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The University of Southern Mississippi

ASSESSING NONTRADITIONAL STUDENT DROPOUTS  
ON A COMMUTER CAMPUS

by

Mary Theresa Funk

Abstract of a Dissertation  
Submitted to the Graduate School  
of The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy

May 2015

## ABSTRACT

### ASSESSING NONTRADITIONAL STUDENT DROPOUTS

#### ON A COMMUTER CAMPUS

by Mary Theresa Funk

May 2015

An educated population renders economic returns for the country and the workforce. The relatively large number of college and university dropouts jeopardizes the nation's presidential education mandate to increase the percentage of adults earning a postsecondary degree by 2020. Employee demand for higher skills motivates institutions to reduce the flow of dropouts in order to increase persistence to graduation. The number of students residing off-campus is increasing causing a larger nontraditional student population. Commuter campus administrators are challenged to retain students who may have families and full-time employment. This research compared student dropouts at a traditional residential campus with nontraditional dropouts from a commuter campus. Utilizing a descriptive, non-experimental assessment, this study sought to determine student withdrawal characteristics more applicable to a commuter campus.

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University of Southern Mississippi

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ON A COMMUTER CAMPUS

by

Mary Theresa Funk

A Dissertation  
Submitted to the Graduate School  
of The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy

Approved:

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Dean of the Graduate School

May 2015

## DEDICATION

I want to thank my sweet parents, Helen and Larry Byrne for a lovely childhood filled with exploration, discovery, and reading. I want to acknowledge my beautiful daughters, Nicki and Kate, who always believed in me even when I wavered. I am grateful for my wonderful husband, Michael Funk, who made many sacrifices for my education through the years. Finally, I want to recognize Ryan Michael Cooper. In his short life he has never known me when I was not working on this degree.

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## CHAPTER I

### INTRODUCTION

The President of the United States of America, Barack Obama, set a goal to drastically increase the number of Americans with postsecondary degrees by 2020. Degree completion, Obama stated, is the key to individual prosperity, economic security, and the enduring strength of democracy (White House, Office of the Press Secretary, 2009, para. 60-68). In order to reach the goal that 60% of adults will possess postsecondary degrees by 2020, the higher education system must produce 23 million more college graduates than are expected at the current rates of production (Lumina Foundation, 2012). This goal challenges the national 4-year degree dropout rate of 57% (Symonds, Schwartz, & Ferguson, 2011). Retaining traditional and nontraditional college students to degree attainment is strategic in operating a successful college or university (Hundrieser, 2012) and vital to a prepared and effective workforce (Symonds et al., 2011). Colleges and universities offer a means to increase workforce readiness.

The state of readiness of the entry level worker in the United States is an ongoing debate. Some estimate the concern began after the Soviet Union achieved space exploration with Sputnik in 1957 (Killian, 1982; McLester & McIntire, 2006). American scientists could no longer expect to be first in their fields with global competition. During the early 1960s, experts realized education was the key to remaining ahead in the global race for dominance in science and technology. Educating the next generation to excel in a technology-based economy was considered critical to workforce success. In addressing workforce readiness crisis, McLester and McIntire (2006) discussed struggles in the United States' education system to keep the country on the cutting edge.

The competition for worldwide dominance in economics requires superior skills, abilities, and innovation in the workforce. Since the 1990s, the United States' skills mismatch is increasing. Employers experience unmet labor needs since the available labor force does not possess the skills needed for available jobs. Therefore, a mismatch of skills needed and skills available exists. The supply of skilled workers does not meet the demand, thereby causing an imbalance in the workforce (Casner-Lotto & Barrington, 2006; Handel, 2003). Booz Allen Hamilton completed a study for the National Association of Software and Service Companies. Hamilton estimated that engineering services totaling \$10 to \$15 billion are currently offshore and expected to grow from \$150 to \$225 billion by 2020 (Wyndrum, 2006). Wyndrum called for incentives for American students to consider technical careers that will stop the loss of the technical labor force in the United States (2006).

According to workforce researchers, a lack of action could cause U.S. children to grow up with a lower standard of living than their parents (Gordon, 2000; Gordon, 2007). The areas of science and mathematics are usual targets for reform; however, Gordon (2007) posited the United States is systemically in need of boosting teacher expertise in order to increase student knowledge. Therefore, the need for higher education affects much more than science and mathematics fields. Wyndrum (2006) quoted from Hudson Institute's Workforce 2000 report as follows: "Even the least skilled jobs will require a command of reading, computing, and thinking that was once necessary only for the professions" (p. 150). Skill demand in the workforce is rising and resulting in worldwide competition for jobs.

