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THE IMPACT OF A FRESHMEN-YEAR SEMINAR ON STUDENTS' SECOND-YEAR RETENTION

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The School of Human Resource Education
and Workforce Development

by
Lori Henry Richard
B.S. Louisiana State University, 2002
M.S. Louisiana State University, 2004
May 2014

This dissertation is dedicated to my husband, Jason Richard.

ACKNOWLEDGEMENTS

I would like to thank those people who helped, motivated, and encouraged me along the way to obtaining this life goal. There were many times over the past year that I felt like quitting, but I was lucky to have several people in my life that helped me keep perspective and believed in my abilities.

First, I want to thank my graduate committee, Dr. Michael Burnett, Dr. Satish Verma, Dr. Brian Bourke, and especially my committee chairperson, Dr. Joe Kotrlik. I have learned so much from each one of you, and I cannot thank you enough for the time, knowledge, and support you have all given me during this journey. Dr. Kotrlik, you have been my academic advisor, professor, Master's and Ph.D. graduate chairperson, and go-to person for nearly everything that I have ever needed during my time at LSU and in my professional career. I am so appreciative to have had your guidance and support over the past 15 years of my life. Thank you for everything.

A special thank you goes to Renee Lastrapes who rescued this researcher and this project when I began to think that I would not be able to finish on time. She has the heart of a true educator, and I cannot thank her enough for her time and patience as she helped me get through one of the toughest parts of this project, logistic regression!

Thank you to Tucker Handley for collecting the data for this project and for your constant support as I began to build the idea for my research, and finally see it through to the end.

Another very important person to me throughout this journey has been my friend, co-worker, and fellow Ph.D. student, Amy Hebert. Without Amy, I likely would have never enrolled in this program, never attended my first class, never made it through general exams and my proposal defense, and certainly would not have made it to graduation day. I was so lucky to have Amy on this journey with me, and could not have asked for a better friend through it all.

A special note of appreciation and gratitude goes to my supervisors and co-workers in University College. They have been a constant source of support that I have relied heavily on when times got tough. They picked up my slack when I had to take off work to go to class, study, or write my dissertation. They were also my biggest cheerleaders when I made it past major milestones throughout my degree.

I also want to thank my family and friends for being so understanding with me throughout this process. I have had to decline many invitations to birthday parties, vacations, and life celebrations over the years in order to obtain my goal, I thank all of them for continuing to stand by my side through it all. A special thank you goes to my mom, Lorraine; dad, Rodley; step-mom, Barbara; brother, Craig, and sister-in-law, Jamie who have always believed in and supported me no matter what. Thank you to my mother-in-law, Mrs. Liz, for all the home cooked meals that you sent over while I was busy with homework or class.

Last, but certainly not least, I want to thank my husband, Jason. All of the sacrifices that we have made together in order for me to obtain this degree have been for our family's future. I simply cannot say 'thank you' enough. I love you, and cannot wait to have more time to spend with you and our baby boy who will be joining our family approximately two weeks after graduation.

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ABSTRACT

This study investigated the impact a freshman-year seminar course, UNIV 101, had on students' second-year retention. Retention was determined based on a student's subsequent enrollment at the university, one year after their initial semester. In addition, this study explored the relationship between selected independent variables found in literature and second-year retention. Finally, the study sought to determine if selected variables, completion of UNIV 101, and final letter grade earned by students in UNIV 101 was able to predict the probability of retention. The target population for this study was all first-time freshmen enrolled in a small, public, regional institution in Southeastern United States. The accessible population of this study was first-time freshmen in their initial enrollment in UNIV 101 during the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters (N=2,464). Data was analyzed using correlation and direct logistic regression.

It was determined that a very large and very strong relationship exists between completers of an extended-orientation, freshmen-year seminar course with a common theme and attendance policy taught by professional academic advisors with students' second-year retention. More specifically, completers of the freshmen-year seminar course were more than 11 times more likely to be retained than non-completers. It was further determined that the final letter grade that students' earn in an extended-orientation, freshmen-year seminar course with a common theme and attendance policy taught by professional academic advisors can predict the probability of students' second-year retention. More specifically, students who earned an *A* or *B* in the extended-orientation, freshmen-year seminar course with a common theme and attendance policy taught by professional academic advisors were more than 14 times and 8 times (respectively) more likely to be retained for a second year. Finally, other student attributes were also found to have a statistically significant relationship with second-year retention. Selected

student attribute variables found in literature-included age, gender, ethnicity, high school grade point average, and highest composite ACT score.

CHAPTER 1: INTRODUCTION

This study examined the predictability of student success and retention of first-time freshmen using selected variables, including the student's first-attempt, final grade in a freshmen-year seminar course. Student data were obtained from a small, public, regional university in the Southeast.

For the past several years, student attrition and retention have been at the forefront of concerns voiced by many administrators of both two- and four-year institutions of higher education, as indicated by the numerous research studies that have been published (Fike, 2008; Morrow & Ackermann, 2012; Sparkman et al., 2012; Webster & Showers, 2011). In 2012, ACT reported that the national retention rate of students between the first and second year of college declined since 2006, from 68.7% to 66.5% (ACT, 2012).

Public institutions of higher education across the nation have felt the increased demand of accountability at all levels of university functions, including increased demands of faculty production and higher student-learning outcomes, with mandates for compliance often tied to national and state funding (Gumport, 2000). The demand for increased accountability has resulted in state governments to introduce performance-based budgeting, which requires state agencies, including public institutions of higher education, to produce quantifiable data that indicate performance indicators were satisfied in order to receive continued funding (Melkers & Willoughby, 1998). Some examples of indicators used for performance-based budgeting in higher education include:

- average ACT and SAT scores of entering freshmen classes,
- first-year retention rates,
- six-year graduation rates,

- time to degree,
- credits to degree,
- pass rates on licensure exams,
- student-faculty ratios,
- average faculty contact hours,
- cost per credit hour,
- percent of high school graduates who have enrolled in public higher education institutions,
- percent of higher education graduates working one year after graduation in a job related to their field or graduate/professional school, and
- higher education graduates' average starting salary (Layzell, 1999).

Several researchers have explored their own theories as to why students choose to leave school. One of the most quoted, Vincent Tinto (1998), has theorized that student integration, both academic and social, is crucial to student persistence. He believed that the most important form of involvement is academic integration, and student integration can take place both in and outside of the classroom. Tinto (1998) reported:

> Attrition is, for most institutions, most frequent during the first year of college. Nearly half of all leavers depart before the start of the second year. It therefore follows that the impact of involvement upon persistence is greatest in that year, especially during the first ten weeks when the transition to college is not yet complete and personal affiliations are not yet cemented (p. 169).

Tinto (1998) also found there are several ways that colleges and universities can implement organizational change that follows the recommendations of research, one of which includes construction of educational settings that promote connected, shared learning; more specifically, creating more opportunities for collaborative learning experiences within the

classroom. By increasing collaboration in the classroom, Tinto believes that the result will be improved student persistence (Tinto, 1998). Conversely, negative interactions and experiences may impede integration and reduce the students' commitment to their own personal goals and to the institution (Pascarella & Terenzini, 2005).

Tinto (1998) suggested that institutions could organize themselves to foster better student integration by developing a "University College" (p. 174). In Tinto's (1998) plan, University College houses its own faculty and staff, and acts as a stand-alone academic unit. Faculty and staff's sole objective would be to educate new students; in addition, faculty in University College would be relieved of other common university functions, such as the need to publish (Tinto, 1998).

Over the years, more and more colleges and universities have implemented a freshmen-year seminar course for their first-time freshmen (Barton & Donahue, 2009; Clark & Cundiff, 2011; Jamelske, 2009; Jessup-Anger, 2011; Porter & Swing, 2006; Potts & Schultz, 2008). Most (95%) universities in the United States have developed and offer a freshmen-year seminar course (Clark & Cundiff, 2011). Research has shown that courses of this nature have positive impacts on student retention, persistence, and graduation rates (Porter & Swing, 2006).

Not only have studies shown that freshmen-year seminar courses have an impact on retention, persistence, and graduation rates; students have also acknowledged the value of freshmen-year seminar courses. Barton and Donahue (2009) reported that students agreed their freshmen-year seminar course helped them with the transition to college, helped them to connect to other disciplines, and develop important skills. In addition, Barton and Donahue (2009) reported that students who enrolled in a freshmen-year seminar course communicated more frequently with faculty about their grades, earned higher mean grade point averages by the end of

their first year, and the students self-reported that they worked harder in their studies and were more involved in campus activities.

As freshmen-year seminar courses have become increasingly popular, many types of freshmen-year seminar courses have been developed. While freshmen-year seminar courses have been widely studied, the uniqueness of each course has produced limited research that can be generalized towards wide and varied populations (Jamelske, 2009). Freshmen-year seminar courses vary from campus to campus in many aspects including, but not limited to:

- major specific orientation courses that are housed in individual colleges or professional schools,
- university-wide courses that are open to voluntary enrollment in the course,
- courses that are designated for at-risk student populations only, and
- courses that are a mandatory requirement for all first-time freshman during the first semester (Clark & Cundiff, 2011; Jamelske, 2009).

For example, the National Resource Center for the First-Year Experience and Students in Transition at the University of South Carolina has identified six common freshmen-year seminar course formats for first-year college students for the First-Year Experience and Students in Transition (2012), these include:

- extended orientation courses which are designed to introduce students to multiple facets of the university (time management, study skills, academic and career planning, student development issues, and learning strategies);
- discipline or major specific, courses with similar academic content across all sections, focusing general academic and skills building and critical thinking;

- freshmen-year seminar courses, similar to the previous seminar types, except topics may vary from section to section;
- major specific academic courses usually taught within specific disciplines or professional schools;
- academic courses with concentration in basic study skills, note taking, reading for at-risk students not prepared for academics; and
- hybrid courses that include elements from two or more of freshman courses previously mentioned.

More specifically, the freshmen-year seminar extended orientation course is used to build the skills needed for students to navigate the college environment, and present information needed for academic planning (Potts & Schultz, 2008). This type of freshmen-year seminar course presents the students with the tools needed to access academic content, use the library, investigate various academic majors and careers (Potts & Schultz, 2008).

Need for the Study

With decreased funding to higher education, decreased enrollment, implementation of performance-based budgeting, and the cost of recruiting new students versus keeping currently enrolled students, administrators are increasingly turning to research to find solutions to decrease attrition, and evaluate programs that are already in place.

The university where this study was conducted has been using a freshmen-year seminar type course to increase student retention since 1964, but no research has been conducted to determine its success. In this study, it will be determined if successful completion of the freshmen-year seminar course, UNIV 101, can predict if students will be retained for their second year.

Purposes and Research Questions

The purpose of this quantitative study is to investigate if a student's successful completion of a freshmen-year seminar course predicts student success, as measured by retention to the student's second year, at a small, public, regional, university in the Southeast. Successful completion was defined as a student earning a grade of *A*, *B*, *C*, or *D* in the course. Students who earn an *F*, *FNA* (failed never attended), or *W* (withdrawal) were considered as non-completers. Student retention was defined as persisting from the student's first year to the student's second year. The research questions that were explored are:

1. What are the personal characteristics of the first-time freshmen population of students during the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters? The characteristics selected were:
    a. age,
    b. gender,
    c. ethnicity,
    d. marital status,
    e. cumulative high school grade point average,
    f. highest ACT composite score, and
    g. first-attempt, final grade in the freshmen-year seminar course, UNIV 101.
2. Does a relationship exist between selected independent variables and the dependent variable, second-year student retention? Variables that were used in this analysis are:
    a. age,
    b. gender,
    c. ethnicity,
    d. cumulative high school grade point average,

e. highest ACT composite score, and

f. first-attempt, final grade in freshmen-year seminar course.

3. Can second-year retention be predicted from the completers and non-completers of the freshmen-year seminar course, UNIV 101?

4. Do selected variables serve as predictors of second-year student retention? The variables that were used in this analysis were:

   a. age,

   b. gender,

   c. ethnicity,

   d. cumulative high school grade point average,

   e. highest ACT composite score, and

   f. first-attempt, final grade in freshmen-year seminar course, UNIV 101.

Significance of the Study

Determining the effectiveness of this freshmen-year seminar course will determine if the course is successful in increasing student retention. If this course is not successful, then modifications of the course will be made and/or other aspects of the freshman experience will be modified so that retention will be increased.

Limitations of the Study

One limitation of this study is the use of marital status as a variable, which will not indicate the number of students who are in a committed, cohabitating relationship, which may also have some effect on student persistence.

Definitions of Terms

The following definitions were used for key terms discussed in this study.

- Academic Advising: situations in which a college or university representative gives awareness or advice to a student about personal, social, or academic matters. The nature of this insight or advice could serve to coach, mentor, counsel, suggest, inform, discipline, or teach (Gordon et al., 2008).
- Freshmen-year seminar: Small discussion type courses that put emphasis on teaching students how to effectively use academic planning, basic study skills, and time management in order to be successful students (Clark & Cundiff, 2011).
- Success in college: defined by academic performance and student retention, but also may be related to other variables or combinations of variables (Sparkman et al., 2012).
- Performance-based budgeting: financial budgeting practice of a public agency utilizing their mission, goals and objectives; in addition, uses quantifiable data to provide meaningful information about program outcomes (Melkers & Willoughby, 1998).
- Professional staff academic advisors:

> Individuals who have been hired to focus primarily on academic advising that promote the academic success of students, with additional attention to general student development at the institution. While some teaching responsibilities may be included in a general job description, professional academic advising staff spend the majority of their time meeting with individuals and groups of students regarding academic curriculum requirements of one or many academic majors or areas of study and general academic and personal success strategies, and addressing overall developmental issues with students in their pursuit of a college education (Gordon, et al., 2008, pp. 267-268).

- Retention: sometimes called institutional retention, is a widely used method to calculate the percentage of students who return the same institution in subsequent years (Roberts & Styron, 2010).

CHAPTER 2: REVIEW OF LITERATURE

Institutional Accountability

A nationwide trend of increased accountability and transparency has been sweeping across the nation, including our nations' public institutions of higher education (Melkers & Willoughby, 1998). Increasingly public colleges and universities are being thought of as "quasi-corporate entities" that should produce products or services, and look at their students, parents, employers, state legislatures, and research funders as their customers (Gumport, 2000, p. 71). Public institutions of higher education are expected to expand access to students, further the quality of their programs, while cutting costs (Gumport, 2000). In addition, leaders of public higher education institutions are expected to exhibit willingness to consider market forces and increased demands for relevance, or else risk losing some legitimacy as an institution (Gumport, 2000). Gumport (2000) reports that difficult political climate, coupled with diminished public confidence and financial pressure creates a difficult situation for those who manage higher education institutions.

Since the late 1970s, state-level policymakers (e.g. legislators and governors) have been monitoring the performance of publicly funded colleges and universities by implementing a variety of accountability and other assessment mechanisms (Layzell, 1999). The introduction of performance-based budgeting into higher education systems focused on institutional performance and measured results, outcomes and impacts of publicly funded organizations (Melkers & Willoughby, 1998). In response to the implementation of performance-based budgeting, higher education has focused much of its energy on bettering retention and graduation rates of its students and decreasing student attrition, as those statistics are at the forefront of many performance-based budgeting agendas (Layzell, 1999).

