaged in when they make the decision "… to avoid moving from the position of relativism to the responsibility of making commitments in a relativistic world" (Perry, 1970, p. 68). When this happens to a first year college student, the decision of whether to remain in school for another year or

leave takes on added weight. Students who decide to leave may realize that the decision to leave is easier than facing the pressures adjusting to the college environment.

Within Kohlberg's (1984) theory of moral development, individuals must pass through six qualitatively distinct stages which fall under three levels of reasoning: pre-conventional, conventional, and post-conventional. Within each of the six stages of moral judgment, there exists a different way in which moral dilemmas can be resolved (Grolnick & Ryan, 1989). Stage one is the punishment and obedience orientation in which there is a dualistic significance of a particular behavior. The second stage is the instrumental relativist orientation. Under this stage the individual is left to decide what the appropriate moral behavior for them should be (Ortiz, 1995). Stage three is the interpersonal concordance which relates to behavior patterns which implies that if an individual follows all of the rules that a society prescribes, they will receive positive reinforcement from others (Cravatta, 1997).

Within stage four, individuals are expected to obey laws and rules because they possess a sense of obligation and respect for the authority figures who have prescribed the rules. There is a concern for the protection and rights of others at stage five. According to Howard-Hamilton and Sina (2003) step six moves toward, "an ethical principle orientation in which rules are not concrete and specific but abstract and defined by good conscience" (p. 39). Within a college setting, a student's ability to cope through each stage will determine their ability to successfully adapt to the new environment they are facing. According to this theory, if a student does not feel they are receiving enough positive reinforcement from mentors and peers, their likelihood of staying in school past their first year will drop considerably (Deci & Ryan, 1985).

Typological Development Theories

Within a third category of development theories, lies typology theory. Theories within this category illustrate how college students adapt to the learning environments they have been introduced to. As students successfully adapt to their respective learning environments they tend to experience personal growth in their decision making skills as well as development in their abilities to balance emotional concerns (McCombs & Marzano,1990). As King and Howard-Hamilton (2000) noted, "Whereas both psychosocial and cognitive-structural theories are grounded in models of increasing maturity, typological theories describe differences that are more stylistic or preferential in nature" (p. 51).

One example of typology theory, prevalent in the field of education, involves learning-style theories. Kolb (1984) cataloged four styles of learning, which are typically constructed within two dimensions: how students perceive information and how they process experience. Educators concerned with retention issues often use information gathered from student learning style research when designing and implementing intervention programs (Clark & Halpern, 1993). When intervention programs take into account this type of research, campus specific programs can be implemented. Individual schools can review general principles, take components that are relevant to their unique populations, and then alter remaining areas to best suit their needs (Koestner, Bernieri, & Zuckerman, 1992). This personal approach in program development may alter the landscape of the college setting by allowing institutions to rely on their own prevalent strengths rather than forcing them to fit into a prescribed model of reasoning that was not designed with their unique needs and challenges in mind (Lau, 2003).

Student Experiences

Both Tinto's (1993) research into the area of integration and Astin's (1993) work dealing with involvement theory, indicate the significance of the relationship between college students and their environments. Within Tinto's (1993) research on the general student population, it was determined that students' experiences when interacting with the environment can affect their goals and commitments to persisting in college through graduation. If an institution can provide an environment which fosters a strong support network for the first year student, the chances increase that the student will remain on campus (Ryan & Powelson, 1991).

Tinto (1993) also suggested that students must possess sufficient academic skills to successfully prevail throughout their college studies. When students have these skills it is more likely they will feel validated as a member of the campus community. Due to the large number of students who enter college lacking these skills, there has been a significant movement towards the creation and implementation of academic assistance programs. Some of these programs are designed for specific student populations and linked to specific skills such as writing or math. Others are related to supplemental course instruction (Barefoot, 2000).

Astin (1993) also emphasized the realization that campus involvement positively affects students' experience in college. Pascarella and Terenzini (1991) emphasized the importance of campus involvement on the psychosocial development of students, particularly as it pertains to interpersonal relationships and identity development. A number of prominent researchers have concluded that the level of student involvement within a campus climate has a major influence on students' perceptions of what they gain

from their college experiences (Astin, 1984; Lenning, Beal, & Sauer, 1980; McInnis, James, & Hartley, 2000; Pace, 1984; Pascarella & Terenzini, 1991; Ryland, Riordan, & Brack, 1994).

The numerous scholastic and personal benefits that college students gain by becoming involved within a college environment have been documented extensively throughout educational research (Astin, 1984; Pace, 1979; Pace, 1984; Pascarella, 1985; Pascarella & Terenzini, 1991). Pace (1984) expanded the research in this area by suggesting that the quality of effort students put forth in their academic and social activities will often provide a great impact concerning what those students perceive they are gaining from their college experiences.

Pace (1984) developed a Community College Student Experiences Questionnaire (CCSEQ) which was designed to assess, "the breadth and quality of effort community college students exert in attaining educational gains and development" (p. 34). It was Pace's (1979) assertion that students had the ability to gain as much of or as little out of their college experiences dependent upon the level of effort they exerted in both academic and social activities. Pace (1984) also reasoned that the experiences and events that influence college outcomes are closely associated with student perceptions of the institutional environment or psychological climate provided by the institution (p. 18). Pace's theory complements other student involvement theories (Astin, 1984; Tinto, 1987) by examining the quality of student involvement both in and out of the classroom.

Academic Achievement and Retention

As Strauss and Volkwein (2004) contended, "The collective balance of student academic and social experiences exert heavy influences on their commitment to

the institution" (p. 34). These experiences both in and out of the classroom can make a lasting impression on a first year college student. Because each of these factors are interwoven so closely together, the success or failure of either one can have a profound effect on the other (Pascarella, Pierson, Wolniak, & Terenzini, 2004). A student may be doing well in classes but may be having difficulties living away from home for the first time. On the alternate side, a student who is having trouble with academic course work may attempt to ignore the problem by becoming immersed within the numerous social and non-academic pursuits a college environment may provide (Richardson & Skinner, 1992).

Several additional researchers have attested to the relationship that exists between college academic achievement and retention (Bembenutty, 1999; DeBerard, Spielmans, & Julka, 2004; McGrath & Braunstein, 1997; Terenzini, Pascarella, & Lorang, 1982; Zimmerman, 1989). Other researchers have signified the importance of the condition when students gain self-efficacy through positive academic experiences (Bandura, 1997; Bandura & Schunk, 1981; Deci, Vallerand, Pelletier, & Ryan, 1991; Lim & Hyunjoong, 2003). When students achieve academic success their self-efficacy will increase and coincide with their beliefs that positive accomplishments will continue to happen to them. According to Kirby and Sharpe, (2001) students who excel academically are more likely to remain in college after their freshman year, as opposed to students who perform at a much lower level academically. For educators concerned with retention this remains a substantial reality that must be considered.

Prior research in the area of student retention reveals that a strong bond exists between institutional commitment to first year students and their likelihood of remaining

in school after their freshman year of study (Cabrera et al., 1993, 1999; Nora & Cabrera, 1993; Tinto, 1987, 1993). When an institution chooses to commit its time and its resources, toward the goal of making students fit in more comfortably with its environment, the effort will undoubtedly have a reciprocal affect on student commitment to that institution. According to Strauss and Volkwein, (2004) student commitment is defined as, "…a student's overall satisfaction, sense of belonging, impression of educational quality, and willingness to attend the institution again" (p. 102). When a first year student experiences these tendencies, they are more likely to feel a connection with their respective college or university. As this occurs the probability for that student in continuing with their educational goals increases significantly (McInnis, James, & McNaught, 1995).

The First Year Student Population

The freshman year represents a difficult transition for many college students who may experience a variety of social, academic, and emotional challenges (Lu, 1994). While many students are able to complete this transition with little difficulty, other students may consider these challenges insurmountable. Often these students will choose to avoid the challenges rather than facing them (McInnis, James, & Hartley, 2000). When this occurs the student may choose to prematurely end their academic careers either by leaving school immediately or at the end of their freshman year.

Retention rates for first year college students, have been declining since the early 1980's. A significantly large decrease occurred during the middle of the 1990's (Cravatta, 1997). More recently the desire to solve the issue of retention has resulted in

the origination of various first year programs and initiatives (Pitkethly & Prosser, 2001). As new programs are created and then implemented, educators will often attempt to connect the intervention strategy with some form of development theory. The goal here is to insure that the program is fundamentally sound. Because of this practice, many intervention programs appear similar at the beginning. As Barefoot (2000) contended, " A close look reveals that the majority of initiatives are based on a small number of well-known themes drawn from research on college students" (p. 21).

Students arrive at college from diverse academic backgrounds and varied levels of preparation. As Thompson and Thornton, (2002) pointed out, "Little is known about students' autonomous dispositions at entry and the extent to which higher education develops or constrains autonomy in learning" (p. 36). The capacity to think, learn and behave autonomously is often claimed as an outcome for students in higher education (Stephenson & Laycock, 1993). This relates directly back to the work of Chickering and Reisser (1993) who recounted the significance of college students achieving autonomy and gaining a sense of independence while moving towards a state of interdependence. If a student can consistently make progress in striving towards this goal, they will become more satisfied with the decisions they will make regarding both their personal lives as well as their academic pursuits (McCombs, 1991).

Motivation

As first year students enter college, their lives are dramatically altered from the experiences they faced during their high school years. As students mature, they ultimately must take responsibility for themselves in regard to how much they want to succeed in school (Paulsen & Feldman, 1999). If educators can promote the intrinsic

benefits of learning to students, chances increase that students will be motivated to put forth more of their best efforts (Stephenson & Laycock, 1993). Administrators often do this by creating learning strategies that promote new concepts in education that are relevant, engaging, and attainable to more students (McMurtrie, 2000; Ryan & Powelson, 1991).

Choice and the motivation that lead students to make decisions is viewed as a significant aspect of the college experience by researchers. As Thompson and Thornton, (2002) noted, "Much of the motivation for academic success in high school is grounded in extrinsic motivation, namely grades" (p. 18). Because so much of the educational process is voluntary the student must find their own source of internal motivation in order to succeed. The student must come to class to learn, because learning is intrinsically motivating and rewarding, and seen as a concrete benefit to them personally. Research on adult learners indicates that, "learners are most motivated when they see relevance to their learning, when they have ownership in the process, and when they feel it is tailored to meet their immediate interests and needs" (Zemke & Zemke, 1988, p. 124). If students can construct a personal stake in the learning process their motivation and aspirations towards succeeding with the class material should also improve.

College students who become more independent and internally motivated tend to demonstrate certain characteristics within their respective college environments. These attributes may include taking responsibility for the decisions they are making as well as

taking responsibility for the consequences of the actions they are choosing (Deci & Ryan, 1985). When students have this type of confidence within themselves, researchers refer to them as being autonomous (Bandura, 1997; Grolnick & Ryan, 1989; Zimmerman, 1989a).

When students have obtained these attributes, of taking responsibility for their decisions and actions, it is believed that as individuals they are also gaining a greater sense of self. Researchers agree that autonomous people will use their internal drives as a source for their decision-making skills (Bandura, 1989; Koestner et al., 1992; McCombs, 1991; Paulsen & Feldman, 1999; Ryan & Powelson, 1991; Zimmerman, 1989b). According to McCombs and Marzano (1990), in order for students to convert these positive attributes into positive actions, the following traits must also be acquired and utilized, "metacognitive skills, such as self-appraisal, reflective practices, strategy choice and implementation" (p. 47). Students with a high self-perceived competence tend to demonstrate the following behaviors: persistence, challenge, interest, curiosity, resilience to failure, and commitment to progress (Bandura, 1997), as well as high levels of intrinsic motivation (Deci et al., 1991; Ryan & Powelson, 1991).