United States' human capital requires strong academic and social skills to compete globally. Dychtwald, Erickson, and Morison (2006) stated that, since the 1980s the rising education levels have driven economic growth up. However, the rate of Americans obtaining higher education degrees is slowing. The decline, according to Dychtwald et al. (2006), also represents a decrease in skill levels in the workforce. Employers struggle with talent shortages which Gordon (2000) attributed to a high number of college and university dropouts; students do not return to complete a bachelor's degree in 6 years. Roughly half of university students deciding to attend institutions of higher learning may drop out due to low academic skills and lack of ability or demographic reasons (Bean & Metzner, 1985; Pascarella, Duby, & Iverson, 1983; Tinto, 1975).

#### Background and Conceptual Underpinnings

In higher education, student attrition remains problematic. Dropping out, or not persisting, continues at a fairly high percentage. The national average dropout rate from 4-year institutions is approximately 44% (Symonds et al., 2011); unless transferring from a community college, then the national dropout rate reaches 88.4% (National Center for Education Statistics, 2010). In 2009, in the midst of a recession, the Obama administration set a goal for the United States' proportion of college graduates to exceed all other nations by the year 2020 (White House, Office of the Press Secretary, 2009). The President's remarks addressed higher education as a means for economic recovery and success—not a means to increase debt.

Dropping out is usually costly for the institution, the individual (Metzner & Bean, 1987), and the nation (Schneider & Yin, 2011a). For the individual, the average cost per

year at a 4-year public university totals \$14,870 (National Center of Education Statistics, 2012). According to a report published by Sallie Mae (2012), families use a combination of 40% parent and student savings, 31% loans, and 29% grants and scholarships.

Students are paying a higher share with loans, savings, and income than previous years due to diminished parent savings (Sallie Mae, 2012). A college education often requires the student to amass debt; however, a student who graduates from college will earn 84% more than students who do not graduate (Sternberg, 2012).

The annual operating cost for universities to educate a student is estimated at \$27,105 (U.S. Department of Education, 2011) using tuition, private donors, and state tax subsidies. Institution losses are experienced by the reduction of state government appropriations and the loss of federal grants awarded to students. Many lower graduation rates and inferior school reputations are attributed to excessive dropouts (Delen, 2011). Student satisfaction information collected by colleges and universities was analyzed in an attempt to increase persistence, returning from one term to the next, and graduation rates (Umbach & Porter, 2002).

In addition to harming the individual and the institution, student dropouts from colleges and universities affect the nation financially. Schneider and Yin (2011a) reported damages as loss of higher wages typically earned by college graduates resulting in the loss of tax revenue, both at the state and federal levels. Taxpayers also suffer from the low graduation rates with “millions upon millions of dollars sent to colleges and universities to support students who do not return to college after the first year” (Schneider & Yin, 2011b, p. 2) through government appropriations and student grant programs.

To attempt to combat dropouts, researchers noted significant connections between select variables in order to predict student departure from college when students begin as freshman at the same institution. Models from Astin (1975), Bean and Metzner (1985), Pascarella (1980), and Tinto (1975, 1985, 1998) are most notable in attempting to identify students at risk or students leaving college prior to graduation. The models were designed to understand students' engagement and satisfaction throughout the education journey. Identifying students at risk for non-persistence, defined as leaving college before completion, may be improved through early interventions (Gerdes, 1994). Students retained in higher education are considered persistent and, therefore, successful (Astin, 1975; Noel, Levitz, & Saluri, 1985).

Higher education is an exceedingly competitive service situated in a global arena. Potential students have thousands of choices for postsecondary education after completing high school. By attempting to attract potential students, increased enrollment is tied to easy-to-find statistics, such as graduation rates, demographics, prestige, and costs, as well as persistence. Persistence is a significant process toward graduation (Pascarella & Terenzini, 2005). To that end, Tinto (1975) theorized that the degree of fit between the organization and the student plays an important role in persistence and attrition. A student searches for the best fit where the culture of the university meets individual needs or preferences. This approach may not be the case for nonresidential or commuter campuses or where students remain close to home or work and transfer from a less expensive community college in order to save costs (Astin, 1993; Cohen, 1998; Turley, 2006).