Research shows that nearly 63% of four-year college students earn their bachelor's degree and approximately 40% of community college students will earn a bachelor's degree or an associate's degree or certificate (Tinto, 2012). Although not all students will graduate at the same rate from their initial institution, universities must recognize that once students have been admitted to their institution, that the institution has an obligation to do what it can to help the student stay and graduate (Tinto, 2012).

Institutions of higher education, in order to increase persistence and graduation rates, must focus on its own behaviors and establish conditions that will promote those anticipated outcomes (Tinto, 2012). Tinto (2012) believes that students are more likely to remain in college, when colleges and universities implement four specific conditions (1) expectations of themselves, (2) support, (3) assessment and feedback, and (4) involvement. He believes that what students expect of themselves, and expectations that are placed on the student by the university, can drive student success. In addition, support, especially academic support in the first year of college, can be a driving factor of student success. Tinto (2012) takes the condition of support one-step further, by stating, "in no place is support more needed than in the classroom where success is constructed one course at a time" (p. 7). The third condition of success, as outlined by Tinto (2012) is assessment and feedback of institutions, so that frequent feedback can enable faculty, staff, and students to adjust their behaviors to promote student success. The final condition of student success, and perhaps the most important, is student involvement or student engagement (Tinto, 2012). Tinto (2012) believes that students, who are academically and socially engaged, are more likely to be successful and be retained by their university.

The First-Year Experience

A student's first year of college is a critical period in their college career, especially during the first semester or quarter (Tinto, 1993). During the first year, students must make the

transition from high school to college, which often involves moving away from home and learning to fend for themselves in an adult world (Tinto, 1993). During this transition period, some students learn that their previous academic training has not sufficiently equipped them for college-level work, or students may have difficulty adjusting to more rigorous academic standards (Tinto, 1993). With this in mind, it is no wonder why student withdrawal is highest during the first year of the student's higher education career (Tinto, 1993). In this critical period, colleges and universities can take action to help smooth the students' transition; some broad strategies include: (1) assist the student during the transition period, (2) early faculty/staff contact in order to begin building a sense of community for the student, (3) provide the student with academic support and opportunities for involvement, (4) have a monitoring and early warning system in place, and (5) provide counseling and advising (Tinto, 1993).

Transition programs, as described by Tinto (1993), include programs that are designed to help ease the stress of academic, social, and/or residential issues, which include improving study habits, study skills, academic preparation, access to libraries and other university resources, and writing college-level reports or term-papers. An example of a transition program includes the University 101 program established by John Gardner at the University of South Carolina, where orientation has been extended into a first-semester course where students are taught how to handle, in course format, a wide range of academic, social, and financial issues (Tinto, 1993).

Another type of program, the early contact/community program, was designed to connect new students with other members of the institution and with various campus communities (Tinto, 1993). Early contact and community program goals typically include creating both formal and informal student-to-student, and student-to-faculty/staff interaction, in order to help the newcomer adjust and gain information about the university life and culture (Tinto, 1993). These

particular programs are based on rewarding interactions between students and members of the institution, these experiences can be formal or informal in nature, but when students interact with faculty or staff outside the natural work domain, students are more likely to grow intellectually and socially (Tinto, 1993). Examples of early contact or community programs include, faculty/staff to student mentoring programs, or social events planned to promote faculty/staff and student interaction, and the University 101 program previously mentioned (Tinto, 1993).

Yet another strategy that universities can invoke to ease student transition are academic involvement and support programs (Tinto, 1993). These types of programs focus on students' need for special educational programs or courses designed specifically for beginning students (Tinto, 1993). An example of this type of program can be found at the University of Washington, where beginning students form groups, called freshmen interest groups, based off common academic and intellectual interest, and then the student groups enroll into the same set of courses during their first semester/quarter of college (Tinto, 1993). Other examples of academic involvement and support programs are Summer Bridge and supplemental instruction programs, which are typically tied to helping developmental students acquire academic skills appropriate to college-level work (Tinto, 1993).

The fourth type of strategy that colleges and institutions can use to ease student transition is a monitoring and early warning program (Tinto, 1993). The monitoring and early warning strategy is typically a system that allows faculty and staff to monitor student progress and provide an early warning or alert to any difficulty that the student may be facing (Tinto, 1993). Early warning systems can be tied to electronic tracking systems that allow the institution to monitor student progress (Tinto, 1993).

The last strategy listed by Tinto (1993) is to assist students with their transition from high school to college by providing counseling and advising opportunities to first-time freshmen. With the implementation and utilization of counseling and advising programs in the beginning of the students' academic career, counselors and advisors can help students work through their academic and career goals (Tinto, 1993). The use of integrated counseling and advising is more effective when used as a positive aspect of the students' education process in which students are expected to experience (Tinto, 1993). The effectiveness of integrating counseling and advising into the students' educational experience has been especially evident in the colleges and universities that have established freshman advising programs that target all first-year students (Tinto, 1993).

To test the impact on a first-year experience program at a mid-western public university, Jamelske (2009) set out to examine the academic performance (GPA) and retention rate after one year for the fall 2006 cohort of first-time freshmen. In his study, Jamelske described the freshman-year experience goals as

- strengthen students' skills needed for academic success,
- build student connections to the university,
- introduce students to a liberal education,
- provide students with meaningful academic and non-academic extracurricular activities,
- create a sense of student accountability,
- encourage student and faculty contact, both academically and socially, and
- provide an environment where students can connect with other students (Jamelske, 2009).

At the university where the study was conducted, located in a small, urban setting, the freshman year-experience included integrating core courses with added extracurricular and curricular activities. Courses had a maximum enrollment of 20 students and an assigned peer mentor (Jamelske, 2009). Curricular activities available to students included service learning, attending guest speaker events, group research, field trips, activities that incorporated time management strategies, study skills, and library and technology use; while extracurricular activities could include visiting career services, attending majors fair, and attending sporting events (Jamelske, 2009). The design of the program created a challenge for the professors to integrate the additional curricular activities without compromising the original course goal, and overextend course time to fulfill extracurricular activities (Jamelske, 2009). Because of this, courses lacked uniformity on how they were organized and taught, and instructors were not held to any type of accountability for the program (Jamelske, 2009).

Despite the hardships faced by course instructors, Jamelske (2009) was able to conclude using university administrative data and data collected from a student and faculty survey, that a positive effect on student retention could not be found in all freshmen experience courses, but freshman-year experience students had higher GPAs than non-freshman-year experience students. Although increased retention could not be claimed as a result of all freshmen-year experience courses offered, Jamelske was able to reduce the sample size to include only selected freshman-year experience courses in which the program goals were likely pursued, and found a positive effect on retention for lower-achieving students (especially females) and for above average students (Jamelske, 2009). Recommendations by Jamelske (2009) include increasing instructor accountability to ensure program goals are met and increasing classroom time to meet the freshman-year experience program goals.

Academic Advising

Academic advising at institutions of higher education are organized based on multiple factors, including, but not limited to: institutional mission, level of educational offerings (associate, baccalaureate, graduate), program offerings, selectivity of the institution, student population, and budget (Gordon et al., 2008). Popular organizational models of academic advising include the (a) decentralized models, (b) centralized models, and (c) shared models (Gordon et al., 2008). Each model has distinctive characteristics that set it apart from the other models. For instance, the decentralized model may include a faculty-only model, in which students are assigned to a faculty member, and the faculty member is accountable to their respective department (Gordon et al., 2008). Another type of decentralized model is the satellite model where advising duties are coordinated in a separate office from the faculty member in a subunit (Gordon et al., 2008).

Some institutions utilize a centralized, self-contained model that encompasses all advising duties, from orientation to departure (Gordon et al., 2008). The self-contained model may be staffed with full- or part-time advisors, faculty, paraprofessionals, counselors, or even peers, and staff is typically directed by a director or dean (Gordon et al., 2008). Some strength to this model is that advisors are easily accessible to students and located in a centralized location on campus, which increases accessibility (Gordon et al., 2008).

Another type of model is the shared model, one example of the shared model is the supplementary model where faculty serves as advisors for all students, but a centralized office also exists to assist faculty (Gordon et al., 2008). Types of assistance offered in the supplementary model might include training facilitation, creating an advising handbook, or being a source of information for students and faculty. Shared models may also include the split model where academic advising is split between academic subunits and an academic advising office

(Gordon et al., 2008). In this split model, once the student meets a certain benchmark (typically choosing a major, or completing developmental coursework), the student may be assigned to an academic unit where they would be advised by full-time advisors, faculty, or others (Gordon et al., 2008). Another example of a shared model is the total intake model where all initial advising is administered through one centralized office, staffed by professional advisors, faculty, paraprofessionals, counselors, or others, and students are assigned to faculty or other academic subunits once identified conditions are met (Gordon et al., 2008).

In addition to institution-wide advising models, individual advisors may also invoke their own style or advising model into their work. Lowenstein (2005) describes three different types of advising models: "(a) advising as bookkeeping, (b) advising as counseling, (c) advising as the coaching of learning" (p.65). He describes the bookkeeping model as the advisor providing information for a student to follow, and the advisor keeps track of the student's submission to the advice given. Information flows from the advisor to the student, not vice versa. Lowenstein (2005) developed his advising as counseling model after Crookston's (1994) model of developmental advising, where the advisor and student exchange dialogue, and the student is an active participant in the advising process. Finally, the advising as the coaching of learning model is described as the advisor coaching students through the curriculum building processes, allowing students to think through the advising decisions and allowing students to understand the reasoning behind educational and academic requirements. Lowenstein (2005) argues that when the advisor is considered a coach for curriculum building, the advisor becomes the "most important person in the student's educational world" (p.72).

Grites and Gordon (2000) believe it is important that academic advising should incorporate many frameworks, theories, and concepts into practice. They believe that

educational planning for students should take into consideration the students' interests and strengths, and their readiness to make firm academic decisions for both long- and short-term goals (Grites & Gordon, 2000). Grites and Gordon (2000) state that all academic advisors, whether faculty or staff, must demonstrate their accessibility to students who seek their advice or knowledge of the institution, including the university available resources, opportunities, and curriculum. In addition, advisors must show consideration for students throughout the advising process and willingness to learn and build upon their own advising knowledge and skills (Grites & Gordon, 2000).

Professional Academic Advisors

While faculty has traditionally served as academic advisors, researchers, and professors; several universities have moved to non-faculty positions, such as professional staff advisors (Gordon et al., 2008). The role of the professional staff advisor is to encourage student success and development, with a primary role in academic advising and some teaching responsibilities (Gordon et al., 2008).

Professional staff advisors are typically part of a centralized academic advising center and spend a majority of their day meeting with students to answer questions and discuss curriculum requirements, institution policies, and procedures (Gordon et al., 2008). Professional staff advisors, like traditional faculty advisors, are often assigned a specific population of students (Gordon et al., 2008).

Freshman-Year Seminar

With increasing student persistence in mind, freshmen-year seminar courses have been developed and are being taught at institutions all over the United States. The first freshmen-year seminar course presented by John Gardner (1980) at the University of South Carolina in 1972 was called University 101: The Student in the University. This course was originally designed

as a freshman only, pass/fail course that focused on providing an extensive orientation to the university to help freshmen adjust and develop positive attitudes toward the university (Gardner, 1980). The course was designed to improve retention rates and provide students with access to services and resources to assist with student development (Gardner, 1980). Faculty and staff who taught the course had to undergo an extensive 40 hour, mandatory, preparatory workshop in increase their knowledge of the university (Gardner, 1980).

Over the years, University 101 at the University of South Carolina has evolved to a three-credit-hour seminar that is open to first-year and transfer students during their first semester at the university (Barefoot et al., 2005). Approximately 80 percent of the university's first-year students elect to enroll in the course, where they are introduced to the culture of higher education (Barefoot et al., 2005). Goals of the course include building personal and academic life-skills, becoming familiar with university facilities, resources and services of the University of South Carolina, and important values and traditions of life at the university as explained in the campus code of ethical behavior (Barefoot et al., 2005). Faculty or administrative mentors teach University 101 to twenty to twenty-five students who are considered a peer support group (Barefoot et al., 2005). Students of the course receive a letter grade, and some discipline-specific seminar courses have been created for academic programs such as engineering, business, journalism, education, and mathematics (Barefoot et al., 2005).

University 101 at the University of South Carolina also selects undergraduate peer leaders to co-teach the course with the instructor-of-record. Peer leaders undergo a competitive application process, and must possess specific academic requirements in order to be selected (Barefoot et al., 2005). Once chosen, peer leaders participate in a two-day training workshop and are matched to course instructors at an informal matching reception; subsequently, both

parties participate in a team-building workshop (Barefoot et al., 2005). Peer leaders, who participate in this co-teaching experience, also enroll in the three-credit-hour academic course, The Teacher as Manager, where they reflect and write about their experience (Barefoot et al., 2005).

The University of South Carolina's University 101 is also committed to faculty development, and has offered more than sixty instructor training workshops, serving approximately 2,000-interested faculty, and staff from eight university campuses since 1972 (Barefoot et al., 2005). The continued success of University 101 has led the University of South Carolina to add a second course for sophomores, second-semester first-year students, and junior-level transfer students that focuses on research-based learning and discipline-based inquiry (Barefoot et al., 2005).

Since the introduction of the first freshmen-year seminar course in 1972, freshmen-year seminar courses have been widely implemented and customized at institutions all over the country. It is not uncommon for the freshmen-year seminar course to vary from institution to institution, for example, some may provide information about academic requirements and an introduction to the intellectual life of the university, while others are considered a college success course, which focuses on study skills, time management, and other skills intended to increase academic performance (Tinto, 2012). Some freshmen-year seminar courses are required of all students, while others are voluntary; some target specific groups such as underprepared students, some are open to all students at all developmental levels in every discipline (Tinto, 2012).

Integrating Academic Advising and the Freshman-Year Seminar

Helping students become successful in their academic careers has been a goal for institutional leaders and policy makers at every educational level (Gordon et al., 2008). When

academic advising is viewed and executed as an educational process, it serves as a critical role in linking students with opportunities for engagement, success, and attainment of key learning outcomes (Campbell & Nutt, 2008). Some institutions, to ensure that student services are connected and collaborative, have created first-year seminars and classes for incoming freshmen, which incorporates academic advising (Gordon et al., 2008).

At many universities across the country, institutions are integrating the academic advising process with the freshmen-year seminar course. In one example, Hsu and Bailey (2011) studied the importance of effective academic advising on students enrolled in a Foundations of Business Administration: BSN101 course at a local college. They described the course, BSN101, as an introductory business course that first-year and transfer business students enroll. In BSN101, the students are introduced to all disciplines within the college of business, the curriculum of the business program, and career information (Hsu & Bailey, 2011).

At the end of the course, Hsu and Baily (2011) surveyed the students on several aspects of advising resources, and factors that affected their decision to return the following semester. Students were specifically asked about the impact of their academic advisor, the seminar course, course instructors, staff, parents, friends, adjusting to dorm life, finding a social fit, schoolwork load, being away from home, maintaining relationships with persons from home, finding a social fit, and job demands (Hsu & Bailey, 2011). One objective of the study included a need to explore perceptions of academic advising and college life of students enrolled in the BSN101 course (Hsu & Bailey, 2011).