According to Stephenson & Laycock (1993), "self-perceived competence is defined as the extent to which a student holds an expectation that they are competent enough to meet the demands of any given situation" (p. 28). Deci & Ryan (1985) advocate a model that measures student motivation to study. It describes the reasons that students tend to study in college as being either self-initiated (intrinsic) or initiated externally (extrinsic).

As first year students encounter this mix of varying emotions, their feelings concerning why they want to stay in school until graduation may be questioned. External pressure from parents might also come into play (Pascarella, Bohr, Nora, & Terenzini, 1995). But if the student possesses some form of internal motivation they are more likely to view the experience of completing their college studies rewarding to them personally (Bembenutty, 1999). In this sense, their motivation can play a significant role in their decision making process. Institutions are beginning to place more credence with this idea as retention strategies now routinely take into account the concept of motivation in the planning of intervention strategies (Hassel & Lourey, 2004).

As Kern, Fagley, & Miller (1998) stated, "Enhancing motivation as a retention strategy seems less common than skill development, but may be an important avenue to increasing retention" (p. 7). While many argue that institutions should feel obligated to motivate their students, other researchers place the responsibility on the shoulders of the students themselves. As Lau (2003) asserted**, "**Ultimately, the success of college retention depends on the students themselves. Therefore, students must be motivated to participate actively in their own learning process" (p. 10). Regardless of what type of motivation is obtained and used, most educators agree that motivation itself, is an important tool for students searching to discover academic success (Deci, Vallerand, Pelletier, & Ryan, 1991; McCombs & Whisler, 1989).

Intervention Models

Before implementing any type of intervention program educators should first identify common risk factors that are unique to their student population. According to DeBerard, Spielmans, and Julka, (2004), "If such risk factors can be identified, then

intervention programs can be designed to increase retention rates more efficiently" (p. 24). Some potential intervention strategies might include: improving classroom energy, increasing faculty availability, and coordinating programs that stimulate student involvement within the campus climate (Hassel & Lourey, 2004). The significance here lies in developing strategies that are unique to the challenges that are facing the individual colleges or universities. An award winning program can look outstanding on paper but if it cannot be adapted to fit with a specific institution, it will be become useless (Bembenutty, 1999).

Dervarics (2000) reported that one of the key components of an efficient intervention program is to focus on services that prevent college students from dropping out in the first place. Noting Dervarics (2000), "Some of the most likely reasons for dropping out include grade point averages under 2.0, delayed entry into college after graduating high school, having no previous college experience from within the student's family and being a full-time employee while attending college" (p. 52). Some researchers agree that for a program to be successful it should contain three core components: a strong summer program for incoming students; more need-based financial aid awards; and more accessible student advising and support services (Braxton, Milem, & Sullivan, 2000; Hassel & Lourey, 2004; McInnis, James, & McNaught, 1995; Owen, 2003; Pascarella & Terenzini, 1998).

Accreditation Concerns

Most types of accrediting agencies, regional and specialized, also tend to focus on student retention as an important component of their accreditation standards. Further evidence can be found attesting to this commitment of retention efforts by reviewing the

mission statements of both regional and specialized accrediting agencies. Within these statements the accrediting agencies clearly outline the significance of such factors as student commitment and institutional retention rates (McMurtrie, 2000).

Throughout the United States several individual states use student retention and graduation rates as performance indicators (Burke & Serban, 1998). By employing the use of student retention rates as performance indicators, both the individual states and the accrediting bodies, are in effect challenging institutions to carefully examine what the underlying factors are which may cause students to leave school early in the first place (Strauss & Volkwein, 2004). Initially indicators were created that established universal applications without regard to what type of institution was being scrutinized. Recently however, educators have called for there to be some distinction between the indicators used at traditional universities and those used at community and technical colleges (Burke, 2000).

When a student chooses to remain at their respective institution, the decision will produce a multitude of positive effects for their particular institution. In addition to having higher graduation rates, the yearly revenue stream for that college or university will be easier to project by having a steady source population from which to draw from (Burke & Modarresi, 2001). Most college and universities have budgets that fluctuate yearly based on enrollment and revenue projections. As Strauss and Volkwein (2004) reported, " Student commitment serves as a valuable planning tool because it predicts subsequent student-persistence behavior. By forecasting and maximizing retention and thus revenue, an institution strengthens its capacity for educational and administrative planning" (p. 2).

As accrediting agencies have begun to focus more attention on student retention rates, the effect has caused institutions to implement more strategies designed to address student retention concerns. Universities and colleges are now focusing more of their efforts on diagnosing the root of the problem (Cabrera, Nora, & Castaneda, 1993). Institutions have begun to ask questions concerning what may cause students to leave school early. As answers to these questions are being found, programs and policies are being designed to address the issue directly, at a time near the beginning of the student's introduction to the college setting (Cutright, 2002).

Student Departure Rationale

If a college student is destined to leave school early, the student will typically leave either during or immediately following their first year of study (Noel, Levitz, & Saluri, 1985). As Lau (2003) mentioned, "Studies indicate that colleges with high freshman retention rates tend to have a higher percentage of students graduating within four years" (p. 1). Obviously when students can finish college earlier they will end up saving money both in educational and related expenses. In turn they will be able to begin working sooner and ultimately will affect their annual and career earnings throughout their lives.

As Terenzini, Springer, Yaeger, Pascarella, & Nora (1996) indicated, there exists a multitude of reasons that could explain why a freshman would not return to school for their sophomore year. An example might be an inadequate fit existing between a particular student and their institution (Pascarella & Terenzini, 1998). Financial concerns could also play a role in the decision making process of first year college students. As an

individual, the student might feel the need to change career goals, which would in turn affect the academic program that student was originally registered within (Rendon & Taylor, 1990).

As Lau (2003) stated, " …During their first year at an academic institution of higher learning, freshmen might be overwhelmed with the transition from high school to college life, and they might become overly stressed by the dramatic changes even before they finish their first year of college" (p. 2). This transition causes stress and creates a barrier that must be mastered before academic concerns can be considered. As Lau (2003) suggested, a first year student may also lack the motivation to succeed in school because, "they do not understand the importance of education, and/or do not know how to apply classroom-learned theories to real life problems" (p. 10).

Intervention Strategies

As colleges and universities seek ways to keep their first year student populations on campus, many are turning to a variety of prevalent intervention strategies. While many of these strategies have encountered varied levels of success, their ability to be adapted equally to all college environments has been called into question (Strauss, 2000). Consequently, before implementing any type of intervention program educators should first identify common risk factors that are unique to their student population. According to DeBerard, Spielmans, and Julka, (2004), " If such risk factors can be identified, then intervention programs can be designed to increase retention rates more efficiently" (p. 24). Some potential intervention strategies might include: improving classroom

energy, increasing faculty availability, and coordinating programs that stimulate student involvement within the campus climate (Hassel & Lourey, 2004).

First year initiatives are designed to accomplish a number of objectives. Some of the objectives might include: the desire to increase student-to-student interaction; to increase faculty-to-student interaction, to increase student involvement and time spent on campus (Terenzini & Pascarella, 1980). Other objective might involve the desire to link curriculums to outside the classroom functions; to increase academic expectations and levels of academic engagement; and to assist students who have insufficient academic preparation for college (Stephenson & Laycock, 1993).

The literature recommends activities and services centered in academic departments have the best chance of enhancing student development and success (Doucette & Dayton, 1989; Rendon & Taylor, 1990; Richardson & Skinner, 1992; Smith, 1993). Academic department activities and services play into students' tendencies to be connected to the college or university primarily through academic courses. In addition, focus on the department enables support groups to develop based on common academic interests such as transfer through general education, job retraining, and vocational or technical education (Owen, 2003).

Early Programs

Although many colleges and universities are currently attempting to implement intervention strategies, there are some institutions where this concept has been a significant part of retention efforts for quite some time (McInnis, James, & McNaught, 1995). In 1932 the University of Minnesota began one of the first significant programs to assist first year students. Similarly in 1962, both the University of Michigan and the

University of Notre Dame each established first year studies programs (Braxton & Brier, 1989). During the 1970's a movement, led by John Gardner at the University of South Carolina, to help freshman students with their transitions into the college environment was created. More recently in the 1990's a significant number of the programs were established within colleges and universities across the country to address the needs of first year students (Barefoot, 2000).

Outside of the United States, efforts to study first year students have been carried out with varied levels of success. In 1956, the University of Melbourne enlisted the use of surveys to identify characteristics of first year students (Anderson, Priestly, & Hammond, 1956). The purpose of the University of Melbourne study was to determine why students were experiencing adjustment and performance problems during their first year of college. The results of this study led to the creation of a freshman seminar program for science students.

By the 1980s Australian universities began to generate freshman seminar programs that were more similar to American studies than they had ever been before (Upcraft & Schuh, 1996; Walker, 1980; Watkins, 1982). This trend continued throughout the 1990's. It was during this time that the Committee for the Advancement of University Teaching (CAUT) commissioned a national study to examine first year college student issues (McInnis, James, & Hartley, 2000).

The CAUT project described major assumptions taken from an earlier period of time in Australia's higher education system. As the CAUT study demonstrated, universities had previously assumed that first year students received a high level of general education before entering college. It was believed that the educational

background they were receiving was sufficient enough to prepare them for a challenging curriculum at a college or university (McInnis, James, & McNaught, 1995). A second assumption concerned the belief that students came into college prepared both financially and socially to easily adapt to the college environment (McGrath & Braunstein, 1997). As demonstrated in several American studies neither of these assumptions have proven to very reliable or accurate (Astin, 1977; Bean & Metzner, 1985; Cabrera, Nora, & Castaneda, 1993; Deci & Ryan, 1985; Pascarella & Terenzini, 1991).

The CAUT study was guided by the psychosocial research of Graham Little (1975). Little's work provides a conceptual framework to explore the thought processes of college students during their first year of study. Little also explored the concept of university learning climates, which consisted of family climates and student learning styles. The data gathered from the CAUT study was complied by using in-depth interviews with students (McInnis, James, & Hartley, 2000).

The four learning climates Little (1975) identified consisted of the two dimensions of support and orientation. According to (McInnis, James, & McNaught, 1995), "Support refers essentially to the level of reassurance and recognition provided to students, and orientation has to do with the guidance given by the university, and the demands made on students to develop and achieve" (p. 32). This type of rationale is similar to the research of Tinto (1982) and Terenzini & Pascarella (1980) who each

placed emphasis on the role that campus environment played upon student success. Little (1975) reasoned:

> A cultivating climate, one in which characterizes what universities are supposed to achieve, produces or reinforces the autonomous student style, where personal potential and preferences are balanced against real-world challenges. The demands for work are balanced against the importance of support and recognition of the self. (p. 158)

The research produced previously from the Australian universities has provided a great deal of insightful information to educators throughout the world (McInnis, 2001). However, research on first year students within the United States does not translate as smoothly to the Australian context as one might expect. Historically, colleges and universities within the United States have been more concerned with research that examines the overall development of college students while Australian universities have tended to be more concerned with the vocational and academic aspects of the college experience (McGrath & Braunstein, 1997). While both methods have their own merits, it is critical that whatever system is using the research to choose an approach that is relevant for their unique population and needs.

Recent Intervention Efforts

Focus on first year students has become increasing importance to colleges and universities throughout the United States. According to Cutright (2002), "This focus could arise from consumer demand, legislative scrutiny, economic concerns that heighten worries about retention, negative media coverage of service to undergraduates,

or a variety of other circumstances" (p. 21). American educators seeking information on first year students now have access to several professional journals and research centers devoted primarily to the freshman year. There is also a strong national research program that was established to monitor trends in the values, behaviors and outlooks of first year students (Barefoot, 2000). In order to address some of the more global first year issues, there have also been several international conferences held on the first year experience. Perhaps more substantial in the United States, a National Research Center for the Freshman Year Experience, has been founded to provide research and support to educators and administrators (Braxton, Milem, & Sullivan, 2000).