According to Sallie Mae (2012), 51% of the 1,600 students participating in the study reduced costs by living at home. Living at home was the most common cost-saving measure—a figure that increased from the previous year’s study. The transfer and nontraditional student population is growing, but minimal data exist due to the difficulties in categorizing issues and persistence variables (Kodama, 2002). According to Kodama (2002), higher education often overlooks students’ feelings of marginality or isolation on a commuter campus as a variable for withdrawal or nonpersistence.

Campuses without residential facilities usually cater to a student body of nontraditional students which present different variables for identifying persistence and attrition causes. Bean and Metzner (1985) and Metzner and Bean (1987) defined *nontraditional students* as those who are older, part-time students, not living on campus, and “not greatly influenced by the social environment of the institution; and is chiefly concerned with the institution’s academic offerings” (Bean & Metzner, 1985, p. 489). This description explains some of the variables identified as influences on the decision to drop out, such as age and environment, and not “the actual experience of college” (Tharp, 1998, p. 280).

Bean and Metzner (1985) considered three defining variables as influences on the decision to drop out: (a) age, (b) enrollment status, and (c) residence. Four background variables also influenced dropout: (a) educational goals, (b) high school performance, (c) ethnicity, and (d) gender. More currently, Tharp (1998) argued that variables in student backgrounds as well as the number of first semester hours and first semester grade-point averages (GPA) were most useful in predicting dropout at a commuter campus. Identifying variables impacting a student’s decision to leave prior to completion is

subjective and does not affect all students similarly (Bean & Metzner, 1985; Tinto, 1975, 1985, 1998; Tharp, 1998).

### Statement of the Problem

The Obama administration projects the United States will require 1.5 million additional college graduates for economic and global competitiveness by 2020. The lack of alignment between skills employers seek and qualified workers is an insufficiency in education and training (American Society for Training and Development, 2012). Adding to the education and training insufficiency, college dropouts impact the nation's financial deficit by reducing the number of college graduates available in the workforce. Employers seek skills earned in college; however, dropouts decrease global competitiveness.

As Americans recognize the increasing need for higher education and training in the workforce, an increased number of nontraditional students are choosing nonresidential alternatives (Cohen, 1998; Gianoutsos, 2011; Stewart, Merrill & Saluri, 1985). The increased number of students who reduce their college cost by residing at home (Sallie Mae, 2012) may cause more institutions to decrease residential facilities, thereby resulting in more nontraditional, commuter students. This potential increase in commuter campuses calls for a more comprehensive understanding of the characteristics of the nontraditional student (Cohen, 1998; Gianoutsos, 2011).

Research addressing dropouts or nonpersisters focus on freshmen entering residential universities to obtain a degree within 4 years to 6 years (Astin, 1975; Bean & Metzner, 1985; Chickering, 1974; Chickering & Reisser, 1993; Horn & Nevill, 2006; Tinto, 1975). Minimal focus, however, is addressed in the literature comparing

commuter and residential student retention (Gianoutsos, 2011; Horn & Nevill, 2006). A better understanding of factors and outcomes of the student decision-making process when faced with persistence or nonpersistence is critical for commuter campus retention programs. Understanding factors contributing to degree or goal attainment can provide the foundation for programs designed to retain students on commuter campuses.

#### Purpose of the Study

The purpose of the study was to examine nonresidential students withdrawing from a commuter campus in order to identify and analyze variables that may prevent individual goal attainment or graduation. Students who drop out contribute to a growing deficiency in workforce readiness by failing to obtain the skills needed for future progress in the United States. This study sought to identify specific variables related to increased persistence of nontraditional students attending commuter campuses. The study compared dropouts at two campuses, residential and commuter.

#### Limitations

The study examined students who have withdrawn, term by term, at a commuter campus compared to students who have withdrawn at a residential campus. Students in this study withdrew or persisted based on their own decision-making processes. By focusing only on students who have already completed the withdrawal process, this tactic presents a lack of randomness causing limitations based on environmental factors, such as disasters, economic concerns, or the selection of courses offered in a particular term.

In the present study the commuter campus population is approximately 82% undergraduate and 18% graduate students. The students in the study may select the university and campus based on convenience of location rather than other factors, thereby

reducing some of the issues of fit identified in previous research. To save costs, students may choose the particular campus because it is geographically convenient or close to students' family residence. Older or nontraditional students at this college may choose to attend college based on proximity of campus to home and work. The current study did not include students enrolled solely in online classes.