Hsu and Bailey (2011) concluded that the BSN101 course instructors played a vital role in advising students, in particular freshman. They also found that students indicated that factors that affected their decision to persist included advisors that were unwilling to answer questions

or discuss the curriculum. In addition, students who indicated that they may not return reported that they skipped classes more often, visited home more frequently, and felt that being away from home, maintaining relationships with persons from home, adjusting to dorm living, and the ability to fit in overall were challenging. Notably, the students that indicated that they might not return also reported that they had less favorable views of their advisor (Hsu & Bailey, 2011).

The researchers suggest that retention strategies that should be put into practice include strengthening the student/advisor relationship, increasing advisor accessibility to students, and inform course instructors of their role in student persistence. In addition, institutions should require the first-year seminar course as part of the student's curriculum, and find ways to help students become more involved in the university community and obtain social support (Hsu & Bailey, 2011).

In another study, Lang (2007) set out to determine if completers of a first-year experience course would accumulate more earned hours and achieve a higher GPA than their non-participant counterparts (Lang, 2007). Lang also expected that a relationship between student persistence, graduation within six years or 12 semesters, and participation in the first-year experience course would be positively correlated.

Lang's study (2007) was conducted at the University of Buffalo, which is a public research institution that enrolls more than 27,000 undergraduate and graduate students and offered more than 200-degree programs during the 2004-2005 academic year. In order to increase retention and better integrate first-year students, the University of Buffalo offers its students a first-year experience course, UB 101. UB 101 is a one-credit-hour course that focuses on student transition from high school to college; grades awarded for this course are pass/fail (Lang, 2007). UB 101 topics include time management, UB Reads, planning for the future,

learning in the classroom, learning beyond the classroom, course registration, meeting an academic advisor, personal wellness, cultural diversity, and values exploration; these topics are collaboratively taught by University of Buffalo faculty or staff along with an undergraduate, upper-class peer mentor (Lang, 2007).

The sample of Lang's study (2007) consisted of first-year college students in 1998, where two groups of students were created based on the student's enrollment in UB 101. The 1998 academic year was selected due to an increased number of sections that were made available at the university, from 10 sections in 1997 to 68 in 1998, in addition, six-year graduation data was accessible for this cohort of students (Lang, 2007).

Students who successfully completed the UB 101 course in the fall 1998 term were assigned to the experimental group, while students who did not enroll in the elective course were assigned to the control group (Lang, 2007). To control for student self-selection bias, the students assigned to the control group were selected by matching completer students according to their ethnicity, gender, intended major, high school GPA, and SAT or converted ACT score (Lang, 2007). Transcript data was extracted for both the experimental and control groups, and then analyzed. Academic performance was compared for students who passed by analyzing students' semester GPA over the first two years at the university (Lang, 2007). In addition to semester GPA, the numbers of completed credit hours were gathered for both groups for the fall 1998 cohort through the spring 2000 semester.

Freshmen-year seminar completers at the University of Buffalo were found to attain higher GPAs in their first semester, have higher rates of persistence to their second, third, and fourth semesters (Lang, 2007). These freshmen-year seminar completers also graduated within four, five, and six years more often than their non-completer peers (Lang, 2007).

In another study, Porter and Swing (2006) set out to understand if persistence is affected by first-year seminars. In their study, data was collected using the First-Year Initiative survey from the fall 2001 semester at 45 four-year institutions, sampling nearly 20,000 first-year students. The survey was designed to provide self-reported feedback from students on the student learning outcomes of participation in a one-term, first-year seminar course (Porter & Swing, 2006).

Porter and Swing (2006) invited institutions to participate in the First-Year Initiative survey by responding to various listserv announcements and conference presentations. Interested institutions applied and were selected for one of about 50 slots on the basis that they enrolled at least 150 students in the fall 2001 first-year seminar, and agreed to survey all students enrolled in the seminar or use a systematic sampling procedure (Porter & Swing, 2006). In order to maximize variation amongst institutional types and geographic location, the Carnegie Classification system was utilized to select 61 institutions to reflect the percent of colleges and universities in the United States. Courses were coded based on seminar types developed by Randy Swing, Betsy Barefoot, John Gardner, and Joe Pica, based on adaptations of the descriptions used by Betsy Barefoot in the 1991 Survey of First-Year Seminars, which was conducted by the National Resource Center on The First-Year Experience, and Students in Transition (Porter & Swing, 2006). Seminar types included (1) college success/transition theme, (2) special academic theme, (3) themes connected to academic or professional discipline, and (4) a remedial theme. The most common format indicated was the transitional theme, which was described as courses that were devoted to easing the transition to college by developing student skills for academic success and encouraging student engagement in educational opportunities (Porter & Swing, 2006).

A total of 31,755 student surveys were produced from the 61 selected institutions, in which 53% of the returned surveys were useable (Porter & Swing, 2006). Data was limited to 75-100% of the freshman-year seminar sections, offered in the transition format, from 45 institutions that allowed them to ensure homogeneity (Porter & Swing, 2006).

In order to assess the impact of elements of the first-year seminars on intent to persist, Porter and Swing (2006) used a multilevel modeling approach. The dependent variable was classified as the student's intent to persist, and independent, individual-level variables were identified as the following: (1) high school grades, (2) work hours, (3) on-campus apartment, (4) off-campus-without family, (5) off-campus-with-family, (6) Greek housing, (7) other residence, (8) female, (9) black, (10) Asian, (11) Native American, (12) Hispanic, (13) multi-racial, (14) race/ethnicity unknown, (15) international student, (16) course-study skills and academic engagement, (17) course college knowledge, (18) course-campus engagement, (19) course-peer connection, and (20) course-health education (Porter & Swing, 2006). School-level, independent variables included were: (1) acceptance rate, (2) spending per-student ($1,000s), (3) public, (4) doctoral, (5) masters, (6) course-study skills and academic engagement, (7) course-college knowledge, (8) course-campus engagement, (9) course-peer connection, (10) course-health education. Control variables that were indicated are: (1) academic preparation, (2) finances, and (3) demographics (Porter & Swing, 2006).

Results of the study concluded that students who were more likely to express an intention to return to their institution the following year were females and students with better grades in high school (Porter & Swing, 2006). In addition, students who were less likely to return indicated that they worked several hours throughout the week. Researchers also found that institution selectivity or available resources were significantly related to persistence, after

controlling for individual student characteristics (Porter & Swing, 2006). Students at liberal arts colleges were less likely to indicate intent to return than those at doctoral institutions (Porter & Swing, 2006).

In addition, Porter and Swing (2006) found that individual perceptions matter. More specifically, although substantial impact was small, researchers found that students were more likely to indicate intent to persist, when they rated their course as more effective in a given content area. A stronger impact on persistence was found in school-level means, which indicated that schools with first-year seminars that adequately taught study skills and education on health matters had a greater mean of probabilities of intent-to persist (Porter & Swing, 2006).

Another notable study includes research by Hyers and Joslin (1998) who studied the use of grades earned in a new first-year seminar as predictors of persistence and academic achievement to the second year and beyond. The purpose of this study was to determine if the implementation of the first-year seminar decreased the dropout rate at a small liberal arts college, and if the first-year seminar course could predict which students were most at risk of dropping out (Hyers & Joslin, 1998).

The first-year seminar class described by Hyers and Joslin (1998) is a one semester, three-credit hour course that was required of all first-year, traditional age (17-20 years old) students, and intertwined with the first-year experience program at that institution. The goal of the course is to help students "develop a sense of belonging to the college" (Hyers & Joslin, 1998, p. 9). The first-year experience program is described as including the freshmen-year seminar in the fall semester and other co-curricular activities that complement and support the academic configuration of the program, including an expanded fall orientation, substance-free

housing options, commuter outreach programs, class trips, faculty-student reunion events, student case conferences, and the Community Spirit Award (Hyers & Joslin, 1998).

The mandatory requirement of freshmen-year seminar at this institution was decided on by the faculty who believed that this course was necessary and that no student should be exempt, except for older, non-traditional students (Hyers & Joslin, 1998). Approximately 18 students were enrolled in 15 sections of the freshmen-year seminar course, and students in each section lived on the same floor of a residence hall, where the freshmen-year seminar instructor also maintained an office for student accessibility (Hyers & Joslin, 1998).

Professors of each section of the freshmen-year seminar course served as the students' academic advisor for their first year, regardless of the students' chosen major. In addition, extensive planning and implementation for each freshmen-year seminar course was conducted to coordinate with other freshmen-year experience activities. Professors of the freshmen-year seminar course also collaboratively developed a common course syllabus, all sections had identical course themes, objectives, and attendance polices. In addition, many sections also had common activities and topics, with the primary goal of the course was to help facilitate the students' transition to college and be academically successful (Hyers & Joslin, 1998).

Data collected in this study included high school percentile rank, SAT scores, college GPA, earned credit hours, attempted credit hours, and a list of persisting and non-persisting students (Hyers & Joslin, 1998). Hyers and Joslin's (1998) objective was to investigate if the first-year seminar grade would be a significant variable to their study.

After statistical analysis, Hyers and Joslin (1998) found that a very distinctive boundary existed between students who received a *C*+ and *B*- in the freshmen-year seminar in all aspects except for SAT scores. Students who earned an *A* or *B* ($p < .01$) had a higher first semester

GPA, earned hours, and attempted hours; in addition, they also had a higher high school rank (Hyers & Joslin, 1998). Hyers and Joslin (1998) also found that there was a positive correlation between success in the freshmen-year seminar and retention, where the freshmen-year seminar grade was a key element in the understanding of persistence. They concluded 77% of students who received an *A* or *B* in the course persisted to their second year, while only 45% of the students who received a *C*+ or below returned (Hyers & Joslin, 1998). More specifically, students who received an *F* or *D* returned at a rate of 32%, a *C* at 57%, and *A* or *B* at 77% with the groups differing statistically ($p<.001$ with a power over 99% at $p=.01$) (Hyers & Joslin, 1998).

The findings of Hyers and Joslin's (1998) research shows that students who are at-risk of not being retained, can be identified by reviewing student's mid-term grades in the freshmen-year seminar. With this information, an advisor or freshmen-year seminar instructor has an opportunity to intervene and make necessary referrals in hopes to help retain the student before it is too late.

Research Addressing Potential Explanatory or Independent Variables

The variables in this section have been selected as possible explanatory variables.

Age

In Jamelske's (2009) study, the sample of 1,997 students included only students under the age of 20, with a mean age of 18.6 and standard deviation of 0.34. He concluded that older students are less likely to return after their first year (age $p \leq 0.05$) (Table 1). In another study, Fike (2008) concluded that a negative correlation exists between student retention and age (Table 1). He also found that students' age was not statistically significant at predicting first-fall to second-fall semester retention, but it was statistically significant, weak predictor fall to spring retention (CI_{95} = 1.005, 1.018) (Fike, 2008). While, Liu and Liu (1999) found that graduation

rates were higher in younger students than older students, and attributes this finding to older students having more family responsibilities (Table 1).

Table 1. Research Studies Reporting Possible Predictor Variables to Student Retention

Reference	Age	Gender	Ethnicity	Marital Status	High School Grade Point Average	ACT Score	Final Grade in Freshmen-Year Seminar
Clark & Cundiff, 2011			None (C), None (AA)	None	P	None	
DeBeard et al., 2004					P		
Fike, 2008	N	None	None				
Hyers & Joslin, 1998							P
Jamelske, 2009	N	P(M)				None	
Liu & Liu, 1999	N	None	P(C)				
Porter & Swing, 2006		P(F)			P		
Potts & Schultz, 2008						None	
Shivpuri et al., 2006						P	

Note. "P" indicates a positive relationship between possible predictor variable and student retention. "N" indicates a negative relationship between possible predictor variable and student retention. "None" indicates no relationship found between possible predictor variable and student retention. "F" indicates female, "M" indicates male. "AA" indicates African American.

Gender

Researchers, Porter and Swing (2006), concluded that females were more likely to express an intention to return to their university for a second year ($p < .01$) (Table 1). Conflicting data on gender's effect on retention was reported by Jamelske (2009) who found after a statistically significant logistic regression analysis that males ($p \leq 0.05$) were likely to return to their university for second year (Table 1).

In another study, using logistic regression and after controlling for covariates, student gender was not found to be a statistically significant predictor of first-fall to first-spring student retention (Fike, 2008) (Table 1). Yet, in a different study, Liu and Liu (1999) also concluded there was no significant difference between students' gender and retention rates (Table 1).

Ethnicity

Clark and Cundiff (2011) could not find a statistically significant relationship between African-Americans and retention or Caucasian and retention ($p < 0.01$) (Table 1). Fike (2008) also concluded that ethnicity, after controlling for covariates, was not a statistically significant predictor of student retention (Table 1). Liu and Liu (1999) indicated that a student's race does have an impact on student departure, more specifically, the retention rates of minorities is lower than Caucasians (Table 1).

Marital Status

In Clark and Cundiff's (2011) study of the effectiveness of a freshmen-year seminar course, they included the covariate married/cohabitating and tested it using propensity scores against students who selected to enroll freshmen-year seminar course (University 101), college GPA, and retention for a second year. However, they were unable to obtain a statistically significant *p* value for this covariate.

High School Grade Point Average

Using propensity scores, Clark and Cundiff (2011) found that first-year GPA and second-year retention had a positive relationship with high school GPA ($p < 0.01$) (Table 1). Other researchers also found that low high school GPA had a statistically significant correlation with retention and conclude that universities with higher admission standards such as high school GPA and SAT scores can expect higher retention rates and achievement among their freshmen (DeBeard et al., 2004) (Table 1). In addition, Porter and Swing (2006) concluded that students were more likely to express an intention to return to their university for their second year, if they earned better grades in high school ($p < .01$) (Table 1).

ACT Score

Potts and Schultz (2008) identified students who were considered at-risk scored 22 or below on the ACT and subsequently below the university admissions standards (Table 1). After statistical analysis, Potts and Schultz (2008) did not find a significant difference in retention between students identified at-risk and students not considered at-risk; because of this, Potts and Schultz (2008) concludes that the ACT admission test score does not fare well in predicting college success ($p < 0.01$) (Table 1). Clark and Cundiff (2011) and Jamelske (2009) found similar results, as ACT score was not a significant factor related to student retention ($p \leq 0.01$) (Table 1).

Contrary to the above findings, other researchers have found that higher SAT/ACT scores were a significant predictor of college success initially, than lower SAT/ACT scores ($\lambda = .33$, $p < .05$) (Shivpuri et al., 2006) (Table 1).

Final Grade in the Freshmen-Year Seminar Course

In a study by Hyers and Joslin (1998), researchers found that students who earned an *A* or *B* ($p < .01$) had a higher first semester GPA, earned hours, and attempted hours than students who earned a *C* or lower. They also found that there was a positive correlation between retention and success in the freshmen-year seminar, and that students' freshmen-year seminar grade was a key to understanding student persistence (Hyers & Joslin, 1998). Hyers and Joslin (1998) concluded that only 45% of the students who received a *C* or below returned for a second year, and 77% of students who received an *A* or *B* in the course persisted to their second year. More specifically Hyers and Joslin (1998) found that 77% of students who received an *A* or *B*, 57% of those who made a *C*, and 32% of those who made a *D* or *F* returned for their sophomore year ($p<.001$ with a power over 99% at $p=.01$) (Table 1).