As first year student initiatives programs have expanded in scope across the country, so too has their role changed on the local campuses of colleges and universities. First-year programs and initiatives are usually part of a centralized function within a smaller institution (Pitkethly & Prosser, 2001). However, at some of the larger research universities, programs targeting first year students can be found within specific colleges or academic units (Strauss & Volkwein, 2004). Many of these programs are designed to improve success for first year students within a curriculum that might have a consistently high failure rate among its first year students (Cutright, 2002).

The National Resource Center for the First Year Experience found that over 70 percent of U.S. colleges and universities offer some type of first year program or effort for first year students (Lau, 2003). The purpose of many of these programs is to establish a more friendly environment within the college campus and to provide a more amicable line of communication between first year students and the institutions they are attending (DeBerard, Spielmans, & Julka, 2004). Within several of these programs the colleges and

universities involved will prepare special classes comprised entirely of first year students. Through these informal classes, covering a variety of topics, it is hoped that these new students will develop peer relationships together (Paulsen & Feldman, 1999).

A central focus of many first year initiatives, both in and out of class, is to increase the amount of time students spend on campus. It is anticipated that first year students will increase their involvement in activities, programs, and functions when organized by the institution for their benefit (Pascarella, Bohr, Nora, & Terenzini, 1995). To make incoming students more aware of programs and services available to them, most colleges and universities offer a new student orientation program before freshman students arrive on campus (Ryland, Riordan, & Brack, 1994).

Many of these orientation programs are filled with programs and seminars designed to make the first year student feel more at ease within the campus environment (Astin, 1998; Braxton, Milem, & Sullivan, 2000; Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999). Some of the more modern academic programs and activities are integrating greater faculty involvement in order to help students form positive images of the campus climate. This comes at a critical time during the adjustment period of college students, as many of them are forming their initial impressions of what their college experience is going to entail (Cravatta, 1997). The attitudes and expectations of these students can be more accurately shaped when these types of programs are utilized (Swigart & Murrell, 2001).

One example where the use of greater faculty involvement with freshmen can be witnessed is with the development of summer reading courses. These courses are designed specifically for first year students to be taken prior to their first semester of

academic coursework (Barefoot, 2000). Colleges and universities throughout the country are intentionally integrating a summer reading experience, involving first year students, into their orientation activities. James Madison University, the University of Central Arkansas, Wartburg College, the University of Connecticut, and the University of South Carolina are among the schools where common reading programs have been implemented successfully during pre-semester orientation (Pascarella, Pierson, Wolniak, & Terenzini, 2004).

Other institutions have experimented with first year initiatives to help improve student retention rates as well as limit behavior problems. In 1999, the University of North Carolina at Chapel Hill began a series of first year seminars taught entirely by tenured faculty. The goal was to improve the level of interaction between first year students and senior faculty (Barefoot, 2000). It was theorized that if students could interact with faculty more frequently during their initial time on campus, the students would be less intimidated by faculty members when problems arose during the course of a normal semester (Thompson & Thornton, 2002). At Duke University administrators chose to move all first year students living on campus, to one central location. While living together these students were exposed to specifically designed programs which sought to address the needs of first year students exclusively (Pitkethly & Prosser, 2001).

In 1998, the University of Texas established a pilot Freshman Interest Group (FIG). The purpose of this program was to match small groups of freshman students together in common classes and provide them with multiple levels of co-curricular enrichment activities (Pascarella, Pierson, Wolniak, & Terenzini, 2004). By the fall of 2001, nearly 40 percent of their first year students were in these groups. At the University

of Delaware a similar program was established in 2000. Under this program first year students are also placed together in residence halls and given several opportunities to become involved together in learning activities (Landrum, 2003).

Most successful intervention efforts build some sort of evaluation or assessment module into their programs. As Creamer (1989) suggests maintaining these assessment requirements are essential in order for an intervention strategy to function properly. The assessments will typically be comprised of students whom are taken from the study that is being examined, as well as any relevant environmental factors that may affect the research study. North Carolina State University builds evaluation into its entire first year student program. At the University of Rhode Island, educators collect qualitative and quantitative data from students, faculty, and peer mentors regarding first year initiatives that are implemented. As Cutright (2002) suggested, "These assessment efforts are the key to strategy improvement and deep integration of a first year focus into the university's priorities" (p. 45).

Strategy Combinations

Researchers have demonstrated that there is no one, single strategy, course, or intervention that will yield all of the desired outcomes pertaining to keeping students enrolled at college through their intended graduations (Braxton, Milem, & Sullivan, 2000; DeBerard, Spielmans, & Julka, 2004; Dervarics & Roach, 2000; Kern, Fagley, & Miller, 1998; Landrum, 2003; Lau, 2003; Lenning, Beal, & Sauer, 1980; Noel, Levitz, & Saluri, 1985; Owen, 2003). However, when a college or university consistently maintains a strong partnership between its academic and student affairs divisions they are more likely to witness positive results with their retention efforts

(Howard-Hamilton & Sina, 2003). Also having a strong communication link between all members involved, remains an integral part to any effective intervention strategy.

Several different approaches have been used in the design of intervention Strategies (Deci, Vallerand, Pelletier, & Ryan, 1991; Fazey & Fazey, 2001; King & Howard-Hamilton, 2000; McInnis, 2001). Each approach carries with it a multitude of both positive and negative attributes. While no single program, is totally replicable, there is much to learn by examining each of them. Although each college and university is unique in its own right, there are some commonalties that each of them share (Thompson & Thornton, 2002). Some examples of the tactics that an institution might use may include: general-education reform, the use of learning communities, the establishment of student peer leaders as instructional assistants to faculty, and participation in national benchmarking studies (Pitkethly & Prosser, 2001).

Summary

As colleges and universities have begun to place greater emphasis on retaining their students the significance of retention efforts has increased exponentially (Lau, 2003). Additionally the connection between institutional commitment and retention has been demonstrated frequently within the literature (Astin, 1991; Bandura & Schunk, 1981; Bean, & Metzner, 1985; Deci & Ryan, 1985; Erikson, 1980; Noel, Levitz, & Saluri 1985; Pace, 1984; Terenzini & Pascarella, 1980; Tinto, 1993; Zemke, & Zemke, 1988). The desire to improve retention and graduation rates can be found at all institutional types including: public, private, two-year junior colleges, or four-year universities.

By focusing efforts on the first year student population, researchers can look for specific at-risk characteristics that incoming students may have upon arrival at the academic institution. Concurrently, this will enable any intervention strategy being considered to become more efficient and relevant to the unique needs of that institution's population (Smith, 1993). Because there are a variety of higher educational institutions, each intervention strategy should be implemented while maintaining awareness of the specific needs of that unique college or university setting (Ortiz, 1995).

CHAPTER III

METHODS

Introduction

This chapter will present the research methods that were utilized for this study. The research questions that were analyzed will also be explored. The population sample that was employed will be shown. The data collection process will be demonstrated as well. The LASSI instrument will be explained as well as four of its scales that were used within this study.

The purpose of this study was to examine the relationship between freshman participation in a study skills course and success at a southeastern university. In addition, the impact of courses on student grade point averages and graduation and retention rates were examined. Analysis of grade point averages of freshman enrolled in the Fall 2001, student retention rates over a period of 11 consecutive semesters (Fall 2001 through Spring 2005), and graduation rates was completed. The effect of the variables gender, race, and age on graduation and retention was determined. These same factors were examined within the control group which was comprised of students who did not complete a study skills course during the same time period as the intervention group: Fall semester 2001. The data set from this group was randomly determined and provided by the Office of Institutional Research at the southeastern university.

For students who successfully completed a study strategies course, LASSI (Learning and Study Skills Inventory) scores were analyzed and recorded. The LASSI instrument consists of ten scales. These scales consist of anxiety; attitude; concentration; information processing; motivation; selecting main ideas; self testing; study aids; test strategies; and time management. For the purpose of this study, four of the scales that were viewed as most relevant were used: attitude, anxiety, concentration, and motivation (Weinstein, Palmer, & Schulte, 1987).

Research Questions

The freshman students were divided into two groups: those who completed a study strategies course and those who did not, for the five consecutive years that began with the Fall 2001 semester and ended with the students remaining from those populations at the end of the Spring 2005 semester. The following research questions were used:

1. What is the relationship between those that participated and those that did not participate in a study strategies course and graduation?
2. What is the relationship between those that participated and those that did not participate in a study strategies course and grade point averages?
3. What is the relationship between those that participated and those that did not participate in a study strategies course to gender, ethnicity, and age?
4. What is the relationship between graduation and learning style scores as measured by the LASSI, for those who completed a study strategies course?

Population Sample

For this study two groups were observed: a control group consisting of students who did not complete a study strategies course and an intervention group consisting of students who did complete a study strategies course. The primary sample for this study was 336 freshman students who were enrolled in a southeastern university during the semester of Fall 2001. The freshman students enrolled during that semester successfully completed a one credit hour study skills course. The students were distributed among 15 course sections. The average class size was 22.4 students, with the highest class number at 26 and the lowest with 14 students. From the group 158 were males and 178 were females. The average age of the students was 18 years old. During the semester within each section, students were administered the Learning and Study Strategies Inventory (LASSI); (Weinstein, Palmer, & Schulte, 1987). This instrument was used to measure self-reported thoughts and behaviors believed to be related to successful learning.

The secondary sample was comprised of approximately 336 students who were enrolled at the same university during the semester of Fall 2001. The students from this group did not complete a study skills course during the same time period that the intervention group had done so. This group consisted of 154 males and 182 females. The average age of the students from the secondary population was also 18 years of age. The data set from this group was randomly determined and organized without any identifying information provided. This data set was created and distributed to the researchers by the Office of Institutional Research at the southeastern university.

Procedures

The study strategies course is a one credit hour course that meets for one hour per week throughout each semester. Instructors who teach the courses are comprised from a mix of graduate students, full time faculty, and professional staff. Before a position is offered to any candidate they undergo a brief interview to determine their compatibility with this position. Training sessions for the instructors are held each month during an academic semester. At the completion of the teaching semester, each instructor receives a monetary stipend to cover class expenses. The division of Student Affairs provides funding and coordination for all study strategies courses. Revenue generated through summer orientation programs pay for the instructional component. All instructors meet SACS (Southern Association of Colleges and Schools) standards for teaching. Instructors are paid $500 per semester for teaching one course each semester.

Measures

In order to examine the relationship between freshman participation in a study skills course and success, several measures were analyzed. Analysis of cumulative grade point averages of freshman enrolled in the Fall 2001 study strategies course were observed over a period of 11 consecutive semesters (Fall 2001 through Spring 2005). At the end of that time frame, the conclusion of the Spring 2005 semester, graduation and retention factors were examined and recorded. The effect of the variables gender, race, and age on graduation and retention was also determined. For students who successfully completed a study strategies course, LASSI (Learning and Study Skills Inventory) scores were analyzed and recorded.

The LASSI was developed at the University of Texas at Austin by Claire E. Weinstein, Ph.D., Ann C. Schulte, Ph.D., and David R. Palmer, Ph.D. This instrument is designed to measure students' use of learning and study strategies. The LASSI instrument consists of ten scales. These scales consist of anxiety; attitude; concentration; information processing; motivation; selecting main ideas; self testing; study aids; test strategies; and time management. The Selecting Main Ideas scale contains 5 items. All other scales contain 8 items. Coefficient Alphas for the scales range from a low of .68 to a high of .86 and test-retest correlation coefficients for the scales range from a low of .72 to a high of .85, demonstrating a high degree of stability for the scales scores (Weinstein, 1987).