Deficiencies/Limitations in Literature

It is appropriate at this point to acknowledge that while conducting a review of the literature on student retention, several theorists were found to criticize Vincent Tinto's (1993) Theory of Institutional Departure. While these articles were reviewed, the researcher has determined that Vincent Tinto's (1993) Theory of Institutional Departure is a widely accepted theory in student persistence and retention and will remain the theoretical framework for this study.

In addition, a gap in both the research conducted and the scholarly articles that have been published in the area of marital status as an indicator of student retention have been identified by the researcher.

Theoretical/Conceptual Framework for the Study

Tinto's (1993) theory of institutional departure was used as the theoretical framework for this study (Figure 1). Tinto's (1993) theory of institutional departure pulls from the work of Arnold Van Gennep's (1960) study of the rites of passage in tribal societies, and of Emile Durkeim's (1953) theory of suicide. Tinto (1993) equates Van Gennep's (1960) rites of passage stages of separation, transition, and incorporation to a college student's career, where college students move from a community or high school setting to college, and must make transitions to the new community. As students make the transition, they are likely to encounter problems of adjustment, in which the resolution of such problems may factor into a student's decision to return to the university (Tinto, 1993).

In Tinto's (1993) first stage, separation, college students must dissociate themselves, in varying degrees, from communities of the past, typically mostly family, their high school, and local area of residence. In this stage, students who move away from home must adopt behaviors and norms appropriate for life in their new location, which requires to some degree acceptance of

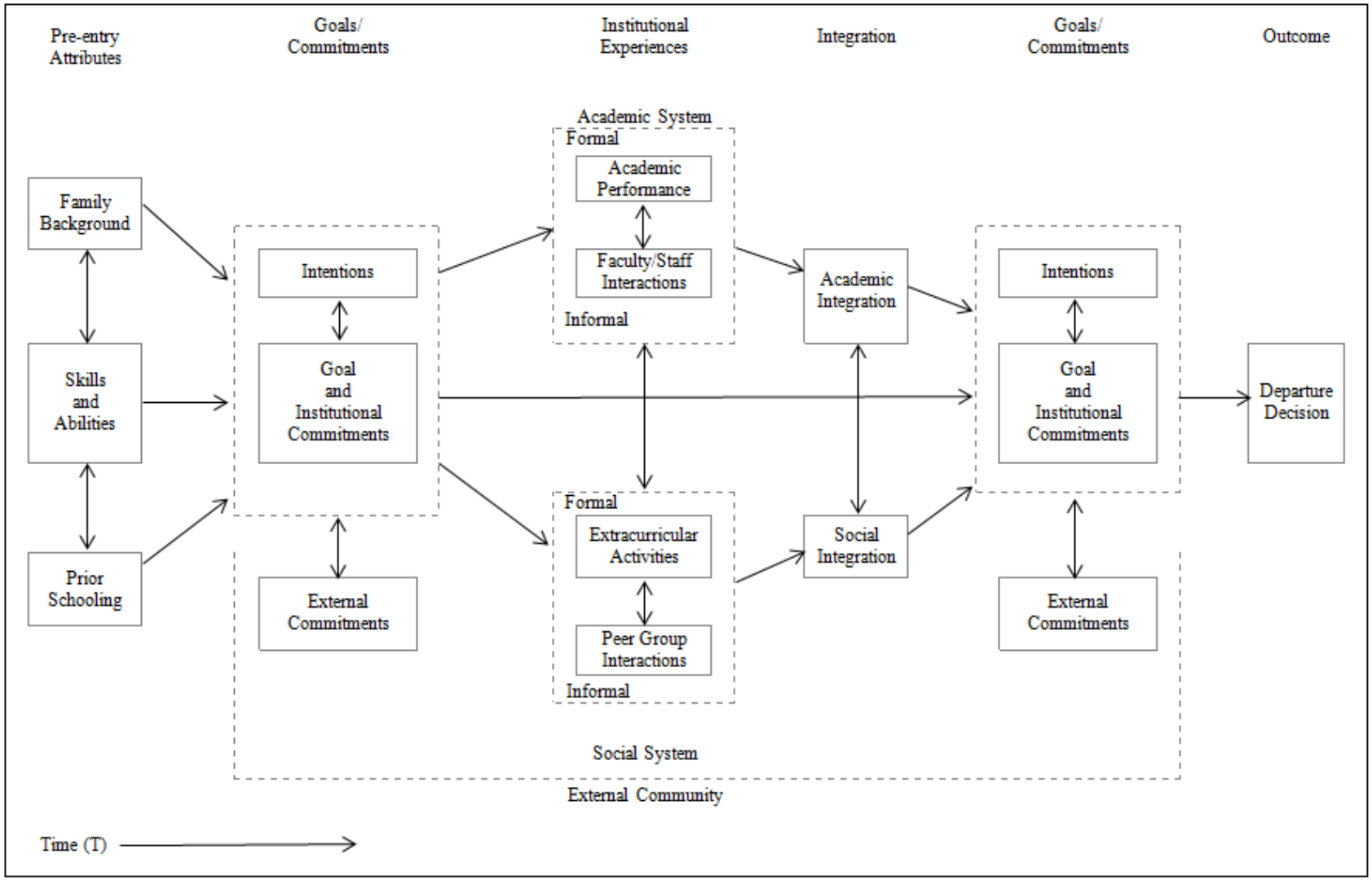

Figure 1. Tinto's Theory of Institutional Departure (1993)

life changes, which may include the denunciation of the customs of their past life (Tinto, 1993). Of course, this is not true of students who choose to attend a local, nonresidential institution that does not require them to disassociate themselves from past communities or affiliations in order to establish membership in their new community (Tinto, 1993). While students who chose to attend local institutions may not experience the stresses of separation, they also may not be able to reap the full rewards the college community can offer them (Tinto, 1993). Students who choose to live at home while attending college, expose themselves to a number of potential coercions, including external forces which may pull the student way from full integration of college life; although, for those individuals from college educated families, the transition to college may be more readily accepted and encouraged movement it the course of their adult life (Tinto, 1993).

The second stage of Tinto's (1993) theoretical framework of departure is transition, which comes during and after the separation stage. In this stage of passage between the old and new communities, full adoption of the new customs and patterns of behavior and after the onset of separation from the old ones, students have not fully separated themselves from past communities, nor have they fully committed themselves to the new community (Tinto, 1993). Students who come from very different backgrounds than those presented in the new community may struggle to achieve competent membership in their new community (Tinto, 1993). Students, who are more prone to this problem, are those whose background has not prepared them for the social and intellectual skills needed for successful participation in the new community; groups of students who are more widely affected include minorities, older, and physically handicapped students and students from rural backgrounds who attend large residential colleges (Tinto, 1993). Student transition to college can be stressful, and the way that individual students deal with the

stress or their ability to cope with the transition may influence a student's decision to withdraw from college early in their first academic year (Tinto, 1993). To help students navigate the transition to their new community, many colleges and universities have set up transitional programs to assist their students through this stage, an example of a freshman program that has been developed is the freshmen-year seminar (Tinto, 1993).

The third stage in Tinto's (1993) theoretical framework of departure is incorporation into the society of college. Once a student reaches this stage, they have already passed through the previous stages of separation and transition, which have a tendency to take place very early in the student's career (Tinto, 1993). In the incorporation stage, a student is faced with the challenge of becoming fully integrated into the college community, though they have passed the hurdles of separation, and transition, student persistence is still not guaranteed (Tinto, 1993). Students who have reached this stage now face the challenge of becoming incorporated into the life of college. While many colleges have established freshman-year programs, many students are still left to learn the ropes largely on their own; for them, daily personal contacts with other members of college are the only vehicles to reach incorporation into the college community (Tinto, 1993). Many students will not reach full incorporation into the life of the institution without external assistance; some students will choose to leave the institution because they were not able to establish satisfying and social membership in the community (Tinto, 1993).

At this point in Tinto's (1993) theory development, he leaves behind the work of Van Gennep (1960) and turns to Durkeim's (1953) work for a look at how individual interaction on campus can lead to incorporation.

Durkeim's (1953) study of suicide was used as a guide for Tinto's (1993) theory on why students choose to leave an institution. More specifically, Tinto (1993) believed that behaviors

from suicide and student departure can be understood, in most circumstances, to symbolize a form of voluntary departure from their community, and indicate somewhat similar forms of rejection of the conventional model persisting in those communities.

Tinto (1993) believes that colleges and universities are made up of both social and academic structures, which include formal and informal communities of students, staff, and faculty. The academic system consists of the formal education of students, while the social system centers the personal needs of its students, faculty, and staff in their personal life. For students, recurring social interactions typically occur in hallways, residence halls, cafeterias, and other various meeting places, which focus on both social and intellectual needs of its members, it is the experience students have in the academic and social systems may lead to departure from the institution (Tinto, 1993). Tinto (1993) believes that it is possible for students to succeed in one domain, such as the social system, but fail to establish membership in the academic domain and vice versa, which can result in student departure. He goes on to explain that student interactions in both the formal and informal community of the university are felt by the other domain, more specifically, experiences are linked and there is an important exchange on the academic and social life of college communities (Tinto, 1993).

Tinto (1993) acknowledges that external forces and choices also play an important role in influencing what transpires within the college, and on student decisions to depart from college. For many students, outside obligations pull at their available time and ability to persist (Tinto, 1993).

In addition to external forces, personal attributes of students also plays a role in student departure, for example, students' personal attributes can predispose them to respond in a particular way to a given situation or condition (Tinto, 1993). Personal motivation of students

can play a role in the attainment of the students' goals, where students who are highly motivated or dedicated are more willing to commit themselves fully to the realization of their goals and students lacking motivation may not be able or willing to commit themselves to attaining their goals (Tinto, 1993).

With the works of Van Gennep (1960) and Durkeim (1953) in mind, Tinto (1993) was able to describe a model he calls the "Longitudinal Model of Departure from Institutions of Higher Education" (p. 112). In this model, it is important to mention that the longitudinal process of departure is designed to explain the process as it occurs within colleges and universities, with a primary focus on the events that occur following entry, or immediately before entry (Tinto, 1993). The model also addresses the longitudinal process by which students make a decision to leave colleges and universities (Tinto, 1993). While it is important to address that the occurrence of academic dismissal was not ignored, it is not a focus of Tinto's (1993) model. Tinto (1993) also describes the model as "longitudinal and interactional in character," where this aspect of the model is meant to explain how interactions among different persons and university characteristics are linked to student withdrawal (p.113). His model focuses on multiple interactions with members of the institution's community, which also makes his model sociological in character (Tinto, 1993). Tinto's (1993) model,

> argues that individual departure from institutions can be viewed as arising out of a longitudinal process of interactions between an individual with given attributes, skills, financial resources, prior educational experiences, and dispositions (intentions and commitments) and other members of the academic and social systems of the institution. The individual's experience in those systems, as indicated by his/her intellectual (academic) and social (personal) integrations, continually modifies his or her intentions and commitments (pp. 113-115).

Tinto's (1993) model recognizes that the external environment is a factor in the social and academic communities of the institution, whereas external communities have their own set

of behavioral standards and values. Furthermore, the model acknowledges that for many students, going to college is one of many commitments they will have to learn to balance during the extent of their college career, and that external commitments can alter a student's intentions and commitment to the university (Tinto, 1993).

Pre-Entry Attributes

When students enter institutions, they enter with varying range of family and community backgrounds, personal attributes, dispositions, skills, financial resources, and types of precollege education achievements and experiences (Tinto, 1993). Each of these characteristics of a student has an effect on student departure, and plays a role in the student's continuing commitment and intentions regarding the future of their education at the institution (Tinto, 1993).

In Tinto's (1993) model of institutional departure, he acknowledges the role of student experiences within the institution, more superficially, those interactions between students and other members of the university, student, staff, and faculty, are related to the students' decision to continue at that institution.

External Commitments

Tinto's (1993) model also addresses that the degree to which the student participates in external communities, such as work, family, and community, can also shape the student's willingness to persist in college. He argues, when external communities have had a substantial impact on the student, those experiences may condition the student to a norm that is not present in the college community, especially with commuter students. Thus, his model leaves open the possibility that even when experiences within the college community are largely positive, there is a possibility that the student may still choose to withdraw from the university (Tinto, 1993).

Academic and Social Integration

The model also addresses the students' academic skills and ability plays a role in the students' decision to depart, such that academic difficulty may prove too great for the student to overcome or conversely, academic boredom may result if the academic system is not challenging enough, both resulting in student departure (Tinto, 1993). Tinto goes on to explain that academic dismissals can also be considered voluntary withdrawal, as the individual made the decision not to commit the time and energy needed to sustain adequate academic progress.

Formal, academic interactions and day-to-day interactions with faculty and staff can also play a role in student departure (Tinto, 1993). Contact with faculty and staff can influence students' judgments about the university, as faculty and staff represent the university and their actions reflect on the university's commitment to student welfare. This reflection and influence can also play a role in the student's dedication to the institution and the student's decision to persist (Tinto, 1993).

In Tinto's (1993) model, an important notion is that institutions are systematic enterprises that are comprised of an assortment of linked interactive systems of informal and formal, social and academic components; and that events or actions in one segment of the university inevitably and unavoidably influence events in other parts of the university. Where, "experiences in the formal academic domain spill over into the informal domain of the college" (Tinto, 1993, pp. 118-119). He goes on to explain that students who become engaged in the classroom, are more likely to seek out faculty contact outside of class than those students who are not actively involved in learning. He believes that relationship between informal and formal interactions may also occur in the social aspects of the institution, when students become involved in campus activities such as working for the student newspaper or serving on student government by accelerating the student's integration into the informal social system. Although it is necessary to

note that full integration in both formal and informal systems of the university is not necessary for persistence (Tinto, 1993). Tinto (1993) also notes that individuals can attain academic integration without achieving integration in the social domain and vice versa, but demands of the academic system would require the student to meet the minimum academic performance requirements. His model explains the important dynamic between the social and academic components of student life on campus, and that ignoring one or the other is to suggest that the formal and social domains occur independently of one another (Tinto, 1993).

College Communities

Students, faculty, and staff make up both social and academic communities, where each community has distinctive ways of binding its members each other (Tinto, 1993). College student persistence is considered a progression of intellectual and social integration, which leads to a person establishing membership in those communities, where acceptance in at least one formal or informal college community is essential for sustained persistence at the institution (Tinto, 1993). To establish competent social and intellectual membership within the larger campus community, students, faculty, and staff can become involved and integrated into smaller subcultures and communities (Tinto, 1993). Integration within smaller communities, both informal and formal, can play an important role in enabling newcomers to effectively transition to college life (Tinto, 1993).

Departure

Finally, Tinto's (1993) model argues that the relationship between a student's goals and commitments, both internal and external, plays a role in whether an individual chooses to depart the institution, and the form that departure takes. Weakened or reduced student goals and/or institutional commitment can result in withdrawal from all forms of higher education, or a

person's commitment to the goal may lead a person to make it to graduation day or even transfer to another institution.

When addressing student departure, it is important for universities not to label all students who depart as a dropout, as it only glosses over the important differences in why students leave (Tinto, 1993). As we have learned, reasons for early student departure can be varied and complex, not all early student departure can be treated with a single policy or action (Tinto, 1993). In addition, the term dropout tends to reflect more on the individuals' actions, and not sufficiently indicate institutional actions may also have responsibility in student departure (Tinto, 1993).

Finally, institutions have a duty to attempt to educate all students who enter, regardless of the students' goals, commitments, and capacities (Tinto, 1993).

Principles of Effective Retention and Effective Implementation

Tinto (1993) describes his principles of effective retention as "an enduring commitment to student welfare, a broader commitment to the education, not mere retention, of all students, and an emphasis upon importance of social and intellectual community in the education of students" (p. 145). He lists the principles as the following:

- Effective retention programs are committed to the students they serve. They put student welfare ahead of other institutional goals,
- Effective retention programs are first and foremost committed to the education of all, not just some, of their students,
- Effective retention programs are committed to the development of supportive social and educational communities in which all students are integrated as competent members. (pp.146-147).

Tinto (1993) describes the above principles as the secret of successful retention, and the application of the principles in the institutional setting. In order to apply the principles of

effective retention, Tinto (1993) goes on to describe another set of principles, the principles of effective implementation:

- Institutions should provide resources for program development and incentives for program participation that reach out to faculty and staff alike,
- Institutions should committ themselves to a long-term process of program development,
- Institutions should place ownership for institutional change in the hands of those across the campus who have to implement that change,
- Institutional actions should be coordinated in a collaborative fashion to insure a systematic, campuswide approach to student retention,
- Institutions should act to insure that facutly and staff possess the skills needed to assist and educate their students,
- Institutions should frontload their efforts on behalf of student retention,
- Insitutions and programs should continually assess their actions with an eye toward improvement (pp. 148-152).

With these principles in mind, Tinto (1993) outlines ways for that colleges and universities can help first-year students make the transition, especially in the first semester or quarter when the adjustment period is most critical for students.

Tinto (1993) explains that transition assistance programs are designed to help students cope with academic and social difficulties that arise during the transition period, such as academic, residential, and/or social issues. One example of transitional program includes University 101, as established by John Gardner at the University of South Carolina (Tinto, 1993). The University 101 course, used as a semester-long extenuation of orientation can help students adjust with difficulties they typically encounter in their first year (Tinto, 1993).

Another facet that universities can develop to assist with transition is the utilization of counseling and advising programs during the early part of the student's career (Tinto, 1993). Tinto (1993) goes on to explain that advising and counseling is further enhanced when they are positively integrated within the education process that all students experience.

Selection of Variables

In Tinto's (1993) Theory of Institutional Departure, he indicates that family background, students' skills and abilities, and prior education are contributing factors to a student's decision to depart the university. With this theory in mind, explanatory variables have been selected for this study. Those explanatory variables associated with family background include student age, gender, ethnicity, and marital status. Explanatory variables associated with skills and abilities include highest composite ACT score and first-attempt, final grade in freshmen-year seminar course. Finally, an explanatory variable associated with prior schooling includes high school grade point average.

CHAPTER 3: METHOD

Population and Sample

The target population of this study was all first-time freshmen enrolled in a freshmen-year seminar course at a small, public, regional institution in the Southeast. The accessible sample utilized for this study was all first-time freshmen enrolled for the first time in University Studies: UNIV 101 in the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters at a small, public, regional institution in the Southeast that offers associate, baccalaureate, and master's degrees. All repeaters of the UNIV 101 course in the given semesters were excluded from the study. Students in the accessible sample were identified by the university's Office of Academic and Institutional Research, as having a final letter grade of A, B, C, D, F, FNA (failed for non-attendance), or W (withdrew) in UNIV 101 for the given semesters as indicated in the university's database, Banner.

The university where this study was conducted uses the "Total Intake Model" as described in *Academic Advising: A Comprehensive Handbook, second edition* (Gordon et al., 2008, p. 246-247). At this institution, professional academic advisors conduct all initial advising of incoming students before students are assigned to faculty in academic departments. Students are assigned to the academic department of their major once the student successfully completes UNIV 101 with a grade of D or better and earns 30 non-developmental credit hours. UNIV 101 is a graduation requirement for all students attending this university.

Instrumentation

The instrument used to collect data for this study consists of a data collection form. A data request was submitted to the university's Office of Assessment and Institutional Research for all data that was analyzed. All data that was used is stored in the university's data

management system, Banner. Permission was sought for use of university data from the Office of Assessment and Institutional Research.

Data Collection Form

A data collection form (Appendix A), designed by the researcher, was used to request data from the Office of Assessment and Institutional Research on incoming first-time freshman enrolled in the university's freshmen-year seminar course, UNIV 101, in the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters. Demographic and pre-college academic data was obtained from the student's application for admission to the university. The researcher requested data to be submitted via a Microsoft Excel spreadsheet.

The researcher submitted the appropriate Institutional Review Board (IRB) form to the Office of Assessment and Institutional Research, and explained why the data is needed and what it was used for.

All data requested was obtained from the university's database; therefore, concerns about reliability and validity are minimal. However, data was reviewed to ensure that missing data is acknowledged. In addition, for students who took the SAT to meet admissions requirements, the ACT approved concordance chart was used to convert SAT composite scores to ACT composite scores (ACT, 2008).

Data Collection

After IRB approval was received from both Louisiana State University and the institution where the study was conducted (Appendixes B and C, respectively), a request was made to the Office of Assessment and Institutional Research for data on first-time freshmen entering the university in the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters. The request included a data collection form (Appendix A) outlining the student information required for the

study. After the Office of Assessment and Institutional Research received the request, a follow up phone call was made to ensure proper communication was received on needed items.

Once the data was received in an Microsoft Excel document, the researcher spot checked data for accuracy, and it was determined marital status should be removed from the study due to a majority of the data was missing and could not be retrieved by the Office of Assessment and Institutional Research.

Data Analysis

The remainder of this chapter will focus on the procedures that were utilized to analyze the data that was collected. For students who were required to repeat the course due to a failing grade or withdrawal, only the first-attempt, final grade of the course was analyzed; the repeated section was eliminated. Transfer students who had previously completed at least one full-time semester were removed from the study.

Research Question 1: Personal and Demographic Characteristics

To describe the population of students during the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters based on the selected characteristics of:

g. age,
h. gender,
i. ethnicity,
j. marital status,
k. cumulative high school grade point average,
l. highest ACT composite score, and
m. first-attempt, final grade in UNIV 101

The data for Research Question 1 used descriptive statistics and frequencies to describe the sample based on the selected demographic and educational characteristics of the students.

The categorical variables gender, ethnicity, marital status, and first-attempt final grade in UNIV 101, were described using frequencies and percentages. Interval variables, age, cumulative high school grade point average, and highest composite ACT score, were described using mean, standard deviation, and range.

Research Question 2: Relationship between Independent Variables and Student Retention

Using correlation, the researcher explored if a relationship existed between the independent variables and the dependent variable, second-year student retention. Correlation is used when examining "relationships between naturally occurring variables rather than making statements about cause and effect" (Field, 2013, p. 872).

Independent variables included:

a. age,
b. gender,
c. ethnicity,
d. cumulative high school grade point average,
e. highest ACT composite score, and
f. first-attempt, final grade in UNIV 101.

The point-biserial measure of association was used to determine if a relationship existed between interval independent variables, cumulative high school grade point average, highest composite ACT score, and age with second-year retention (Hinkle et al., 2003). Point-biserial is special case of the Pearson's *r* and is appropriate to use when one of the two variables is dichotomous, and the other is measured on an interval or ratio scale (Hinkle et al., 2003). Pearson's product-moment (otherwise known as Pearson's *r*), is a standardized correlation coefficient used to determine the relationship between to linear variables (Field, 2013; Hinkle et al., 2003).

The *phi* correlation coefficient was used to determine if a relationship existed between the nominal, dichotomous independent variable gender and second-year retention (Hinkle et al., 2003). The *phi* coefficient, a special case of the Pearson *r*, should be used when both variables are nominal dichotomous (Hinkle et al., 2003). In this analysis, males were coded 0 and females were coded 1 in SPSS.

Ethnicity was broken down into three categories, Caucasian, African-American, and Other ethnicities. Due to a small sample of students who reported their ethnicity as something other than Caucasian or African-American, a new variable was created, White or Non-white. The new variable was created in order to fold the African-American and Other categories into one group. In the new variable, White or Non-white, white students were coded as 1 and all other ethnicities were coded as 0 in SPSS. The *phi* correlation coefficient was then utilized to obtain the relationship between White or Non-white students with second-year retention.

Kendall's *Tau-c* correlation was chosen to determine if a relationship exists between the ordinal independent variable, first-attempt final grade in the freshmen-year seminar course and second-year retention. Kendall's *Tau*-c, a modification of the Kendall's *Tau-b*, is appropriate to use when a data set has a large number of tied ranks with multiple categories, more specifically for contingency tables that have an unequal number of rows and columns (De Muth, 2006).

Effect size for correlation analysis was measured using Davis' (1971) descriptors. Effect size can be classified as a "standardized measure of the magnitude of an observed effect" (Field, 2013, p. 874). Davis (1971) describes correlation coefficients as: .70 or higher as a very strong association, .50 to .69 as a substantial association, .30 to .49 as a moderate association, .10 to .29 as a low association, and .01 to .09 as a negligible association.

Research Question 3: First-attempt Completion in UNIV 101 as a Predictor of Retention

Using logistic regression analysis, what is the probability that student retention can be predicted by using the student's first-attempt of completing UNIV 101? Student retention was defined as students who persist from their first year to their second year.

The independent variable was broken down into two groups: successfully completed UNIV 101 (recorded grades of A, B, C, and D) and did not successfully complete UNIV 101 (recorded grades of F, FNA, and W).

Logistic regression (enter method) was selected as the appropriate statistical test as it calculates a logistic coefficient; this coefficient makes a comparison of a particular event occurring with the probability of it not occurring (Hair et al., 1998). "Logistic regression analysis is especially useful when the distribution of responses of the dependent variable are expected to be nonlinear with one or more of the independent variables" (Tabachnick & Fidell, 2013, p. 439). In addition, logistic regression is appropriate to use when the independent variable is a continuous or categorical variable, and the dependent variable is categorical variable (Field, 2013; Hair et al., 1998; Tabachnick & Fidell, 2013).

The data was reviewed for linearity, multicollinearity, independence of errors, outliers and missing cases (Field, 2013; Tabachnick & Fidell, 2013). Effect size of the odds ratio was determined using Rosenthal's (2012) qualitative descriptors, where about 1.5 or 0.67 is a small and weak association, about 2.5 or 0.40 is a medium and moderate association, about 4.0 or 0.25 is a large and strong association, and about 10.0 or 0.10 is a very large and very strong association. An *alpha* level of .05 was used for the logistic regression analysis.

Research Question 4: Logistic Regression Analysis to Determine if Selected Independent Variables May Predict Retention

Using logistic regression analysis, the researcher explored if a statistically significant contributor to the prediction of student retention could be found by using the following independent variables:

a. age,
b. gender,
c. White or Non-White,
d. cumulative high school grade point average,
e. highest composite ACT score, and
f. first-attempt, final grade in UNIV 101.
    i. A
    ii. B
    iii. C
    iv. D
    v. F (includes students who received a F for non-attendance)

Variables selected for this analysis were found to be related to student retention as reported in the review of literature. Direct logistic regression was conducted in SPSS to determine if the variables were statistically significant contributors to the prediction of retention. Logistic regression is appropriate to use when the dependent variable is nominal and dichotomous, and the researcher wants to predict the probability of an event occurring (Hair et al., 1998).

Data was examined for multicollinearity, linearity, independence of errors, and missing cases. Effect size of the odds ratio was determined using Rosenthal's (2012) qualitative

descriptors, where about 1.5 or 0.67 is a small and weak association, about 2.5 or 0.40 is a medium and moderate association, about 4.0 or 0.25 is a large and strong association, and about 10.0 or 0.10 is a very large and very strong association. An *alpha* level of .05 was used for the direct logistic regression.

Institutional Review Board Approval

Permission for the study was requested from the Institutional Review Board (IRB) at Louisiana State University and a small, public, regional institution in the Southeast, where the study was conducted. The institution where this study was conducted decided to defer an approval or denial IRB decision to Louisiana State University, the institution initiating the research. The approval form from Louisiana State University is located in Appendix B. The letter of deferral from the small, public, regional institution in the Southeast is located in Appendix C.

CHAPTER 4: RESULTS

The purpose of this study was to determine if a first-time freshman's completion and first-attempt, final grade in a freshmen-year seminar had an impact on second-year retention. Data for this study was extracted from a database at the university where the study was conducted. The population of the study was first-time freshmen who entered the university in the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters (*N*=2,464).

Research Question 1: Personal and Demographic Characteristics

The first research question addressed the personal characteristics of first-time freshmen who entered a small, public, regional institution in the Southeast in the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters. The independent variables included in this study were: age, gender, ethnicity, marital status, high school grade point average, highest composite score on the ACT, and first-attempt, final grade in the freshmen-year seminar course, UNIV 101. All data was provided to the researcher in a Microsoft Excel spreadsheet from the university's Office of Assessment and Institutional Research.

Using data provided to the researcher, 982 (39.9%) students identified themselves as male and 1,482 (60.1%) as female (Table 2).

Table 2. Distribution of Gender for First-time Freshmen Students Entering a Small, Public, Regional Institution in the Southeast

Gender	*N*	%
Female	1,482	60.1
Male	982	39.9
Total	2,464	100.0

Ethnicity was broken down into six categories, Caucasian, African-American, Alaska Native / American Indian, Hispanic or Latino, Asian, and Native Hawaiian / Pacific Islander. Of the total population of 2,464 students, 1,716 (69.6%) of students self-identified themselves as

Caucasian, 517 (21.0%) as African-American, 82 (3.3%) as Alaska Native or Native American, 58 (2.4%) as Hispanic or Latino, 35(1.4) as Asian, 3(0.0%) as Native Hawaiian or Pacific Islander, and 53 (2.2%) of students did not report their ethnicity (Table 3).

Table 3. Distribution of Ethnicity for First-time Freshmen Students Entering a Small, Public, Regional Institution in the Southeast

Ethnicity	*N*	%
Caucasian	1,716	69.6
African-American	517	21.0
Alaska Native or American Indian	82	3.3
Hispanic or Latino	58	2.4
Missing	53	2.2
Asian	35	1.4
Native Hawaiian or Pacific Islander	3	0.0
Total	2,464	100.0

Due to an extremely small number of cases, which consisted of various ethnicities other than Caucasian or African-American, the data was collapsed into two categories, White or Non-white. Of the total population of 2,464 students, 1,716 (69.6%) students self-identified themselves as White, 695 (28.2%) were Non-white, and 53 (2.2%) students did not report their ethnicity (Table 4).

Table 4. Distribution of White or Non-white First-time Freshmen Students Entering a Small, Public, Regional Institution in the Southeast

White or Non-White	*N*	%
White	1,716	69.6
Non-white	695	28.2
Missing	53	2.2
Total	2,464	100.0

In regards to the variable marital status, 2,257 (91.6%) of 2464 students did not report their marital status to the university. Of those students who did report, 6 (0.2%) identified as divorced, 8 (0.3%) as married, 3 (0.1%) as separated, 188 (7.6%) as single, and 2 (0.1%) as some

other status (Table 5). Due to the large number of missing cases in this independent variable, the researcher removed this variable from all other research questions in the study.