The developmental work that led to the creation of the LASSI began as part of the Cognitive Learning Strategies Project at the University of Texas at Austin. In response to increasing numbers of academically under-prepared students who were entering college for the first time, many institutions were creating intervention programs to address student deficiencies. However, one major problem that arose over time related to the lack of assessment that was taking place. It was believed that by completing an accurate diagnosis of entry level skills educators could then create individualized prescriptions for improvement as well as provide a basis for evaluating the effectiveness of the course or program (Weinstein, 1987).

The authors of the LASSI began their work by focusing their efforts on data collection. An analysis was made of existing published and experimental instruments and inventories. It was discovered that the topics encompassed by the terms "study skills" and "learning strategies" varied considerably among researchers, practitioners, and assessment measures. Since there was no consensus concerning definitional components,

the initial phases of this work involved an attempt to create a categorical scheme. To assist in this work a survey project was conducted to examine the contents of study skills books, manuals, and programs. Input was also gathered from a series of experts in the area (Weinstein, 1987).

Using the data gathered in the first series of studies, an initial item pool was created. This pool of 645 items was drawn from all of the sources used in the early developmental stage. These items were sorted by expert judges using a tentative categorical scheme that was developed (Weinstein, Palmer, & Schulte, 1987).

During the process of sorting the items, two major problems were identified: first, many items were close duplicates; second, a number of items fit into more than one category. The first problem was resolved by eliminating duplicate items and the second was left to be addressed after the initial pilot tests when the categorical scheme could be revised based on both the descriptive and correlational data collected. In addition, items that did not directly deal with study practices (personality characteristics) and items whose content concerned an aspect of behavior or experience that could not be altered and therefore could not be a target for remediation were eliminated (Weinstein, 1987).

As a result of these selection processes, the pool of potential items was reduced to 291. Although the LASSI currently uses a Likert-type scale, these initial pilot items were converted to a true-false format. Approximately half of the items were worded positively and half negatively.

LASSI Pilot Testing

A preliminary pilot test was conducted to evaluate the administration procedures and to begin collecting psychometric data about the items. Different groups of students completed approximately one third of the items as well as a measure of social desirability and a questionnaire about the items and administration procedures. A subset of this population was also interviewed (Weinstein, Palmer, & Schulte, 1987).

Based on an analysis of this data set and its relation to other student data such as ACT/SAT scores, grade point average, and high school rank, a number of changes were made. First, the format was changed to a Likert-type measure. If necessary, items were reworded. Next, items correlating above .50 with the measure of social desirability were eliminated. In addition to eliminating items from the potential pool, a number of new items were added. The sources of these new items included: a survey of current research literature in cognitive psychology, responses from students on the post experimental questionnaire, suggestions from practitioners, and student responses on the Learning Activities Questionnaire, a precursor of the LASSI developed as part of the project (Weinstein, 1987). Two content matter specialists and two psychometricians then examined this new pool of items independently. A revised set of 14 categories containing at least 7 items for each category was created. This version of the LASSI had 149 items.

A second pilot test was conducted to evaluate the administration procedures and to examine the properties of the items on the revised instrument (Weinstein, Palmer, & Schulte, 1987). The descriptive data collected and the student comments made during the feedback portion of the administration sessions were used to establish criteria for selecting items for the field test version of the LASSI. This version of the LASSI had

130 items. In addition, a preliminary study of test-retest reliability (with a 3- to 4-week interval) was conducted. A test-retest correlation of .88 was computed for the total instrument (Weinstein, 1987).

LASSI Scale Construction

A series of field tests was conducted over a 2- year period. During this period the number of items was reduced from 130 to 90, and 10 scales measuring clusters of learning strategies, study skills, attitudes and beliefs were developed. These clusters were identified by groups of experts and refined using psychometric data, such as Coefficient Alpha, for each potential scale (Weinstein, 1987). In addition, preliminary norms were developed using the Fall 1982 incoming freshman class at a small private college in the eastern United States (with a representative student body). A total of 850 students participated, with complete data available for 780 students (Weinstein, Palmer, & Schulte, 1987). The scales were refined and thirty new items were created and added prior to another large scale field test in 1984. Item analysis data were used to create the 77-item form of the LASSI. Norms were developed using a sample of 880 incoming freshman from a large southern university. Test-retest correlations (3-week intervals) were computed on a sample of 209 students from an introductory course in communications at the same school (Weinstein, 1987).

A number of different approaches were used to examine the validity of scores from the LASSI. First, the scale scores were compared, where possible, to other tests or subscales measuring similar factors. Second, several of the scales were validated against performance measures. Finally, the LASSI was subjected to repeated tests of user validity (Weinstein, 1987). Professors, advisors, developmental educators, counselors,

and learning center specialists at more than 30 colleges and universities used the LASSI on a trial basis. They reported few, if any, administration problems and a high degree of usefulness in their settings.

Description of the LASSI Scales

The LASSI is a 77- item scale with each item rated on a 5 point scale (a = not at all typical of me and e = very much typical of me). The entire range is as follows:

a = Not at all typical of me

b = Not very typical of me

c = Somewhat typical of me

d = Fairly typical of me

e = Very much typical of me

The LASSI yields 10 individual scale scores, one for each of the 10 scales. Because the LASSI is a diagnostic instrument, no total score is computed. These scale scores are then compared numerically or graphically to the norms provided. The data provided with the LASSI includes percentile score equivalents. Based on a student's scale scores, either in relation to the national norms included with the instrument or on a percentile cut-off score of 75% determinations can then be made in addressing the unique needs of a particular student (Weinstein, 1987). The four scales used for the purpose of this study include: attitude, anxiety, concentration, and motivation. The attitude scale has a coefficient alpha of .86 and a test-retest correlation coefficient of .85. The anxiety scale has a coefficient alpha of .81 and a test-retest correlation coefficient of .83. The

concentration scale has a coefficient alpha of .84 and a test-retest correlation coefficient of .85. The motivation scale has a coefficient alpha of .81 and a test-retest correlation coefficient of .84. A test-retest correlation of .88 was computed for the total instrument (Weinstein, Palmer, & Schulte, 1987). The authors of the LASSI did not provide statistical data in relation to the validity of the scores from the LASSI.

Anxiety Scale

According to Weinstein (1987), "Current conceptions of anxiety emphasize the interactive effects of our own thought processes, beliefs, and emotions and how they affect academic performance" (p. 32). Cognitive worry which is considered a major component of anxiety is often manifested in the negative self-referent statements that students make to themselves. These negative thoughts or feelings concerning one's abilities or perceived likelihood of success, can divert a student's attention away from more relevant academic tasks such as reading or preparing for a test. When students become anxious about studying or performing in academic situations, their attention will be diverted away from the academic task and focused inward causing them to manifest irrational fears (Weinstein, Palmer, & Schulte, 1987). Students' scores on this scale measure how tense or concerned they are when approaching academic tasks. Students who score low on this measure (indicating high anxiety) may need assistance in learning techniques for coping with anxiety.

Many qualified students are often incapable of demonstrating their true level of knowledge and skill because they are paralyzed or distracted by debilitating anxiety. In fact, helping some students learn how to reduce their anxiety is sufficient for helping

them to improve their performance. Once these additional blocks are removed, many students show large increases in performance. The anxiety scale has a coefficient alpha of .81 and a test-retest correlation coefficient of .83 (Weinstein, 1987).

Items on this scale address the degree to which students worry about their performance. Do students worry so much that it is difficult for them to concentrate? Are they easily discouraged about grades?

Sample items:

When I am studying, worrying about doing poorly in a course interferes with my concentration.

I feel very panicky when I take an important test.

Attitude Scale

Students' general attitudes toward school and their general motivation for succeeding in school can have a great impact on their perseverance when studying, particularly in situations where they may need to study alone (Weinstein, Palmer, & Schulte, 1987). Students' scores on this scale measure their general attitudes and motivation for succeeding in school and performing the tasks related to school success. Students who score low on this measure may need to work on higher-level goal setting and reassess how school fits into their future. If school is not seen as relevant to the student's life goals and attitudes, then it will become difficult for the student to generate the high level of motivation needed to take responsibility for their own learning and skill development. The attitude scale has a coefficient alpha of .86 and a test-retest correlation coefficient of .85 (Weinstein, 1987).

Items on this scale address attitude and interest in college. How clear are students about their own educational goals? Is school important or worthwhile to them?

Sample items:

I do not care about getting a general education, I just want to get a good job.

I only study the subjects I like.

Concentration Scale

Concentration helps students to focus their attention on school-related activities, such as studying and listening in class, rather than on distracting thoughts, emotions, feelings, or situations. People have a limited capacity to process what is going on around them and in their own thoughts; if they are distracted, there will be less capacity to focus on the task at hand (Weinstein, Palmer, & Schulte, 1987). Students' scores on this scale measure their abilities to concentrate and direct their attention to school and academic related tasks, such as preparing for an exam. Learning techniques for focusing attention and maintaining concentration helps students implement effective learning strategies and can make learning and studying both more effective and more efficient. Students who score high on this measure are effective at focusing their attention and maintaining a high level of concentration. Students who score low on this measure are less successful at focusing their attention on the task at hand by eliminating interfering thoughts, emotions, feelings, and situations The concentration scale has a coefficient alpha of .84 and a test-retest correlation coefficient of .85 (Weinstein, 1987).

Items on this scale address students' ability to pay close attention to academic tasks. Are they easily distracted? Can they direct their attention to school tasks?

Sample items:

My mind wanders a lot when I study.

If I get distracted during class, I am able to refocus my attention.

Motivation Scale

The Attitude Scale measures students' general attitudes toward school and their general motivation for succeeding in school. However, although general attitudes and motivation levels are important, so is a student's motivation to perform the specific tasks related to achievement. The degree to which students accept responsibility for studying and for their performance is reflected in the everyday behaviors they exhibit related to school and school tasks (Weinstein, Palmer, & Schulte, 1987). These behaviors might include: reading the textbook, preparing for class, finishing assignments on time, and being diligent in studying, even if the topic is not particularly interesting to them. Students' scores on this scale measure the degree to which they accept responsibility for performing the specific tasks related to school success. Students who score low on this measure may need to work on goal setting at the more specific level of individual tasks and assignments. The motivation scale has a coefficient alpha of .81 and a test-retest correlation coefficient of .84 (Weinstein, 1987).

Items on this scale address students' diligence, self-discipline, and willingness to work hard. Do they stay up-to-date in class assignments? Do students easily lose interest in their classes?

Sample items:

When work is difficult I either give up or study only the easy parts.

I set goals for the grades I want in my classes.

Data Collection and Procedures

The data used in this study were made available beginning with the Fall 2001 semester. Any data relating to time periods prior to this were inaccessible. From the Fall 2001 semester through the Spring 2005 semester data were examined. In order to complete the study in a timely manner, Spring 2005 was chosen as a cut off date so that the data could be analyzed appropriately.

The success strategies course is designed to help students gain a better understanding of the learning process and the relationship of higher education in their lives. In helping the student make the adjustment to the academic environment topics such as reading, writing, information processing, self and group assessment, personal development, critical thinking, communication, teamwork, problem solving, time management, and self-management are frequently areas of discussion. These topics are covered using the following techniques: lectures; hand-outs; videos; guest speakers; walking tours; and power point presentations. One component of the course allows students to undergo the experience of employing a learning instrument to learn about their academic strengths and weaknesses.