Table 5. Distribution of Marital Status for First-time Freshmen Students Entering a Small, Public, Regional Institution in the Southeast

Marital Status	*N*	%
Missing	2,257	91.6
Single	188	7.6
Married	8	0.3
Divorced	6	0.2
Separated	3	0.1
Other	2	0.1
Total	2,464	100.0

It was determined that 1,172 (71.9%) of 2464 students in the study identified themselves as 18 years old (*M*=18.7; *SD*=3.126). The age range of these first-time freshmen was 16 to 51 (Table 6). The students' high school grade point average (GPA) (*N*=2417; 98.1%) was *M* = 3.18 (*SD* = 0.50) with a minimum GPA of 1.20 and a maximum GPA of 4.0.

Due to the number of students who presented SAT scores (*N*=73*)* to the university for college admission, SAT critical reading and mathematics scores were added together to obtain an SAT composite score, then a concordance table provided by ACT (Appendix D) was used to calculate an approximate ACT composite score for students who presented SAT scores (ACT, 2008). The highest ACT composite score for each student was then used in this study. The researcher identified two published concordance tables that could be used to convert SAT scores to ACT scores, one a 1998 concordance table published by the Board of Regents in the state where the study was conducted, and a 2008 concordance table produced by ACT. The researcher chose to use the most current concordance available (produced by ACT), which can be found in Appendix D.

Highest ACT composite score (*N*=2346; 95.2%) had a range of 14-34. The students' highest average ACT composite score was *M* = 21.64 (*SD* = 3.18) (Table 6).

Table 6. Age, High School Grade Point Average, and Highest ACT Composite Score for First-time Freshmen Students Entering a Small, Public, Regional Institution in the Southeast

Variable	*N*	*M*	*SD*	Minimum value	Maximum value
Age	2,464	18.70	3.126	16	51
High school grade point[a]	2,417	3.18	0.497	1.20	4.00
Composite ACT score[b]	2,346	21.64	3.175	14	34
Total	2,464				

Note. [a]High school grade point average was missing for 47 students in the study. [b]Composite ACT scores were missing for 118 students. Composite ACT scores were estimated from the students' SAT score for 73 students.

Finally, just over one-half of the students (*N*=1,302; 52.8%), earned an *A* as their first-attempt, final grade in the freshmen-year seminar course (UNIV 101) while less than one-fifth of the students (*N*=406, 16.5%) earned a *B* in the course (Table 7).

Table 7. Distribution of First-attempt, Final Grade in the Freshmen-Year Seminar Course (UNIV 101) for First-time Freshmen Students Entering a Small, Public, Regional Institution in the Southeast

First-attempt, Final Grade in UNIV 101	*N*	%
A	1,302	52.8
B	406	16.5
C	233	9.5
D	115	4.7
F	285	11.6
FNA[a]	12	0.5
W[b]	111	4.5
Total	2,464	100.0

Note. [a]Failed Never Attended [b] Withdrew

Finally, the dependent variable, second-year retention, was analyzed and it was determined that 1,687 (68.5%) of first-time freshmen enrolled in their initial semester of UNIV 101 in Fall 2011, Spring 2012, Fall 2012, and Spring 2013 were retained for a second year, while 777 (31.5%) were not retained for a second year (Table 8).

Table 8. Second-Year Retention of First-time Freshmen Enrolled in the Freshmen-Year Seminar Course, UNIV 101, at a Small, Public, Regional, Institution in the Southeast

Retention	*N*	%
Retained	1,687	68.5
Not retained	777	31.5
Total	2,464	100.0

Research Question 2: Relationship between Independent Variables and Student Retention

This research question sought to determine if a relationship existed between each independent variable and the dependent variable, students' second-year retention. The point-biserial measure of association was used to determine if a relationship existed for the interval variables: age, highest composite ACT score, and high school grade point average with the nominal dichotomous variable, second-year retention. The point-biserial coefficient, derived from the Pearson *r*, is used when one interval or ratio scale variable and one nominal, dichotomous variable are being correlated (Hinkle et al., 2003). Effect size was calculated for the point-biserial correlation coefficient using Davis's (1971) descriptors. A statistically significant, negligible, negative association was found between age and second-year retention (N=2,464; r=-0.09; p<.001) (Table 9).

Table 9. Relationship between Independent Variables and Student Retention at a Small, Public, Regional Institution in the Southeast

Measure	Relationship
Final Grade in UNIV 101[a]	0.42
High school grade point[b] averge	0.30
Composite ACT Score[b]	0.17
Age[b]	-0.09
Gender [c]	0.06
White or Non-White [c]	0.05

Note. [a]Kendall's *Tau-c* [b]Point-biserial [c] *Phi*

A statistically significant, low, positive association existed between ACT composite score and second-year retention (N=2,346; r=0.17; p<.001) (Table 9). A statistically significant,

moderate positive association was found between high school grade point average and second-year retention (N=2,417; r= 0.30; p<.001) (Table 9).

The *phi* correlation coefficient was used to determine if a relationship existed between nominal, dichotomous variable gender (males coded as 0, females coded as 1), with second-year retention. The *phi* coefficient, derived from the Pearson's r, is appropriate to use when both variables are nominal and dichotomous (Hinkle et al., 2003). Effect size was calculated for the *phi* correlation coefficient using Davis's (1971) descriptors. A statistically significant, negligible, positive relationship was found between gender (N=2464; r=.06; p<.004) and second-year retention, indicating that females were more likely to be retained for a second year than males (Table 9).

The *phi* correlation coefficient was used to determine if a relationship existed between White or Non-white (white students coded as 1, non-white students coded as 0) and second-year retention. The *phi* coefficient, derived from the Pearson's r, is appropriate to use when both variables are nominal and dichotomous (Hinkle et al., 2003). Effect size was calculated for the *phi* correlation coefficient using Davis's (1971) descriptors. A statistically significant, negligible, positive relationship was found between White or Non-white students (N=2464; r=.05; p<.018) and second-year retention, indicating that white students were more likely to be retained than non-white students (Table 9).

The Kendall's *Tau-c* correlation coefficient was used to determine if a relationship existed between the ordinal variable first-attempt, final grade in UNIV 101, and the dependent variable, student retention. Effect size was determined using Davis' (1971) descriptors. A statistically significant, moderate, positive relationship was found between the two variables

(N=2464; τ_c= 0.42; p<.001), indicating that as students grades in UNIV 101 increased, retention also increased (Table 9).

Research Question 3: First-attempt Completion in UNIV 101 as a Predictor of Retention

The third research question used logistic regression to determine if first-time student completion or non-completion of UNIV 101 could predict the probability of a student being retained from the first year to a second year. Completion of UNIV 101 was defined as receiving a passing grade, as defined by the university, of A, B, C or D in the course. Students were classified as not completing the course, if they received a letter grade of F, FNA (failed never attended), or W (withdrew) in their first attempt at the course.

The data was reviewed for linearity, multicollinearity, independence of errors, outliers and missing cases (Field, 2013; Tabachnick & Fidell, 2013). There were no missing cases or outliers in the data set. The data was checked to ensure that no student appeared in the data set more than one time, and only appeared for the semester that they initially attempted UNIV 101; therefore, the data set was found to be free of independence errors. Multicollinearity is not a concern due to only one independent variable being used in this research question. In addition, due to the nature of the independent variable, a linear independent variable is not possible in this research question, as the independent variable is nominal, dichotomous. Although this logistic regression model did not meet all basic assumptions, logistic regression is less affected by assumption violations compared to other statistical models and is more robust when the assumptions are not met (Hair et al., 1998).

The descriptive statistics were reviewed, and of the 2,464 students included in the analysis, 2,056 (83.4%) successfully completed UNIV 101 in their first attempt, and 408 (16.6%) students did not successfully complete the course in their first attempt. There were no missing cases in this data set (Table 10).

Table 10. UNIV 101 Completers and Non-completers at a Small, Public, Regional Institution in the Southeast

UNIV101	*N*	%
Completer	2,056	83.4
Non-completer	408	16.6
Total	2,464	100.0

Of those students who completed UNIV 101, 1591 (94.3%) were retained for a second year, while 96 (5.7%) of the students who did not complete the course were retained for a second year (Table 11).

Table 11. Retention Rates of Students Who Completed UNIV 101 in their First-attempt Compared to the Retention Rates of Non-completers in their First-attempt of UNIV 101 at a Small, Public, Regional Institution in the Southeast

UNIV101	Retention Status			
	Retained (*N*)	%	Not Retained (*N*)	%
Completer	1,591	94.3	465	59.8
Non-completer	96	5.7	312	40.2
Total	1,687	100.0	777	100.0

Direct logistic regression was completed in SPSS (using the enter function) and interpreted at the *alpha* level of .05, which was set *a priori.* It was determined that the model correctly predicted group membership 77.2% of the time, which is an indicator of good model fit. Model fit was also examined using the Omnibus Tests of Model Coefficients table presented by SPSS, which indicated a statistically significant chi-square statistic (χ^2=428.16, p<.001) (Tabachnick & Fidell, 2013). In examining the odds ratio, UNIV 101 has an odds ratio value of 11.12 (Table 12). Since the odds ratio is larger than 1, it can be interpreted that students who complete UNIV 101 have a 11.12 times or 1,012% increase in odds to be retained for a second year than those who did not complete the course.

Using Rosenthal's (2012) qualitative descriptors for odds ratio size and strength of association, it was determined that the odds ratio value of 11.12 has a very large and very strong

association. Therefore, students who complete the freshmen-year seminar course, UNIV 101, have a very large and very strong association with being retained for a second year.

Table 12. Completer and Non-Completer of UNIV 101 Predicting Second-Year Retention at a Small, Public, Regional Institution in the Southeast

Variable	*B*	*SE*	*OR*	95% CI	Wald statistic	*p*
UNIV 101	2.409	0.13	11.12	[8.65, 14.30]	353.76	<.001

Note. UNIV 101 was coded as 0 for non-completer and 1 for completer of the course.

Research Question 4: First-attempt Final Grade in UNIV 101 as a Predictor of Retention

The fourth research question used direct logistic regression (enter method in SPSS) to determine if selected variables, which were found in literature, could predict the probability of a student being retained from the first year to a second year. Selected variables included:

a. age,
b. gender,
c. White or Non-white,
d. cumulative high school grade point average,
e. highest composite ACT score, and
f. first-attempt, final grade in UNIV 101.
    i. A
    ii. B
    iii. C
    iv. D
    v. F (includes students who received a F for non-attendance)

The descriptive statistics of UNIV 101 were reviewed, 1,687 (68.5%) students were retained for a second year, while 777 (31.5%) of the students were not retained for a second year (Table 11). Students who earned an *A* (*N*=1,302) in the course had a retention rate of 64.4%,

students who earned a *B* (*N*=406) in the course had a retention rate of 17.5%, students who earned a *C* (*N*=233) in the course had a retention rate of 8.9%, students who earned a *D* (*N*=115) in the course had a retention rate of 3.4%, students who earned an *F* (*N*=297) in the course had a retention rate of 4.1%, and students who earned a *W* (*N*=111) in the course had a retention rate of 1.5% (Table 13).

Table 13. Retention Rates of Students Listed by Final Grade in their First-attempt of UNIV 101 at a Small, Public, Regional Institution in the Southeast

UNIV101	Retained			
	Retained (*N*)	%	Not Retained (*N*)	%
A	1,087	64.4	215	27.7
B	296	17.5	110	14.2
C	150	8.9	83	10.7
D	58	3.4	57	7.3
F & FNA	70	4.1	227	29.2
W	26	1.5	85	10.9
Total	1,687	100.0	777	100.0

Direct logistic regression was then utilized to determine if students' final grade in UNIV 101 could predict the probability of the student being retained for a second year. Logistic regression is a statistical analysis that is relatively free of restrictions and has the capacity to allow many types of predictors to be analyzed together (Tabachnick & Fidell, 2013). In direct logistic regression, all independent variables enter the model simultaneously as long as tolerance is not violated (Tabachnick & Fidell, 2013). Tolerance is defined as the amount of variability of an independent variable not explained by the other independent variables (Hair et al., 1998). Tabachnick and Fidel (2013) advise that direct logistic regression is the method of choice if there is no specific hypothesis about the importance or order of the independent, predictor variables.

The data was reviewed for linearity, multicollinearity, independence of errors, outliers and missing cases (Field, 2013; Tabachnick & Fidell, 2013). No outliers were found in the data set. The data was checked to ensure that no student appeared in the data set more than one time;

therefore, the data set was found to be free of independence errors. Multicollinearity was evaluated and no independent variable exceeded the suggested tolerance or Variance Inflation Factor (VIF) levels, <0.10 or >10, respectively (Hair et al., 1998). Some independent variables did present missing cases from the sample (*N*=2,464), they were White or Non-white (*N*=2,411), highest ACT composite score (*N*=2,346), and high school GPA (*N*=2,417). Through using SPSS software, 168 missing cases were identified in the logistic regression model. All independent variables were retained for the logistic regression analysis, despite missing cases being identified, as model fit was not affected. Due to the nature of some independent variables, the researcher could not assess linearity for this logistic regression analysis. While it is preferred for the logistic regression model to meet all basic assumptions, logistic regression is less affected by assumption violations compared to other statistical models and is more robust when the assumptions are not met (Hair et al., 1998).

The researcher was especially interested in determining if an individual letter grade or series of letter grades earned by students in the UNIV 101 course could be used as a predictor of student retention for a second year as Hyers and Joslin (1998) were able to do with their study 16 years ago. In order to accomplish this goal, the independent variable, first-attempt, final grade in UNIV 101, was recoded into seven different variables using SPSS. The new variables included *A*, *B*, *C*, *D*, *F*, *FNA* (failed for non-attendance), and *W* (withdraw). The letter grade *W* (coded as 0), was selected to be the reference category in the logistic regression model as it was the variable of least interest to the researcher (Field, 2013; Tabachnick & Fidell, 2013).

Due to only 12 cases of *FNA* letter grade in UNIV 101, this category was folded into the *F* category (Tabachnick & Fidell, 2013). The *FNA* designation is a way for the university to distinguish between an *F* for students who made an effort to complete the course and those who

simply registered, but never attended. A student who received an *FNA* letter grade received the same number of quality points and grade point average for the course, as if they would have made an *F* in the course; therefore, the *FNA* cases were folded into the *F* cases for the purposes of this study. Folding *FNA* into the *F* category reduced the number of letter grade variables from seven to six.

Direct logistic regression was completed in SPSS (using the enter function) and interpreted at the *alpha* level of .05, which was set *a priori.* It was determined that the model correctly predicted group membership 77.9% of the time, which is an indicator of good model fit. Model fit was also examined using the Omnibus Tests of Model Coefficients table presented by SPSS, which indicated a statistically significant chi-square statistic (χ^2=517.85, p<.001) indicating that the indpendent variables included in the model made a statiscially significant contribution to the prediction of the outcome (Tabachnick & Fidell, 2013).

In examining the independent predictor variables, 8 of the 10 independent variables produced statistically significant *Wald* chi-square values, which included gender (*Wald* χ^2=4.86; p<.027), White or Non-white (*Wald* χ^2=4.80; p<.028), highest composite ACT score (*Wald* χ^2=5.01; p<.025), high school GPA (*Wald* χ^2=16.87; p<.001), and UNIV 101 student letter grades *A* (*Wald* χ^2=103.45; p<.001), *B* (*Wald* χ^2=60.33; p<.001), *C* (*Wald* χ^2=41.25; p<.001), and *D* (*Wald* χ^2=19.0; p<.001). Independent variables, age and UNIV 101 student letter grade *F*, did not produce a statistically significant *Wald* chi-square value (Table 14).