For the time frame of this study the LASSI instrument was used. Data was collected using the LASSI because it was previously built into the course requirements of the Study Strategies class. Copies of the instrument are purchased directly from the publisher. During one of the class meetings at the beginning of the semester, students were administered the LASSI instrument by instructors of the study strategies courses. Each student within the course was given a copy that was used during the class at no charge to them. Before completing the LASSI students were debriefed about the purpose

of the LASSI and given additional information regarding study strategy techniques that would be covered through the semester in the course. Instructions were provided on how to complete the LASSI. Students were allowed to use a percentage of the class time to complete the instrument which was approximately 35 minutes.

Once all of the students had completed the LASSI they were instructed on how to score the instrument. As an out of class assignment the students were required to examine their scores and write a brief narrative on their results to be turned in at the next class meeting. Additionally, during the following class meeting any questions regarding interpretation of the scores was discussed. Information was also provided on how students could improve various aspects of their study habits.

Longitudinal data from study skills course participants was analyzed from the period of Fall 2001 through Spring 2005. The cumulative GPA's of these students were reviewed and compared to a control group comprised of similar students taken from the overall freshman class from the Fall 2001. Data relating to this group was randomly determined and provided by the Office of Institutional Research. The students from this group did not complete a study skills course during the same time period as the intervention group: Fall semester 2001. Otherwise the group was similar in other contrasting factors to members of the intervention group in regard to age, gender, race, college affiliation, and major. The study used pre-existing data and was approved by the Institutional Review Board and conducted in accordance with the American Psychological Association ethical Guidelines (see Appendix A). Permission for use of

data from study skills course was obtained from the supervisor of the research project (Appendix B). Permission to use information relating to the comparison group was provided by the Office of Institutional Research (Appendix C).

Relating to the control group, the researcher was originally provided with a large data file of students, numbering in the thousands, each possessing similar characteristics to the intervention group. A random numbers table was used to select a more manageable number of students which was closer in size to the number of students within the intervention group, approximately 336 students. Some of the students had ACT scores while others had SAT scores. Due to this occurrence scores from both the ACT and SAT exams were transformed into *z* scores so that a proper analysis could be completed. ACT test scores were used when available. Members from both samples that did not have either SAT or ACT scores were eliminated. From the intervention group this brought the total from 336 students to 317. The statistical results lend support for the researcher's hypothesis that students who complete a study strategies course are more likely to graduate than students who do not choose to take a study strategies course.

The study used an archival research design that involved a non-experimental strategy that analyzed existing student records employing several statistical techniques to analyze the data. Factor analysis of variance (ANOVA) was used as the statistical analysis technique best suited to address those hypothesis dealing with the impact of the independent variables on first-year GPA because GPA is a single, metric dependent variable. Logistic regression was chosen as the analytical technique to address those hypotheses dealing with the impact of the independent variables on retention because retention is binary, non-metric dependent variable.

Summary

The purpose of the study was to examine the impact of study skills courses on student grade point averages and graduation rate for first year students. The freshman students were divided into two groups: those that participated in a study strategies course and those who did not, for five consecutive years beginning with the Fall 2001 semester and ending with the Spring 2005 semester. For students who successfully completed a study strategies course, LASSI (Learning and Study Skills Inventory) scores were also analyzed and recorded.

This population sample was chosen because retention is an important concern specifically among first year students. Students are at their most vulnerable in the first year in terms of their likelihood of academic failure (Pascarella & Terenzini, 1991). From the institutional perspective, first-year is a priority since it is recognized that attrition is costly for both individuals and universities. Retention rates for all college freshmen have been declining since the early 1980's with a significantly large decrease occurring during the middle of the 1990's (Cravatta, 1997). This surge in student attrition was an alarming fact that drew the notice of the educational community. As a result, the number of first year programs and initiatives has increased involving student retention issues (Owen, 2003). The goal of the current study was to determine the effects these courses were having on the students they were serving.

In this chapter the methods and approaches used to collect data and the empirical evaluation of the data were discussed. In Chapter IV the results of the study, a description of the sample, and analysis of the research questions will be presented.

CHAPTER IV

RESULTS

This chapter will present results of the study. Data to answer each of the research questions will be presented and analyzed. The analyses will be followed by discussion. The SPSS statistical system was used for the computation in the analysis of the data.

Purpose of the Study

The purpose of the study was to complete a longitudinal investigation to examine the impact of study strategies courses on freshmen retention, grade point averages, and graduation rates at a southeastern, state-supported, land-grant university. This population was chosen because retention is an important concern among first year students. Students are at their most vulnerable point during their first year of study in terms of their likelihood of academic failure (Pascarella & Terenzini, 1991). From the institutional perspective, first year is a priority since it is recognized that attrition is costly for both individuals and universities.

Research Questions

To determine the effects of taking a study strategies course the following questions were considered:

1. What is the relationship between those that participated and those that did not participate in a study strategies course and graduation?

2. What is the relationship between those that participated and those that did not participate in a study strategies course and grade point averages?
3. What is the relationship between those that participated and those that did not participate in a study strategies course to gender, ethnicity, and age?
4. What is the relationship between graduation and learning style scores as measured by the LASSI, for those who completed a study strategies course?

Research Question 1

Question 1 asked for the relationship between participating in a study strategies course and graduation. The results of a Pearson Chi Square Test indicated that statistical significance was reached χ^2 (1, N = 653) = 6.022, p = .014, Cramer's $\underline{V}$ = .096. From the group of 317 students that participated in a study strategies course 239 (75%) did graduate while the remaining 78 (25%) did not graduate by the Spring 2005 semester, as shown in Table 1. From the group of 336 who did not participate in a study strategies course 224 (67%) did graduate while the remaining 112 (33%) did not graduate by the Spring 2005 semester, as shown in Table 2. From the total group N = 653 consisting of both samples, there were 463 students (71%) who did graduate and 190 students (29%) who did not graduate by the Spring 2005 semester as shown in Table 3. The statistical results lent support to the researcher's hypothesis that students who complete a study strategies course are more likely to graduate than those students who choose to not take a study strategies course.

Table 1

Graduation Rate and Participation in a Study Strategies Course

Graduation status	Students	Percentage
Did graduate	239	75%
Did not graduate	78	25%
Total	317	100%

Table 2

Graduation Rate and Non-participation in a Study Strategies Course

Graduation status	Students	Percentage
Did graduate	224	67%
Did not graduate	112	33%
Total	336	100%

Table 3

Graduation Rate for Participation and Non-participation in a Study Strategies Course

Graduation status	Students	Percentage
Did graduate	463	71%
Did not graduate	190	29%
Total	653	100%

Research Question 2

Research question 2 assessed the relationship between the completion of a study strategies course (the independent variable) and grade point averages (the dependent variable). The results of the analysis of variance (ANOVA) was statistically significant F (1, 606) = 189.144, p< .001. These results indicated that students who completed a study strategies course earned higher GPA's than students who did not complete such a course. Using an alpha level of .05, Levine's Test of Equality of Error Variances indicated that the assumption of equality of variances across population groups represented by the sample was violated, F (1, 606) = 16.36, p<.001. Therefore the results should be viewed with caution. The grade point average mean for students who took the class (M = 2.86) was higher than the mean for students who did not take the study strategy course which was (M = 2.28). Additionally the effect size was large, $\eta^2 = .238$. The statistical results lent support to the researcher's hypothesis that students who complete a study strategies course will tend to have higher grade point averages.

Research Question 3

Question 3 asked about the relationship between graduation and the variables: gender, ethnicity, and age for those who completed a study strategies course. The results from a Pearson Chi Square Test indicated that there were statistically significant differences in graduation based on gender, χ^2 (1, N = 653) = 4.500, p = .034, Cramer's $\underline{V}$ = .083. From the overall sample N = 653 there were 331 females (51%) along with 322 males (49%). From the total of those who graduated which was 463, females comprised 247 or (75%) of the group while males made up the remainder of the group at 216 or (25%). From the total group of students who failed to graduate which was

190, there were 84 females (44%) and 106 males (56%). These results are similar to the national trend of females graduating at higher rates than males (DeBerard, Spielmans, & Julka, 2004; Hassel & Lourey, 2004; Strauss & Volkwein, 2004; Thompson & Thornton, 2002). Additionally females as a whole tend to enroll in study strategies courses of this nature more so than their male counterparts (Cutright, 2002; Lau, 2003; Strauss, 2000). The statistical results lent support to the researcher's hypothesis that students who complete a study strategies course and go on to graduate, are more likely to be female than male.

When ethnicity was examined it was noted that the percentage of ethnic groups other than Caucasian taken from the samples was too small for an appropriate analyses to be completed. As a result, ethnicity was taken out in order to maintain the integrity of the analysis. The percentage of representatives comprising each ethnic group are listed as follows: Asian (1%), Black (2%), Caucasian (95%), Hispanic (1%), and Other (1%).

The ages 18 and 19 were used because of the large number available from these groups and also because there were not enough students collectively from any other age group to effectively use in the analysis. From the total group of students comprising both 18 and 19 years of age, which was 645, there were 430 or (67%) from the age 18 group while the remaining 215 or (33%) were found in the age 19 group. In terms of graduation from the total number of 430 that comprised the age 18 group 301 or (70%) did graduate while the remaining 129 or (30%) did not graduate. From the total number of 215 that comprised the age 19 group 155 or (72%) did graduate while the remaining 60 or (28%) did not graduate. The results from a Pearson Chi Square test was statistically significant for graduation rate by age χ^2 (1, N = 645) = .122, p = .727, Cramer's $\underline{V}$ = -.014. The

statistical results lent support to the researcher's hypothesis that students who complete a study strategies course at age 18 are more likely to graduate than students who complete a study strategies course at age 19. This would seem to indicate that the earlier an intervention strategy of this nature can be introduced to a student, it is more likely that the strategy will produce positive benefits including retention and ultimately graduation.

Research Question 4

Question 4 asked for the relationship between graduation (the independent variable) and scores on the LASSI (the dependent variable) for those who completed a study strategies course. The four scales that were utilized included: attitude, anxiety, concentration, and motivation. For the first scale, attitude, by using an alpha level of .05, Levine's Test of Equality of Error Variances indicated that the assumption of equality of variances across population groups represented by the sample was violated, F (1, 286) = 12.427, $p < .001$. Therefore the results should be viewed with caution. The analysis using attitude as the dependent variable was statistically significant F (1, 286) = 178.719, $p < .001$. The mean for students who graduated (M = 27.09) was higher than the mean for students who did not graduate (M = 18.32). See Table 4 for group means and standard deviations. Additionally the effect size was large, $\eta^2 = .385$. The statistical results lent support to the researcher's hypothesis that students who scored higher on the LASSI attitude scale were more likely to graduate that students who scored lower on the same scale.

Table 4

LASSI Scale Attitude

Graduation status	N	Mean	Std. Deviation
Did graduate	217	27.08	5.04
Did not graduate	71	18.32	3.91

For the second scale, anxiety, using an alpha level of .05, Levine's Test of Equality of Error Variances indicated that the assumption of equality of variances across population groups represented by the sample was not violated, F (1, 286) = 1.847, $p < .001$. The analysis using anxiety as the dependent variable was statistically significant F (1, 286) = 188.441, $p < .001$. Furthermore the effect size was large, $\eta^2 = .397$. Relating to the LASSI scale anxiety, the mean for students who graduated (M = 26.48) was higher than the mean for students who did not graduate (18.56). See Table 5 for group means and standard deviations. The statistical results lent support to the researcher's hypothesis that students who scored higher on the LASSI anxiety scale were more likely to graduate that students who scored lower on the same scale.