Of these eight statistically significant predictors, six produced an odds ratio larger than one, indicating that as the independent predictor variable increased, the odds of students being retained for a second year also increased by one or more units (Field, 2013; Tabachnick & Fidell, 2013). As Tabachnick and Fidell (2013) explained, “an odds ratio of 1.5 means that the odds are

increased by 50%. An odds ratio of 0.8 indicates that the odds of an outcome labeled 1 are 0.8 less with a one unit increase in the predictor; the odds decreased by 20%" (p. 463).

Table 14. Analysis of Maximum Likelihood Estimates to Determine the Contributors to the Prediction of Second-Year Retention for First-time Freshmen Entering a Small, Public, Regional Institution in the Southeast

Variable	*B*	*SE*	*OR*	95% CI	Wald statistic	*p*
Age	-0.05	0.06	0.95	[0.85, 1.07]	0.67	.412
Gender	-0.23	0.11	0.78	[0.63, 0.97]	4.86	.027
White or Non-white[a]	-0.26	0.12	0.77	[0.61, 0.97]	4.80	.028
High school grade point[b]	0.60	0.15	1.81	[1.37, 2.41]	16.87	<.001
Composite ACT score[c]	0.05	0.02	1.05	[1.01, 1.09]	5.01	.025
A[d]	2.64	0.26	14.07	[8.45, 23.41]	103.45	<.001
B[d]	2.10	0.27	8.14	[4.80,13.82]	60.33	<.001
C[d]	1.81	0.28	6.12	[3.52, 10.63]	41.25	<.001
D[d]	1.37	0.32	3.95	[2.13, 7.33]	19.00	<.001
F[d]	0.13	0.28	1.14	[0.66, 1.97]	0.22	.637

Note. OR = Odds Ratio, CI = confidence interval for odds ratio (*OR*). [a]White or Non-white was missing for 53 students in the study. [b]High school grade point average was missing for 47 students in the study. [c]Composite ACT scores were missing for 118 students. Composite ACT scores were estimated from the students' SAT score for 73 students. [d]Letter grade of first-time students' first-attempt in UNIV 101.

Interval independent variable, high school grade point average, produced an odds ratio of 1.81 (Table 14), which indicates that as high school GPA increases, the probability of the student being retained for a second year increases 1.81 times or 81%. Using Rosenthal's (2012) qualitative descriptors for odds ratio size and strength of association, it was determined that the odds ratio value of 1.81 has small and weak association. Therefore, students who have a higher high school grade point average have a small or weak association with being retained for a second year.

Interval independent variable, composite ACT score produced an odds ratio of 1.05, which indicates that as composite ACT score increases, the probability of the student being retained increases 1.05 times or 5% (Table 14). Using Rosenthal's (2012) qualitative descriptors

for odds ratio size and strength of association, it was determined that the odds ratio value of 1.05 has negligible association. Therefore, students who have a higher composite ACT score have a negligible association with being retained for a second year.

All statistically significant final letter grades in UNIV 101 produced a positive relationship with second-year retention. The UNIV 101 letter grade *A* produced an odds ratio of 14.07, which indicates that students who earned an *A* in the course have a 14.07 times or 1,307% increase in odds to be retained for a second year than students who earned a *W* in the course, the reference group (Table 14). Using Rosenthal's (2012) qualitative descriptors for odds ratio size and strength of association, it was determined that the odds ratio value of 14.07 has very large and very strong association. Therefore, students who earned an *A* in the course have a very large and very strong association with being retained for a second year.

The UNIV 101 letter grade *B* produced an odds ratio of 8.14, which indicates that students who earned a *B* in the course have a 8.14 times or 714% increase in odds to be retained for a second year than students who earned a *W* in the course, the reference group (Table 14). Using Rosenthal's (2012) qualitative descriptors for odds ratio size and strength of association, it was determined that the odds ratio value of 8.14 has large and strong association. Therefore, students who earned a *B* in the course have a large and strong association with being retained for a second year. To further compare students who made an *A* or *B* in the course, we can say students who made an *A* are 5.93 times or 493% more likely to be retained than those who made a *B*.

The UNIV 101 letter grade *C* produced an odds ratio of 6.12, which indicates that students who received a *C* in the course have a 6.12 times or 512% increase in odds to be retained for a second year than students who earned a *W* in the course, the reference group (Table

14). Using Rosenthal's (2012) qualitative descriptors for odds ratio size and strength of association, it was determined that the odds ratio value of 6.12 has large and strong association. Therefore, students who received a *C* in the course have a large and strong association with being retained for a second year. To further compare students who made a *B* or *C* in the course, we can say students who made a *B* are 2.02 times or 102% more likely to be retained than those who made a *C*.

The UNIV 101 letter grade *D* produced an odds ratio of 3.95, which indicates that students who received a *D* in the course have a 3.95 times or 295% increase in odds to be retained for a second year than students who earned a *W* in the course, the reference group (Table 14). Using Rosenthal's (2012) qualitative descriptors for odds ratio size and strength of association, it was determined that the odds ratio value of 3.95 has large and strong association. Therefore, students who received a *D* in the course have a large and strong association with being retained for a second year. To further compare students who made a *C* or *D* in the course, we can say students who made a *C* are 2.17 times or 117% more likely to be retained than those who made a *D*.

Two independent variables, gender and White or Non-white, produced a statistically significant *Wald* chi-square value and an odds ratio value less than one, which indicates that as the independent variable value increases, the likelihood of the student being retained for a second year decreased (Field, 2013; Tabachnick & Fidell, 2013). Gender (coded 0 for males, 1 for females) had a negative relationship with retention, indicating that female students have a 0.78 times or 22% decrease in odds to be retained for a second year than males (Table 14). Using Rosenthal's (2012) qualitative descriptors for odds ratio size and strength of association, it was

determined that the odds ratio value of 0.78 has small and weak association. Therefore, female students have a small and weak association with being retained for a second year.

The dichotomous independent variable, White or Non-white also had a negative relationship with retention, indicating that white students (coded as 1) have a 0.77 times or 23% decrease in odds to be retained for a second year than non-white students (coded as 0) (Table 14). Using Rosenthal's (2012) qualitative descriptors for odds ratio size and strength of association, it was determined that the odds ratio value of 0.78 has small and weak association. Therefore, white students have a small and weak association with being retained for a second year.

As discovered in research question two, the independent variables, gender and White or Non-white, had a negligible but positive relationship with the dependent variable, second year retention. In research question four, the logistic regression model indicated that there was a negative relationship between the independent variables gender and White or Non-white and the dependent variable, second-year retention. The discrepancy in these findings indicates that a negative or net suppression effect might be in play at the logistic regression model (Tabachnick & Fidell, 2013). Tabachnick and Fidell (2013) explain,

> When the sign of the regression weight of an independent variable is the opposite of what would be expected on the basis of its correlation with the dependent variable. This is negative or net suppression. Prediction still is enhanced because of the magnitude of the effect the independent variable is greater (although the sign is opposite) in the presence of the suppressor (pp. 155-156).

Identification of suppressor independent variable(s) that may be increasing the predictability of the independent, predictor variables could not be confirmed by re-running the logistic regression model without each congruent independent variable as suggested by Tabachnick and Fidell (2013). Therefore, if suppression is occurring, this could indicate that a

Type II error has occurred, indicating that the model could be misinterpreting the prediction of the outcome (Field, 2013).

CHAPTER 5: SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Summary

This chapter includes the summary and conclusions of the study. Also included are recommendations for future research.

Purpose and Objectives

The purpose of this exploratory, quantitative study was to determine if the freshmen-year seminar course, UNIV 101 was able to predict the probability of second-year retention. The research questions answered in this study included:

1. What are the characteristics of the first-time freshmen population of students during the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters? The characteristics selected were:
    a. age,
    b. gender,
    c. ethnicity,
    d. marital status,
    e. cumulative high school grade point average,
    f. highest ACT composite score, and
    g. first-attempt, final grade in freshmen-year seminar course.
2. Does a relationship exist between selected independent variables and the dependent variable, second-year student retention? Variables that were used in this analysis were:
    a. age,
    b. gender,
    c. ethnicity,

d. cumulative high school grade point average,

e. highest ACT composite score, and

f. first-attempt, final grade in freshmen-year seminar course.

3. Can second-year retention be predicted from the completers and non-completers of the freshmen-year seminar course, UNIV 101?

4. Do selected variables serve as predictors of second-year student retention? The variables used in this analysis were:

    a. age,

    b. gender,

    c. ethnicity,

    d. cumulative high school grade point average,

    e. highest ACT composite score, and

    f. first-attempt, final grade in freshmen-year seminar course.

Procedure

The target population for this study was first-time freshmen enrolled in a small, public, regional institution in the southeastern United States. The accessible population (*N*=2,464) included first-time freshmen students enrolled in Fall 2011, Spring 2012, Fall 2012, and Spring 2013 semesters.

UNIV 101

Student participation in the freshmen-year seminar course, UNIV 101, was a key variable in this study. All first-time freshmen students and all transfer students with less than 30 earned credit hours are required to take the course at the university where the study was conducted. The population of interest was only first-time freshmen students; therefore, repeaters of the course during the given semesters were eliminated from the study.

Data Collection

After receiving IRB approval to conduct the study, the researcher submitted a request to the university's Office of Assessment and Institutional Research. Data requested on the students entering the university in Fall 2010, Spring 2011, Fall 2011, and Spring 2012 included information collected from the students' admission application, including demographic and academic information. The data was provided to the researcher in a Microsoft Excel spreadsheet. All of the requested data was received.

Data Collection Form

This form was provided to the Office of Assessment and Institutional Research to collect relevant data on the first-time freshmen initially enrolled in the freshmen-year seminar course, UNIV 101, in the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters. Requested information included:

1. Student's first name
2. Student's last name
3. Student's institutional identification number
4. Age
5. Gender
6. Ethnicity
7. Marital status
8. Cumulative high school grade point average
9. Highest composite ACT score
10. Highest composite SAT score
11. First-attempt, final grade in UNIV 101 (initial enrollment only) [i.e. A, B, C, D, F, FNA, I, W]

12. Enrolled in second-year at the institution after initial enrollment in UNIV 101(yes or no) [i.e. Initially enrolled in UNIV 101 in Fall 2011, subsequently enrolled at the institution in Fall 2012]

Summary of Findings

Research Question 1: Personal Characteristics of Students

The first research question sought to describe the personal characteristics of first-time freshmen students entering a small, public, regional institution in the southeast in the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters. The variables included as descriptors were: age, gender, ethnicity, marital status, cumulative high school grade point average, highest composite ACT and/or SAT score, and first-attempt, final grade in UNIV 101.

Using data provided to the researcher, it was discovered that a majority of the first-time freshmen students in the given semesters (*N=2,464)* were female (*N*=1,482; 60.1%) and Caucasian (*N*=1,716; 69.6%).

While conducting the review of literature, it was discovered that there was a lack of literature on marital status' relationship or effect on student retention; therefore, it was written into this study to use marital status as an independent variable. Unfortunately, the university where the study was conducted did not keep adequate data on students' marital status, forcing the researcher to remove the independent variable from the study, as only 207 (8.4%) of the population included in the study reported their marital status.

The average age of the students included in the study was 18.7, with the age range of students spanning from 16-51. The average ACT composite score was 21.64, with scores falling between 14-34. Students included in the study posted an average high school grade point average of 3.18, with a range of 1.20-4.00.

Finally, just over one-half of the students (*N*=1,302; 52.8%), earned an *A* as their first-attempt, final grade in the freshmen-year seminar course (UNIV 101), while less than one-fifth of the students (406, 16.5%) earned a *B* in the course.

Research Question 2: Relationship between Independent Variables and Student Retention

The second research question was to determine if the selected independent variables had a relationship with the dependent variable, students' second-year retention.

The point-biserial measure of association was used to determine the relationship between interval independent variables, and second-year retention. It was found that a low, positive association existed between ACT composite score and second-year retention (N=2,346; r = .17; p<.001), while a moderate, positive association existed between high school grade point average and second-year retention (N=2,417; r= .30; p<.001). A negligible, negative association between age and second-year retention (N=2,464; r=-0.09; p<.001) was discovered. Therefore, as student's age increased, second-year retention decreased, and as students' ACT composite score and high school grade point average increased, so did students' second-year retention.

The *phi* correlation coefficient was used to determine if a relationship existed between nominal, dichotomous variables, gender and White or Non-white students, with second-year retention. A statistically significant, yet negligible, positive relationship was found between both gender (N=2464; r=.06; p<.004) and White or Non-white (N=2464; r=.05; p<.018) students with second-year retention; indicating that white and female students were more likely to be retained for a second year.

The Kendall's *Tau-c* correlation coefficient was used to determine if a relationship could be found between the ordinal variable first-attempt, final grade in UNIV 101, and the dependent variable, students' second-year retention. A statistically significant, moderate, positive relationship was found between the two variables (N=2464; τ_c= 0.42; p<.001), indicating that

students who received a higher grade in the course were more likely to be retained than students who received a low or failing grade.

Research Question 3: First-attempt Completion in UNIV 101 as a Predictor of Retention

The third research question set out to determine if completers or non-completers of the freshmen-year seminar course, UNIV 101, could predict second-year retention. Students who completed UNIV 101, in their first-attempt of the course, were identified as those who earned a final grade of *A, B, C,* or *D* (*N*=2,056; 83.4%) in the course. Non-completers were defined as those who earned an *F, FNA,* or *W (N*=408; 16.5%). The direct logistic regression analysis of this predictor variable with the dependent variable, second-year retention, determined that the logistic regression model correctly predicted retention 77.2% of the time, and produced an odds ratio of 11.12. This odds ratio indicated that students who complete UNIV 101 are 11.12 times or 1,012% more likely to be retained for a second year than students who do not complete the course.

Research Question 4: Logistic Regression Analysis to Determine if Selected Independent Variables May Predict Retention

The fourth research question set out to identify if direct logistic regression could be used to predict second-year retention with selected independent, predictor variables found in literature. Independent variables included age, gender, White or Non-white, cumulative high school grade point average, highest composite ACT score and, first-attempt, final grade in UNIV 101, (*A, B, C, D,* and *F).*

The direct logistic regression model determined that the independent, predictor variables correctly predicted second-year retention 77.9% of the time. Of the 10 independent, predictor variables included in the model, eight of the variables produced a statistically significant *Wald* chi-square values, which included gender, White or Non-white, highest composite ACT score,

high school GPA, and UNIV 101 student letter grades *A*, *B*, *C*, and *D*. Independent variables, age and UNIV 101 student letter grade *F*, did not produce a statistically significant *Wald* chi-square value.

Six independent, predictor variables included in the model produced an odds ratio larger than one, indicating that as the independent predictor variable increased the odds of students being retained for a second year also increased by one or more units. These predictor, independent variables were identified as high school grade point average (*OR*= 1.81), composite ACT score (*OR*= 1.05), UNIV 101 letter grade *A* (*OR*= 14.07), UNIV 101 letter grade *B* (*OR*= 8.14), UNIV 101 letter grade *C* (*OR*= 6.12); and UNIV 101 letter grade *D* (*OR*= 3.95).

Two independent variables, gender and White or Non-white, produced statistically significant *Wald* chi-square value and an odds ratio value less than one, which indicates that as the independent variable value increases, the likelihood of the student being retained for a second year decreased (Field, 2013; Tabachnick & Fidell, 2013). Gender was found to have a negative relationship with retention (*OR*= 0.78), indicating that female students were 22% less likely to be retained for a second year than males. In addition, the White or Non-white independent, predictor variable also had a negative relationship with retention (*OR*= 0.77), indicating that white students were 23% less likely to be retained for a second year than non-white students were.

Conclusions

Conclusion One

Pre-college attributes, high school grade point average and highest composite ACT score, are positively related to students' second-year retention. In this study, high school grade point average had a moderate relationship with second-year retention while composite ACT score only had a small relationship.

Furthermore, as determined by logistic regression analysis, students who have a higher GPA in high school are more likely to be retained for a second-year. This conclusion is in line with similar studies of first-time freshman pre-college attributes' relationship with student retention (DeBeard et al., 2004; Porter & Swing, 2006; Shivpuri et al., 2006), and further supports Vincent Tinto's (1993) Theory of Institutional Departure. These findings are similar to DeBeard et al. (2004) who concluded that schools who had higher admission standards could expect higher retention rates. The findings of this study are also similar to Porter and Swing (2004) who found students who earned better grades in high school were more likely to return to their university for a second year.

Conclusion Two

Successful completion of a university required, extended-orientation, freshman-year seminar course with a common theme and attendance policy taught by the students' academic advisor has a positive impact on students' second-year retention as demonstrated by the following findings. Ninety-four percent of students who completed the course with a *D* or better were retained for a second year, while 16.5% of students who did not complete the course, were not retained for a second year. We can also conclude that the likelihood of students who complete the university required, extended-orientation, freshmen-year seminar course with a common theme and attendance policy taught by the students' academic advisor are 1,012% more likely to be retained for a second year than those who do not complete the course.

Campbell and Nutt (2008) discussed the importance of linking students to opportunities for engagement, success, and key learning outcomes to enhance student retention, which are all top priorities of the freshmen-year seminar course in this study. In addition, Gordon et al. (2008) discussed the benefit of linking academic advising within a freshmen-year seminar to provide students with a more connected and collaborative opportunity to introduce students to support

services. Vincent Tinto (1998) suggested faculty and staff should act as a stand-alone unit whose primary responsibility is to educate new students; which is the model that the Academic Advising Center this university follows. With this study, we can provide evidence that these recommendations are appropriate to helping students make the transition to college, and ultimately be retained for a second year.

Conclusion Three

Final letter grades of first-time freshmen enrolled in an extended orientation freshmen-year seminar taught by academic advisors have a moderate, positive correlation with retention and can contribute to predicting the likelihood of students returning for a second year. This conclusion is supported by the following findings: students who earned an *A* or a *B* in the course were retained at a rate of 82%, while only 17% of students who made a *C* or below were retained for a second year. Furthermore, students who make an *A* or *B* in the freshmen-year course are 1,307% and 714% (respectively) more likely to be retained for a second year, than students who withdrew from the course (the reference group).

These conclusions are similar to Hyers and Joslin's (1998) study on the freshman-year seminar's ability to identify students who are at-risk of leaving the institution. Hyers and Joslin (1998) found that 77% of students who made an *A* or *B* in their freshmen-year seminar course returned for a second year, while students who made a *C* or below returned at a rate of 45%. Thus, this type of extended orientation, freshmen-year seminar course is worthy of the investment in order to assist with the retention efforts of the university.

Recommendations for Practice

Institutions should implement a university required, extended orientation, freshman-year seminar course with a common theme and attendance policy that is taught by freshmen academic advisors to increase student-retention.

Institutions should also access mid-term and/or final grade data from institutional databases to provide a cost-efficient and easy way to identify students who are at-risk of leaving the institution. More specifically, freshmen-year seminar instructors and/or freshmen academic advisors should use students' mid-term and/or final freshman-year seminar grades to pinpoint which students may be struggling to get acclimated to university life and need extra support from their freshmen-year seminar instructor, academic advisor, or other at-risk student support service within their first semester at the institution. Saving even a small percentage of these students from leaving the university can have a large impact on tuition dollars retained for small, public, regional institutions like the one where this study was conducted.

It is also recommended that universities who utilize an extended orientation, freshmen-year seminar course taught by the students' academic advisor utilize completer and non-completer data to identify which students need to be contacted in their second semester for at-risk student support or advising. An early warning system, such as this, will allow time for the institution to work with the non-completers (who are potentially at-risk of leaving the university) throughout the second semester in hopes of affirming the student's commitment to the institution and retaining the student for a second year. This suggested practice is in line with the recommendations of Tinto (1993) to help students through the critical period of transition to university life.

Finally, universities should use students' pre-college attribute, high school GPA, to determine which students are at-risk of not being retained. More specifically, high school GPA should be used by freshmen academic advisors to help identify potential at-risk students before the start of the academic year to begin setting them up with additional support services to help ease their transition to the university.

Recommendations for Future Research

Many institutions over the past 20 years have developed a freshman-year seminar course, and many studies have been conducted to show the impact a freshman-year seminar course can have on student acclimation to college and retention. Although many studies have been completed, each university seems to have its own way of organizing the course. Some institutions prefer to leave the course as optional for student participation, while others make it a requirement for all first-time freshmen. Some universities have a major specific freshman-year seminar course, and others have one freshman-year seminar course design that is open and available to all majors. Some freshmen-year seminar courses target low-ability students, while others are designed as an extension of freshmen orientation. Some universities use full-time faculty or adjunct instructors to teach the course, and some use professional academic advisors whose main responsibility is to advise and teach freshmen-only. With so many different course designs and a lack of studies that have specifically researched university required, extended-orientation, freshmen-year seminar courses taught by the students' professional academic advisor the following future research initiatives are suggested:

1. Can the results of this study be duplicated at a similar-size institution with a similarly designed freshman-year seminar course?
2. What are student perceptions of an extended-orientation, freshman-year seminar course taught by professional academic advisors at a small, public, regional institution in the Southeast?
3. How does the second-year retention rate of students at a small, public, regional, institution in the Southeast with an extended-orientation, freshmen-year seminar course taught by professional academic advisors compare to a similar institution in size and mission without an extended-orientation, freshmen-year seminar?

Other potential research questions related to this study could include:

1. Over one-third (41.8%, *N*=325) of students who made an *A* or *B* in the freshmen-year seminar course, UNIV 101, in the given semesters were not retained for a second year. Why did these students choose not to return to the university?
2. Over half (58.2%) of students who made a *C*, *D*, *F*, or *W* in the freshmen-year seminar course, UNIV 101, in the given semesters were not retained for a second year. Why did these students choose not to return to the university?
3. Can the final grade in the freshman-year seminar course predict students' future academic success as measured by their first-year grade point average at a small, public, regional, institution in the Southeast?
4. What is the graduation rate of students who have successfully completed this freshman-year seminar course, UNIV 101, as compared to graduation rates of students before the course became a university requirement for graduation at a small, public, regional university in the Southeast?
5. Finally, how can the university continue to focus on improving student satisfaction with the freshmen-year seminar course, UNIV 101, and student retention?

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APPENDIX A: DATA COLLECTION FORM

This form was provided to the Office of Assessment and Institutional Research to collect relevant data on the first-time freshman initially enrolled in the freshmen-year seminar course, UNIV 101 in the Fall 2010, Spring 2011, Fall 2011, and Spring 2012 semesters.

Note: Please include all students that enrolled in UNIV 101 for the listed semesters. Please only include the student's initial enrollment in the course in the given semesters. If the student repeated the course after initial enrollment, please do not include the repeated course (initial enrollment only should be included). If a student enrolled in the course in the given semesters was repeating the course, and their initial enrollment was a semester not included in the given semesters, please do not include them in the requested data.

Student's first name
Student's last name
Student's institutional identification number
Age
Gender
Ethnicity
Marital status

Cumulative high school grade point average

Highest composite ACT score
Highest composite SAT score

First-attempt, final grade in UNIV 101 (initial enrollment only) [i.e. A, B, C, D, F, FNA, I, W]

Enrolled in a second year at the institution after initial enrollment in UNIV 101(yes or no) [i.e. Initially enrolled in UNIV 101 in Fall 2011, subsequently enrolled at the university in Fall 2012]

APPENDIX B: LOUISIANA STATE UNIVERISITY INSTITUTIONAL REVIEW BOARD APPROVAL FORM

Application for Exemption from Institutional Oversight

LSU

Institutional Review Board
Dr. Robert Mathews, Chair
130 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8692
F: 225.578.5983
irb@lsu.edu
lsu.edu/irb

Unless qualified as meeting the specific criteria for exemption from Institutional Review Board (IRB) oversight, ALL LSU research/projects using living humans as subjects, or samples, or data obtained from humans, directly or indirectly, with or without their consent, must be approved or exempted in advance by the LSU IRB. This Form helps the PI determine if a project may be exempted, and is used to request an exemption.

-- Applicant, Please fill out the application in its entirety and include the completed application as well as parts A-F, listed below, when submitting to the IRB. Once the application is completed, please the completed application to the IRB Office or to a member of the Human Subjects Screening Committee. Members of this committee can be found at http://sites01.lsu.edu/wp/ored/human-subjects-screening-committee-members/

-- A Complete Application Includes All of the Following:
(A) A copy of this completed form and a copy of parts B thru F.
(B) A brief project description (adequate to evaluate risks to subjects and to explain your responses to Parts 1&2)
(C) Copies of all instruments to be used.
*If this proposal is part of a grant proposal, include a copy of the proposal and all recruitment material.
(D) The consent form that you will use in the study (see part 3 for more information.)
(E) Certificate of Completion of Human Subjects Protection Training for all personnel involved in the project, including students who are involved with testing or handling data, unless already on file with the IRB. Training link: (http://phrp.nihtraining.com/users/login.php)
(F) IRB Security of Data Agreement: (https://sites01.lsu.edu/wp/ored/files/2013/07/Security-of-Data-Agreement.pdf)

1) Principal Investigator: Lori Richard Rank: Doctoral Student

Dept: Human Resource Education Ph: [redacted] E-mail: [redacted]

2) Co Investigator(s): please include department, rank, phone and e-mail for each
*If student, please identify and name supervising professor in this space

Dr. Joe Kotrlik
James C. Atherton Alumni Professor
School of Human Resource Education & Workforce Development
kotrlik@lsu.edu

IRB# E8405 LSU Proposal #_____
- Complete Application
- Human Subjects Training
- IRB Security of Data Agreement

3) Project Title: The Impact of a Freshman Year Seminar on Students' Second Year Retention

STUDY EXEMPTED BY:
Dr. Robert C. Mathews, Chairman
Institutional Review Board
Louisiana State University
130 David Boyd Hall
225-578-8692 / www.lsu.edu/irb
Exemption Expires: 9/12/2016

4) Proposal? (yes or no) No If Yes, LSU Proposal Number _____

Also, if YES, either ◯ This application completely matches the scope of work in the grant
OR ◯ More IRB Applications will be filed later

5) Subject pool (e.g. Psychology students) Frehmen enrolled in UNIV 101 at Nicholls State Univ in Fa 2010-Sp '12

*Circle any "vulnerable populations" to be used: (children <18, the mentally impaired, pregnant women, the ages, other). Projects with incarcerated persons cannot be exempted.

6) PI Signature Lori Richard Date 8/31/13 (no per signatures)

** I certify my responses are accurate and complete. If the project scope or design is later changes, I will resubmit for review. I will obtain written approval from the Authorized Representative of all non-LSU Institutions in which the study is conducted. I also understand that it is my responsibility to maintain copies of all consent forms at LSU for three years after completion of the study. If I leave LSU before that time the consent forms should be preserved in the Departmental Office.

Screening Committee Action: Exempted ✓ Not Exempted ____ Category/Paragraph 4

Signed Consent Waived? Yes / No

Reviewer Mathews Signature [signature] Date 9/13/13

APPENDIX C: SMALL, PUBLIC, REGIONAL INSTITUTION IN THE SOUTHEAST INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

[redacted] **UNIVERSITY**
Human Subjects Institutional Review Board

Ms. Lori Richard
[redacted]

RE: HSIRB Deferral

Dear Ms. Richard,

It is [redacted] practice that graduate student's human subject research must be approved and monitored by the institution initiating the research. This letter is to acknowledge that I have received a copy of an approval letter from Louisiana State University's HSIRB board. You may begin to collect data from your subjects under [redacted] HS-IRB deferred Protocol Number # 20130923009AD.

Sincerely,

R. Denis Soignier, Ph.D.
HS IRB Chairperson

APPENDIX D: CONCORDANCE TABLES FOR THE ACT AND SAT TESTS

ACT–SAT Concordance

The ACT

A tool for comparing scores

The ACT and SAT are different tests that measure similar but distinct constructs. The ACT measures achievement related to high school curricula, while the SAT measures general verbal and quantitative reasoning.

ACT and the College Board (producers of the SAT) have completed a concordance study that is designed to examine the relationship between two scores on the ACT and SAT. These concordance tables do not equate scores, but rather provide a tool for finding comparable scores.

You can also find the concordance tables and guidelines for proper use on our website at www.act.org/aap/concordance.

ACT Composite Score	SAT Score Critical Reading + Math (Single Score)	SAT Score Critical Reading + Math (Score Range)	ACT Score Combined English/Writing	SAT Score Writing (Single Score)	SAT Score Writing (Score Range)
36	1600	1600	36	800	800
35	1560	1540–1590	35	800	800
34	1510	1490–1530	34	770	770–790
33	1460	1440–1480	33	740	730–760
32	1420	1400–1430	32	720	710–720
31	1380	1360–1390	31	690	690–700
30	1340	1330–1350	30	670	660–680
29	1300	1290–1320	29	650	640–650
28	1260	1250–1280	28	630	620–630
27	1220	1210–1240	27	610	610
26	1190	1170–1200	26	590	590–600
25	1150	1130–1160	25	570	570–580
24	1110	1090–1120	24	550	550–560
23	1070	1050–1080	23	530	530–540
22	1030	1020–1040	22	510	510–520
21	990	980–1010	21	490	480–500
20	950	940–970	20	470	470
19	910	900–930	19	450	450–460
18	870	860–890	18	430	430–440
17	830	820–850	17	420	410–420
16	790	770–810	16	400	390–400
15	740	720–760	15	380	380
14	690	670–710	14	360	360–370
13	640	620–660	13	340	340–350
12	590	560–610	12	330	320–330
11	530	510–550	11	310	300–310

ACT advancing lives

ACT–SAT Concordance Study: June 2008

VITA

Lori Henry Richard is an Instructor, Professional Advisor, and Coordinator of Student Engagement at Nicholls State University. She is serves as an instructor of University Studies 101 (UNIV 101), and is directly responsible for the Tutorial and Academic Enhancement Center, Early Start (dual enrollment) program, athletic-academic advising, and Math Enrichment program. She is also directly involved in degree program assessment within University College. She serves on various college and university-wide committees, including the Southern Association of Colleges and Schools' (SACS) Quality Enhancement Plan (QEP) committee. She is a member of the National Academic Advising Association (NACADA), and national honor society, Gamma Sigma Delta. In her personal life, she serves as an active member of Farm Bureau's Young Farmers and Ranchers and Louisiana State University's College of Agriculture Alumni Association Board of Directors.