Table 5

LASSI Scale Anxiety

Graduation status	N	Mean	Std. Deviation
Did graduate	217	26.47	4.37
Did not graduate	71	18.56	3.67

For the third scale, concentration, using an alpha level of .05, Levine's Test of Equality of Error Variances indicated that the assumption of equality of variances across population groups represented by the sample was violated, F (1, 286) = 25.730, $p < .001$. Therefore the results should be viewed with caution. The analysis using concentration as the dependent variable was statistically significant F (1, 286) = 68.515, $p < .001$. Additionally the effect size was large, $\eta^2 = .193$. Relating to the LASSI scale concentration, the mean for students who graduated (M = 24.92) was higher than the mean for students who did not graduate (17.70). See Table 6 for group means and standard deviations. The statistical results lent support to the researcher's hypothesis that students who scored higher on the LASSI concentration scale were more likely to graduate that students who scored lower on the same scale.

Table 6

LASSI Scale Concentration

Graduation status	N	Mean	Std. Deviation
Did graduate	217	24.92	6.93
Did not graduate	71	17.70	4.23

For the fourth scale, motivation, using an alpha level of .05, Levine's Test of Equality of Error Variances indicated that the assumption of equality of variances across population groups represented by the sample was violated, F (1, 286) = 32.182, $p < .001$. Therefore the results should be viewed with caution. The analysis using motivation as the dependent variable was statistically significant F (1, 286) = 77.530, $p < .001$.

Additionally the effect size was large, $\eta^2 = .213$. Relating to the LASSI scale motivation, the mean for students who graduated (25.16) was higher than the mean for students who did not graduate (18.11). See Table 7 for group means and standard deviations. The statistical results lent support to the researcher's hypothesis that students who scored higher on the LASSI motivation scale were more likely to graduate that students who scored lower on the same scale.

Table 7

LASSI Scale Motivation

Graduation status	N	Mean	Std. Deviation
Did graduate	217	25.15	6.27
Did not graduate	71	18.11	4.27

Summary

The statistical analyses completed during this study lent support to the researcher's hypothesis that students who complete a study strategies course are more likely to exhibit a specific series of behaviors than students who do not complete a study strategies course. These behaviors include graduating at a higher rate and earning higher grade point averages throughout their academic careers. Additionally those students who complete a study strategies course and score higher on the four LASSI scales: attitude, anxiety, concentration, and motivation tend to succeed academically as well as achieve higher graduation rates.

In Chapter 4 the results of the study were introduced. Data relating to the research questions was presented and analyzed. Chapter 5 will provide the implications to the analyses along with conclusions and recommendations based on the findings.

CHAPTER V

DISCUSSION AND RECOMMENDATIONS

Discussion

This chapter will consist of a summary of the research and recommendations based on the findings. The conclusions of this study will be presented as they relate toward specific research questions. The purpose of this study was to examine the impact of study skills courses on student grade point averages and graduation rate for first year students. The freshman students were divided into two groups: those that participated in a study strategies course and those that did not, for a period of eleven consecutive semesters, beginning Fall 2001 and ending Spring 2005. The following research questions were used:

1. What is the relationship between those that participated and those that did not participate in a study strategies course and graduation?
2. What is the relationship between those that participated and those that did not participate in a study strategies course and grade point averages?
3. What is the relationship between those that participated and those that did not participate in a study strategies course to gender, ethnicity, and age?
4. What is the relationship between graduation and learning style scores as measured by the LASSI, for those whop completed a study strategies course?

The retention of first year college students remains an essential concern for educational administrators. The widespread goal of solving the retention challenge has been undertaken by nearly all types of higher educational institutions, whether they are public, private, two-year junior colleges, or four-year universities (Pascarella & Terenzini, 1991). According to Lau (2003), "Since the 1980s, American institutions have experienced a major problem retaining students, particularly under-represented minorities" (p. 126). The problem of retention is often linked with falling graduation rates and lower grade point averages (GPA's). As many educators have discovered the phenomenon that is retention is very complex and has many issues within it, each carrying their own weight and significance (Astin, 1984; Chickering & Reisser, 1993; Dervarics & Roach, 2000; Pace, 1984; Pascarella, 1985; Pascarella & Terenzini, 1991; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Tinto, 1987, 1993).

The connection between institutional commitment and retention has been demonstrated throughout numerous studies (Astin, 1991; Bandura & Schunk, 1981; Bean, & Metzner, 1985; Deci & Ryan, 1985; Erikson, 1980; Noel, Levitz, & Saluri 1985; Pace, 1984; Terenzini & Pascarella, 1980; Tinto, 1993; Zemke, & Zemke, 1988). Consequently, the influences on student retention are shared among the wide range of institutions in higher education. Regardless of size, location, or scope of study colleges and universities share a common goal of wanting the students who enroll at their institutions to successfully complete their studies and graduate with an earned degree from their respective school (Cravatta, 1997). Additionally this has caused an increase in

literature relating to the improvement of retention or new intervention techniques (DeBerard, Spielmans, & Julka, 2004; Dervarics & Roach, 2000; Landrum, 2003; Lau, 2003; Owen, 2003).

Leaders from within higher educational institutions have been placing greater emphasis on retention consistently for over the past twenty five years (Swigart & Murrell, 2001). Most educators tend to agree that student retention is an important indicator of student success (Astin, 1984; Bandura, 1989; Braxton & Brier, 1989; Chickering, & Reisser, 1993; Creamer, 1989; Erikson, 1982; Kohlberg, 1984; Pascarella, & Terenzini, 1991; Tinto, 1987; Upcraft & Schuh, 1996). Retention rates also usually tend to have multiple effects on both a campus and its surrounding community.

When students choose to leave school early it may result in a negative effect being experienced by their host college or university. As retention rates fall, greater pressure is placed on the goal of bringing in new students to fill those empty slots. If all of these slots cannot be filled, the overall enrollment numbers may suffer. This could lead to significant financial strains being placed on the institution (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999). The high cost of recruiting new students each year is an added incentive to retain currently enrolled students.

To combat their concerns over retention, higher educational institutions have implemented various intervention strategies aimed at reducing declining retention rates at their respective schools for over the past twenty five years (Owen, 2003). Although the volume at which these programs have been developed and implemented is impressive, the assessment of the results has been less than complete (Pitkethly & Prosser, 2001).

As institutions have discovered, it is typically more cost effective to keep current students enrolled rather than constantly trying to replace them with new students each semester (Cabrera, Nora, & Castaneda, 1993). While most institutions tend to agree that retention is an important concern, they may differ in deciding the specific population to focus retention efforts on.

The first year students, or freshman, are often seen as being most vulnerable to dropping out of school prior to degree completion. As freshman students enter the college setting for the first time they are faced with a multitude of new challenges as well as opportunities. For many students these challenges along with the combined obligations of maintaining some level of academic success, proves to be more than they can endure. Without the necessary support network or the appropriate coping mechanisms, these students will often decide to leave school early before completing their degrees (Tinto, 1993).

Researchers have identified a number of reasons why a first year student might choose to leave school early. (Astin, 1984; Chickering & Reisser, 1993; Dervarics & Roach, 2000; Pace, 1984; Pascarella, 1985; Pascarella & Terenzini, 1991; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Tinto, 1987, 1993). Some of these reasons might include having low grade point averages that fall under a 2.0 measure. Another reason might involve the student delaying their entry date into college until a time that falls much later in their lives, rather than immediately after their high school graduations. When this occurs the student may forget what they had previously learned. In some cases the student may lack entirely the necessary skills needed to succeed in a college or university setting (Thompson & Thornton, 2002).

An additional reason might involve the student being a first generation college student. By falling into this category the student can be identified as being the first person in their immediate family to attend and graduate from a college or university (Chickering & Reisser, 1993). Yet another reason might involve the student working at a full-time job during the same time period they are attending college. Additional circumstances that may affect a student's decision to remain in school could include: financial reasons, a change in career goals, or the lack of desire or ability to successfully assimilate within the college environment (Braxton, Milem, & Sullivan, 2000). Through any combination of these reasons a student might decide to choose leaving school early (Astin, 1984; Chickering & Reisser, 1993; Dervarics & Roach, 2000; Pace, 1984; Pascarella, 1985; Pascarella & Terenzini, 1991; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Tinto, 1987, 1993).

Whatever the reason that causes a student to leave school early, there is little argument over the fact that all college and universities would like to see improvement made within this area to help students find the skills necessary to remain in school through their graduation (Kirby & Sharpe, 2001). To combat this mass exodus from higher educational institutions, educators have been looking for ways to help students find more opportunities that will empower them to succeed. A culmination of this search has led educators to realize that college academic achievement can often be directly linked with retention rates (Astin, 1984).

Previous research has indicated that the relationship between college academic achievement and retention does indeed exist (Chickering & Reisser, 1993; Kern, Fagley, & Miller, 1998; Tinto, 1993). As often discovered, higher academic performing students

are more likely to complete their studies than their peers who perform at a much lower standard academically (Kirby & Sharpe, 2001; McGrath & Braunstein, 1997; Ryland, Riordan, & Brack, 1994). Researchers tend to agree that retention is a fundamental indicator of students success (Braxton & Brier, 1989; Paulsen & Feldman, 1999; Ryland, Riordan & Brack, 1994; Swigart & Murrell, 2001; Thompson & Thornton, 2002).

Historically there has been a lack of research examining the long-term effects that first year student intervention programs involving study skills courses are having. There is also a gap in the research to determine if courses of this nature are providing any positive affect on student retention. As retention concerns have grown, educators have often proposed the implementation of various first year student programs. Each of these programs were designed to assist students in making their transitions to college life a successful one. Due to a lack of support, either human or financial, many of these programs were abandoned before an accurate assessment of them could be completed (Cutright, 2002). If a proper assessment had been completed it may have determined if theses programs were actually making a difference in retention and graduation rates.

Students who perform poorly academically during their freshmen year tend to be potential candidates for dropping out of school. If study skills courses can foster academic skills within first year students their likelihood of staying in school through graduation may increase exponentially (Howard-Hamilton & Sina, 2003). It is hoped that results from this study will assist with the planning and implementation of future courses designed to target first year students. In order to justify the continued use of intervention programs designed to increase student retention rates of college freshman, assessments should be completed to validate the continued existence of these programs. An early

assessment should be completed before the course is put into place. The goal here is to identify the target population of the host institution and control for as many limitations as possible. Once the course has been put into place additional assessments could be completed in order to make any necessary adjustments to the course content or delivery methods.

The purpose of this study was to complete a longitudinal investigation to examine the impact of study strategies courses on freshmen retention, grade point averages, and graduation rates at a southeastern, state-supported, land-grant university. The results of which were hoped to be both vital and relevant to the academic community. As more of these types of intervention strategies are put into practice and examined, the level of knowledge will expand within the higher education community. This will grant researchers the opportunity to shape how future intervention strategies are designed and implemented. The primary benefit of this research will be to help students successfully make the transition to college and ultimately graduate. As this occurs students will leave college better equipped to face the outside world and the challenges they will encounter.

Recommendations

Findings from Question 1 indicated that a relationship did exist between the completion of a study strategies course and graduation. From the combined population [N=653] consisting of both groups, there were 463 students (71%) who did graduate and 190 students (29%) who did not graduate by the spring 2005 semester. Of those who graduated 239 students (52%) had completed a study strategies course while the remaining 224 students (48%) had not completed a study strategies course.

From the group who did not graduate 78 students (41%) had completed a study strategies course while the remaining 112 students (59%) did not take the course.

There are different ways in which these results might be interpreted. One could argue that as a result of taking the course, those students were better prepared to face future challenges throughout their academic careers. Conversely, one might contend that the students who did succeed in the class were the type of students who were already academically prepared before entering the course and would have succeeded anyway. To make an accurate judgement future research would need to be completed.

Findings from Question 2 indicated that a relationship was also present between the completion of a study strategies course and grade point averages. The results of the statistical analysis demonstrated that students who completed a study strategies course had more favorable GPA's than students who did not complete such a course. This might lead one to assume that by competing a study skills course, a student's grade point average would increase. However it is also possible that students may have adapted to the unique style of this course and its instructor, in order to successfully receive a favorable grade. By doing so these students were actually using skills that could be translated into other classroom environments. These skills might include such behaviors as arriving at class on time, listening closely to the instructor, and taking accurate notes.

Findings from Question 3 indicated that there was also a relationship between graduation and the variables: gender, ethnicity, and age for those who completed a study strategies course. Within the statistical analysis it was found that gender reached statistical significance along with ethnicity. However the relationship between age and graduation was not statistically significant. Within the study the researcher used ages 18

and 19 because of the large numbers available from that range. Additionally there were not enough from any other age group to effectively use within the analysis.

Findings from Question 4 indicated that there was a relationship between graduation and the scores on the LASSI for those who completed a study strategies course. The four scales that were utilized included: attitude, anxiety, concentration, and motivation. These four were chosen because they were each deemed relevant due to their necessary involvement within most types of intervention efforts. According to Weinstein (1987), "Current conceptions of anxiety emphasize the interactive effects of our own thought processes, beliefs, and emotions and how they affect academic performance" (p. 32). Furthermore when students become anxious about studying or performing in academic situations, their attention will undoubtedly be diverted away from academic tasks (Weinstein, Palmer, & Schulte, 1987).

Students' general attitudes toward school and their general motivation for succeeding in school can have a great impact on their perseverance when studying, particularly in situations where they may need to study alone (Weinstein, Palmer, & Schulte, 1987). If school is not seen as relevant to the student's life goals and attitudes, it may become difficult for the student to generate motivation to take responsibility for their own learning and skill development.

Concentration helps students to focus their attention on school-related activities, such as studying and listening in class, rather than on distracting thoughts, emotions, feelings, or situations (Weinstein, Palmer, & Schulte, 1987). Learning techniques for

focusing attention and maintaining concentration helps students implement effective learning strategies and can make learning and studying both more effective and more efficient.

The degree to which students accept responsibility for studying and for their performance is reflected in the everyday behaviors they exhibit related to school and school tasks (Weinstein, Palmer, & Schulte, 1987). These behaviors might include: reading the textbook, preparing for class, finishing assignments on time, and being diligent in studying, even if the topic is not particularly interesting to them.

Based on the findings within this study it is recommended that before any type of intervention strategy is implemented the targeted population should be identified. An accurate assessment should also be completed in order to pinpoint what student populations are prevalent to that particular institution. At that point, the intervention strategy can be molded to fit the unique needs of the college or university that it pertains to. When this is done, the program or strategy will benefit students at that specific institution regardless of the academic setting.

Future studies could also be expanded to ensure a greater sense of diversity from the targeted sample. Further research, perhaps qualitative in nature, might reveal greater insight into the thought processes and individual study habits pertaining to participants taken from a variety of ethnic backgrounds. The marketing strategy of the course could also play a role in obtaining greater percentages of ethnic minorities as well as greater gender equality. Additionally a closer look at other student populations such as:

non-traditional students, part-time students, and commuter students would provide valuable information that could be used when preparing any future intervention techniques.

Although the study introduced a great deal of relevant information concerning first year student issues, within certain areas it was found that limitations existed that would need to be addressed in any subsequent research of this nature. One of these limitations involved the fact that the sample data was gathered from one southeastern, four-year university. In future studies this could be expanded to include several different types of higher educational institutions including: regional universities, private institutions, and community colleges. This is a significant factor specifically at community colleges due to the way that retention is viewed. Although many students plan to graduate, others are primarily concerned with transferring to a specific four-year institution. The definition of what a first year student is has a different meaning at a community college. Having larger numbers of non-traditional students plays a role in how intervention strategies are designed and implemented.

In addition, the geography of the study could also be extended upon. The study could be lengthened to include schools from the northern, eastern, and western regions of the United States. The study could also be expanded to include college and universities from outside the continental United States. Future studies might also use a larger dataset covering a longer period of time, since a limited timeframe was used in this study. Other variables that could be examined more closely might include high school GPA's and test scores on the ACT and SAT exams.

Another limitation involved the fact that each of the 15 sections of the study skills courses was taught by a different instructor. Because of this factor, course delivery could not be standardized in terms of a single universal approach used with every class. The variety of instructors involved with a course of this nature acts as both an asset and a liability. In one sense by having a variety of instructors the course is enriched through the diversity it allows. On the other hand when course delivery cannot be standardized it can become difficult to record and note differences among the many classes. A possible recommendation for future studies would be to have a detailed training seminar to orient instructors who will be teaching the course. This seminar could present a general outline of how the course might be structured to create a more uniform approach in content delivery.

Summary

Findings from the current research indicated that the completion of a study strategies course did provide a positive effect, in terms of graduation rate and grade point average, relative to the population that the course was designed to target. Any future intervention strategy would need to be designed to reflect the special needs of the student populations relative to that institution. Significant factors to consider include monitoring the diversity of the target sample, being aware of how the course is marketed to students, and standardizing course delivery.

The issue of student retention has steadily become a consistent concern for educators. It is hoped that through research studies of this nature potential interventions strategies can be developed, assessed, and ultimately made more efficient. If intervention strategies of this nature can result in first year students fulfilling their educational goals,

the ending result will be justifiably worth the effort that was expended. Furthermore if educators can empower students to complete their academic goals the end result will be the development of a more educated society, better equipped to face the challenges and hurdles they will encounter throughout their lives.

REFERENCES

Anderson, D., Priestly, B., & Hammond, S. (1956). *Draft report of first year student study*. Parkville: University of Melbourne.

Astin, A. W. (1977). *Four critical years: Effects of college beliefs, attitudes, and knowledge.* San Francisco: Jossey-Bass.

Astin, A. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 24*(5), 207–308.

Astin, A. (1991). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education*. New York: MacMillan.

Astin, A. (1993). *What matters in college? Four critical years revisited.* San Francisco: Jossey-Bass.

Astin, A. (1998). The changing American college student: Thirty-year trends, 1966–1996. *The Review of Higher Education, 21*(2), 115–135.

Bandura, A. (1989). Perceived self-efficacy in the exercise of personal agency, *The Psychologist, 10,* 411–424.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: W. H. Freeman.

Bandura, A., & Schunk, D. (1981). Cultivating competence, self-efficacy and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology, 41,* 586–598.

Barefoot, B. (2000). The first-year experience. *About Campus*, *4*(6), 12-19.

Bean, J. (1980). Dropout and turnover: The synthesis and test of a causal model of student attrition. *Research in Higher Education, 12*, 155–187.

Bean, J., & Metzner, B. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Higher Educational Research, 55*(4), 485–540.

Bembenutty, H. (1999). Sustaining motivation and academic goals: The role of academic delay of gratification. *Learning & Individual Differences, 11*(3), 233-258.

Braxton, J., Milem, J., & Sullivan, A. (2000). The influence of active learning on the college student departure process. *Journal of Higher Education, 7*(5), 569–590.

Braxton J., & Brier, E. (1989). Melding organizational and interactional theories of student attrition: A path analytic study. *The Review of Higher Education, 13*, 47-62.

Burke, J. (2000). Performance funding: Present status and future prospects. *New Directions for Institutional Research, 3*(97), 5-14.

Burke, J., & Modarresi, S. (2001). Performance funding programs: Assessing their stability. *Research in Higher Education, 42*(1), 51-71.

Burke, J., & Serban, A. (1998). Performance funding for public higher education: Fad or trend? *New Directions in Institutional Research, 47*(2), 74-85.

Cabrera, A., Nora, A., & Castaneda, M. (1993). The role of finances in the persistence process: A structural model. *Research in Higher Education, 33*(5), 571–593.

Cabrera, A., Castaneda, M., Nora, A., & Hengstler, D. (1992). The convergence between two theories of college persistence. *Journal of Higher Education, 63*(2), 143–164.

Cabrera, A., Nora, A., Terenzini, P., Pascarella, E., & Hagedorn, L. (1999). Campus racial climate and the adjustment of students to college. *Journal of Higher Education, 70*(2), 134–160.

Chickering, A., & Reisser, L. (1993). *Education and identity* (2nd ed.). San Francisco: Jossey-Bass.

Clark, J., & Halpern, D. (1993). The million dollar question: Can an intensive learning experience help lowest-quartile students succeed in college? *Journal of Instructional Psychology, 20*(1), 29-39.

Cravatta, M. (1997). Hanging onto students. *American Demographics, 19*(11), 41-52.

Creamer, D. (1989). Changing internal conditions: Impact on student development. In William L. Deegan, & Terry O'Banion (Eds.), *Perspectives on student development* (pp. 31-43). San Francisco: Jossey-Bass.

Cutright, M. (2002). What are research universities doing for first-year students. *About Campus, 7*(4), 16-21.

DeBerard, M., Spielmans, G., & Julka, D. (2004). Predictors of academic achievement and retention among college freshmen: a longitudinal study. *College Student Journal, 38*(1), 66-81.

Deci, E.L.,& Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Deci, E., Vallerand, R., Pelletier, L. & Ryan, R. (1991). Motivation and education: the self-determination perspective, *Educational Psychologist, 26,* 325–346.

Dervarics, C., & Roach R. (2000). Fortifying the federal presence in retention. *Black Issues in Higher Education, 17*(3), 20-28.

Doucette, D., & Dayton, L. (1989). A framework for student development practices: A statement of the league for innovation in the community college. In William L. Deegan, & Terry O'Banion (Eds.), *Perspectives on student development.* (pp. 61-71). San Francisco: Jossey-Bass.

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

Erikson, E. (1980). *Identity and the life cycle.* New York: Norton.

Erikson, E. (1982). *The life cycle completed: A review*. New York: Norton.

Evans, G., Forney, H., & Guido-DiBrito, D. (1998). *Student development in college: Theory, research, and practice.* San Francisco: Jossey-Bass.

Fazey, D., & Fazey, J. (2001). The potential for autonomy in learning: Perceptions of competence, motivation and locus of control in first-year undergraduate students. *Studies in Higher Education, 26*(3), 345-362.

Grolnick, W., & Ryan, R. (1989). Parent styles associated with children's self-regulation and competence in school, *Journal of Educational Psychology, 81,* 143–154.

Hassel, H., & Lourey, J. (2004). The dearth of student responsibility. *College Teaching, 53*(1), 1-13.

Howard-Hamilton, M. (1993). African American female athletes: Issues, implications, and imperatives for educators. *NASPA Journal, 30*(2), 153–159.

Howard-Hamilton, M., & Sina, J. (2003). How college affects student athletes. *New Directions for Student Services, 93*(2), 35-46.

Kern, C., Fagley, N., & Miller, P. (1998). Correlates of college retention and GPA: Learning and study strategies, testwiseness, attitudes, and ACT. *Journal of College Counseling, 1*(1), 26-35.

King, P. (1978). William Perry's theory of intellectual and ethical development. In L. Knefelkamp, C. Widick, and C. A. Parker (Eds.), *Applying New Developmental Findings.* San Francisco: Jossey-Bass.

King, P., & Howard-Hamilton, M. (2000). Using student development theory to inform institutional research. *New Directions for Institutional Research, 108*(3), 19-37.

Kirby, D., & Sharpe, D. (2001). Student attrition from Newfoundland and Labrador's public college. *Alberta Journal of Educational Research, 47*(4), 353-368.

Koestner, R., Bernieri, F., & Zuckerman, M. (1992). Self-regulation and consistency between attitudes, traits and behaviors. *Personality and Social Psychology Bulletin, 18,* 52–59.

Kohlberg, L. (1984). *The psychology of moral development: Moral stages and the life cycle* (Vol. 2). San Francisco: HarperCollins.

Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development.* Englewood Cliffs: Prentice Hall.

Landrum, R. (1999). Student expectation of grade inflation. *Journal of Research and Development in Education, 32*(2), 124–28.

Landrum, R. (2003). The responsibility for retention: Perceptions of students and university personnel. *College Student Retention, 3*(2), 195–212.

Lau, L. (2003). Institutional factors affecting student retention. *Education, 124*(1), 126-137.

Lenning, O., Beal, P., & Sauer, K. (1980). *Retention and attrition: Evidence for action and research.* Boulder, CO: National Center for Higher Education Management Systems.

Lim, D., & Hyunjoong, K. (2003). Motivation and learner characteristics affecting online learning and learning application. *Journal of Educational Technology Systems, 31*(4), 423-439.

Little, G. (1975). *Faces on the campus.* Parkville: Melbourne University Press.

Lu, L. (1994). University transition: major and minor stressors, personality characteristics and mental health. *Psychological Medicine, 24*, 81-87.

McCombs, B. (1991). Motivation and lifelong learning. *Educational Psychologist, 26,* 117–127.

McCombs, B., & Marzano, R. (1990). Putting the self in self-regulated learning: The self as agent in integrating will and skill. *Educational Psychologist, 25*, 51–69.

McCombs, B., & Whisler, J. (1989). The role of affective variables in autonomous learning. *Educational Psychologist, 24*, 277–306.

McGrath, M., & Braunstein, A. (1997). The prediction of freshmen attrition: An examination of the importance of certain demographic, academic, financial, and social factors. *College Student Journal, 31*(3), 396-408.

McInnis, C. (2001). Researching the first year experience: Where to from here? *Higher Education Research & Development, 20*(2), 105-115.

McInnis, C., James, R., & Hartley, R. (2000). *Trends in the first year experienc*e. Canberra: AGPS.

McInnis, C., James, R., & McNaught, C. (1995). *First year on campus: Diversity in the initial experiences of Australian graduate*s. Committee for the Advancement of University Teaching. Canberra: AGPS.

McMurtrie, B. (2000). Accreditors revamp policies to stress student learning. *The Chronicle of Higher Education, 54,* A29–A31.

Noel, L., Levitz, R., & Saluri, H. (1985). *Increasing student retention: Effective programs and practices for reducing the dropout rate*. San Francisco: Jossey-Bass.

Nora, A., & Cabrera, A. (1993). The construct validity of institutional commitment: A confirmatory factor analysis. *Research in Higher Education, 34*(2), 243–262.

Ortiz, A. (1995). Enhancing student development in community colleges. *Community College Review, 22*(4), 63-71.

Owen, T. (2003). Retention implications of a relationship between age and GPA. *College Student Journal, 37*(2), 181-190.

Pace, C. (1979). *Measuring outcomes of college: Fifty years of findings and recommendations for the future*. San Francisco: Jossey-Bass.

Pace, C. (1984). *Measuring the quality of college student experiences*. Los Angeles: Higher Education Research Institute, Graduate School of Education, University of Los Angeles.

Pascarella, E. (1985). College environmental influences on learning and cognitive development: A critical review and synthesis. In J. Smart (Ed.), *Higher Education: Handbook of Theory and Research, 1* (pp. 1-61). New York: Agathon.

Pascarella, E., & Smart, J. (1991). Impact of intercollegiate athletic participation for african american and caucasian men: Some further evidence. *Journal of College Student Development, 32,* 123–130.

Pascarella, E., & Terenzini, P. (1991). *How college affects students*. San Francisco: Josey-Bass.

Pascarella, E., & Terenzini, P. (1998). Studying colleges in the 21st century: Meeting new challenges. *The Review of Higher Education, 21*(2), 151-165.

Pascarella, E., Bohr, L., Nora, A., & Terenzini, P. (1995). Intercollegiate athletic participation and freshmen-year cognitive outcomes. *Journal of Higher Education, 66,* 369–387.

Pascarella, E., Pierson, C., Wolniak, G., & Terenzini, P. (2004). First generation college students. *Journal of Higher Education, 75*(3), 249-284.

Paulsen, M., & Feldman, K. (1999). Student motivation and epistemological beliefs. *New Directions for Teaching and Learning, 78*(4), 17-27.

Perry, W. (1970). *Forms of intellectual and ethical development in the college years: A scheme*. New York: Holt, Rinehart and Winston.

Pitkethly, A., & Prosser, M. (2001). The first year experience project: a model for university-wide change. *Higher Education Research & Development, 20*(2), 185-199.

Rendon, L., & Taylor, M. (1990). Hispanic students: Actions for access. *Community, Technical and Junior College Journal 60*(3), 18-23.

Richardson, R., & Skinner, E. (1992). Helping first-generation minority students achieve degrees. In L. Steven Zwerling, & Howard B. London (Eds.), *First generation students: Confronting the cultural issues* (pp. 29-43). San Francisco: Jossey-Bass.

Ryan, R., & Powelson, C. (1991). Autonomy and relatedness as fundamental to motivation and education. *Journal of Experimental Education, 60,* 49–66.

Ryland, E., Riordan, R., & Brack, G. (1994). Selected characteristics of high-risk students and their enrollment persistence. *Journal of College Student Development, 35*(1), 54-58.

Smith, B. (1993). The effect of quality of effort on persistence among traditional-aged community college students. *Community College Journal of Research and Practice, 17*(2), 103-122.

Stephenson, J., & Laycock, M. (1993). *Using learning contracts in higher education*. London: Kogan Page.

Strauss, L. (2000). Predictors of student commitment at two-year and four-year institutions. *Research in Higher Education, 41*(5), 537–580.

Strauss, L., & Volkwein, J. (2004). Predictors of student commitment at two-year and four-year institutions. *Journal of Higher Education, 75*(2), 203-228.

Swigart, T., & Murrell, P. (2001). Factors influencing estimates of gains made among African-American and Caucasian community college students. *Community College Journal of Research and Practice, 25*(4), 297-342.

Terenzini, P., & Pascarella, E. (1980). Student/faculty relationships and freshman year educational outcomes: A further investigation. *Journal of College Student Personnel, 21*, 521–528.

Terenzini, P., Pascarella, E., & Lorang, W. (1982). An assessment of the academic and social influences on freshmen year educational outcomes. *Review of Higher Education, 5*, 86–110.

Terenzini, P., Springer, L., Yaeger, P., Pascarella, E. & Nora, B. (1996). First generation college students: Characteristics, experiences, and cognitive development. *Research in Higher Education, 37*, 1–22.

Thompson, B., & Thornton, H. (2002). The transition from extrinsic to intrinsic motivation in the college classroom: a first year experience. *Education, 122*(4), 785-792.

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

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

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

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). Chicago: The University of Chicago Press.

Upcraft, M., & Schuh, J. (1996). *Assessment in student affairs: A guide for practitioners*. San Francisco: Jossey-Bass.

Volkwein, J., & Lorang, W. (1996). Characteristics of extenders: Full-time students who take light credit loads and graduate in more than four years. *Research in Higher Education, 37*(1), 43–68.

Volkwein, J., Szelest, B., Cabrera, A., & Napierski-Prancl, M. (1998). Factors associated with student loan default among different racial and ethnic groups. *Journal of Higher Education, 69*(2), 206–237.

Walker, B. (1980). *Dimensions and patterns of satisfaction amongst university student*s. Student Counseling and Research Unit Bulletin, 17. New South Wales: University of New South Wales.

Watkins, D. (1982). Students' personality and satisfaction with an Australian university: A study of interdisciplinary differences. *Higher Education Research and Development, 1*(2), 155–165.

Weinstein, C. (1987). *LASSI user's manual*. Clearwater, FL: H &H Publishing.

Weinstein, C., Palmer, D., & Schulte, A. (1987). *Learning and study strategies inventory*. Clearwater, FL: H &H Publishing.

Zemke, R., & Zemke, S. (1988). Thirty things we know for sure about adult learning. *Training*. 57-61.

Zimmerman, B. (1989a). Models of self-regulated learning and academic achievement. In B.J. Zimmerman & D.H. Schunk (Eds.), *Self-regulated Learning and Academic Achievement: theory, research and practice*, (pp. 1–25). New York: Springer Verlag.

Zimmerman, B. (1989b). A social cognitive view of self-regulated academic learning, *Journal of Educational Psychology, 81*, 329–339.

APPENDICES

APPENDIX A

INSTITUTIONAL REVIEW BOARD

Auburn University

Auburn University, Alabama 36849

Office of Human Subjects Research
307 Samford Hall

Telephone: 334-844-5966
Fax: 334-844-4391
hsubjec@auburn.edu

October 13, 2005

MEMORANDUM TO: Mark Nabors
Dean of Students

PROTOCOL TITLE: "An Examination of the Relationship between Freshman Participation in Study Skills Courses and Retention at a Rural Southeastern University"

IRB File: #05-180 EX 0509

APPROVAL DATE: September 19, 2005
EXPIRATION DATE: September 18, 2006

The referenced protocol was approved "Exempt" from further review under 45 CFR 46.101 (b)(4) by IRB procedure on September 19, 2005. You should retain this letter in your files, along with a copy of the revised protocol and other pertinent information concerning your study. If you should anticipate a change in any of the procedures authorized in this protocol, you must request and receive IRB approval prior to implementation of any revision. Please reference the above IRB File in any correspondence regarding this project.

If you will be unable to file a Final Report on your project before September 18, 2006, you must submit a request for an extension of approval to the IRB no later than July 1, 2006. If your IRB authorization expires and/or you have not received written notice that a request for an extension has been approved prior to September 18, 2006, you must suspend the project immediately and contact the Office of Human Subjects Research for assistance.

A Final Report will be required to close your IRB project file.

If you have any questions concerning this Board action, please contact the Office of Human Subjects Research at 844-5966.

Sincerely,

Niki L. Johnson, JD, MBA, Director
Office of Human Subjects Research
Research Compliance Auburn University

cc: William Spencer
Maria Witte

APPENDIX B

SUPERVISOR OF RESEARCH PROJECT

Auburn University
Auburn University, Alabama 36849-5369

Student Success Center
A Division of Student Affairs

Student Counseling Services
400 Lem Morrison Dr.

Telephone: (334) 844-5123
FAX: (334) 844-6110

August 9, 2005

Mark Nabors
2300 LaFayette Parkway
Opelika AL 36849

Dear Mr. Nabors:

Pending approval by the Institutional Review Board, the Student Services Office of the Dean of Students allows you, under your current job duties as a graduate intern, to access the fall 2001 through spring 2005 Auburn University freshman data for use in your dissertation. The information contains the following: date of birth, gender, ethnicity, major, high school grade point average, ACT or SAT scores, grade point average, and Learning and Study Strategies Inventory (LASSI). You will access this information through a password protected computer database that is contained in this office. I understand the dataset will not contain any personally identifiable information, and the participants will remain anonymous.

Sincerely,

Mary Ann Taylor-Sims
Counselor and Testing Coordinator

APPENDIX C

OFFICE OF INSTITUTIONAL RESEARCH

Auburn University

Auburn University, Alabama 36849-5111

Institutional Research and Assessment
203 Samford Hall

Telephone (334) 844-4765
Fax (334) 844-4773

August 4, 2005

Mark Nabors
2300 Lafayette Pkwy
Opelika, AL 36849

Dear Mr. Nabors,

Pending approval by the Institutional Review Board, the Office of Institutional Research and Assessment is prepared to supply a dataset consisting of Fall 2001 Auburn University freshman students for use in your dissertation. The data will be provided to you in unit-level form with data for date of birth, gender, ethnicity, major, high school grade point average, ACT or converted SAT score, and GPA for each term at Auburn University through Spring 2005. The dataset will not contain any personally identifiable information; the participants will be anonymous.

Sincerely,

Matthew W. Campbell, Ed.D.
Institutional Research Analyst