#### Delimitations

The researcher investigated students from two geographic locations at one institution at one period of time spanning over a 2-year period. Data were not gathered from multiple environments resulting in limitations in usefulness from one institution to another. The researcher selected a public, 4-year institution that awards bachelor's, master's, and doctoral degrees; however, all programs are not offered at both campuses. The possibility existed that some degree programs generate a different type of student or are more difficult to gain admission, thereby changing the dynamics or student makeup of the programs at either campus and causing results to differ.

This research investigated a population of students who withdrew from college utilizing a process for the purpose of informing the university administrators of the intent to discontinue classes. Students sometimes opt to withdraw in a less formal manner by simply not attending. The federal government financial aid agencies referred to this as unofficial withdrawal. Some students complete the term and drop out without notifying the education institution. The current study parameters only included students choosing to formally withdraw.

### Assumptions

This study utilized archival data acquired from documents of several sources and assumed to be coded and entered correctly. Prospective students completing an admission application had to complete personal information, academic history, intentions, and major. Students must present or authorize the transfer of transcript and financial documents. This information was transferred into a data management system with assumed accuracy.

### Research Objectives

The present study addressed the following research objectives:

RO1. Describe demographic characteristics (specifically, age, ethnicity, gender, and financial aid) of nontraditional student withdrawals on a commuter campus.

RO2. Describe demographic characteristics (specifically, age, ethnicity, gender, and financial aid) of traditional student withdrawals on a residential campus.

RO3. Describe academic characteristics (specifically, previous college GPA, education goals, academic standing, and full- or part-time load) of nontraditional student withdrawals on a commuter campus.

RO4. Describe academic characteristics (specifically, previous college GPA, education goals, academic standing, full- or part-time load) of traditional student withdrawals on a residential campus.

RO5. Compare student demographic characteristics (specifically, age, ethnicity, gender, and financial aid) of nontraditional students on a commuter campus with traditional students on a residential campus.

RO6. Compare student academic characteristics (specifically, previous college GPA, education goals, academic standing, and full- or part-time load) of nontraditional students on a commuter campus with traditional students on a residential campus.

#### Conceptual Framework

A theoretical and conceptual framework helped explain models of dropouts from both residential and commuter university campuses. The conceptual framework illustrated factors and outcomes of the student decision-making process when faced with persisting or not persisting. Four foundational theories explained the student attrition models of traditional and nontraditional students and formed the basis for this study.

Astin's (1975) prevention of student departure model or involvement theory included a prediction formula based on theory recognizing combinations of variables increasing likelihood of dropout. Astin addressed residential campuses but acknowledged possible differences in variables for commuter campuses. Astin theorized that students concerned about success factors may select colleges based on variables identified in the model. Other theories included Tinto's (1975) Interactionist Theory, Chickering and Reisser's (1993) Seven Vectors of Student Development Theory, and Pascarella's (1985) Model for Assessing Change.

According to Tinto's (1975) Interactionist Theory, a measure of fit exists between the student and the institution. The student may choose a college based on information gathered from available literature and marketing materials. Tinto (1975) described consequences of attending a university not suitable for the student in areas of interaction resulting in nonpersistence.

Chickering and Reisser (1993), in *Seven Vectors of Student Development Theory*, described the maturing process a student experiences that allows successful degree completion as well as development necessary for success in the workplace. Chickering and Reisser (1993) discussed collegiate lessons important in the workforce, such as self-management, social interactions, and discovery.

The fourth foundational theory of the present study was Pascarella's (1985) *Model for Assessing Change*. The change is a transformation occurring within the student allowing for a successful transition from early student to adult and worker. Pascarella's model illustrates quality of effort and relies on previous variables, such as background traits, institutional environment, and influences of peers and faculty. Change transpires based on variables, such as "student background characteristics, interactions with socializing agents, and the quality of effort invested in learning and developing" (Pascarella, 1985, p. 657).

The current study sought to identify the profile characteristics, demographic and academic, of nontraditional students on a commuter campus. Chickering and Reisser (1993), Pascarella (1985), Tharp (1998), Tinto (1985), and others discussed students at risk of dropping out. With the exception of Tharp (1998), the theorists reported variables relevant to traditional residential student dropouts. The present study targeted the nontraditional commuter student dropout. The variables, assessed individually, may not have indicated dropout risk; however, the combination of variables may have identified risk of nonpersistence. The study identified risk variables for dropouts at commuter campuses with nontraditional students. A comparison of significant factors between nontraditional commuter students and traditional residential students may have illustrated

differences in dropout descriptions emphasizing existing theories focusing on traditional residential student dropouts.

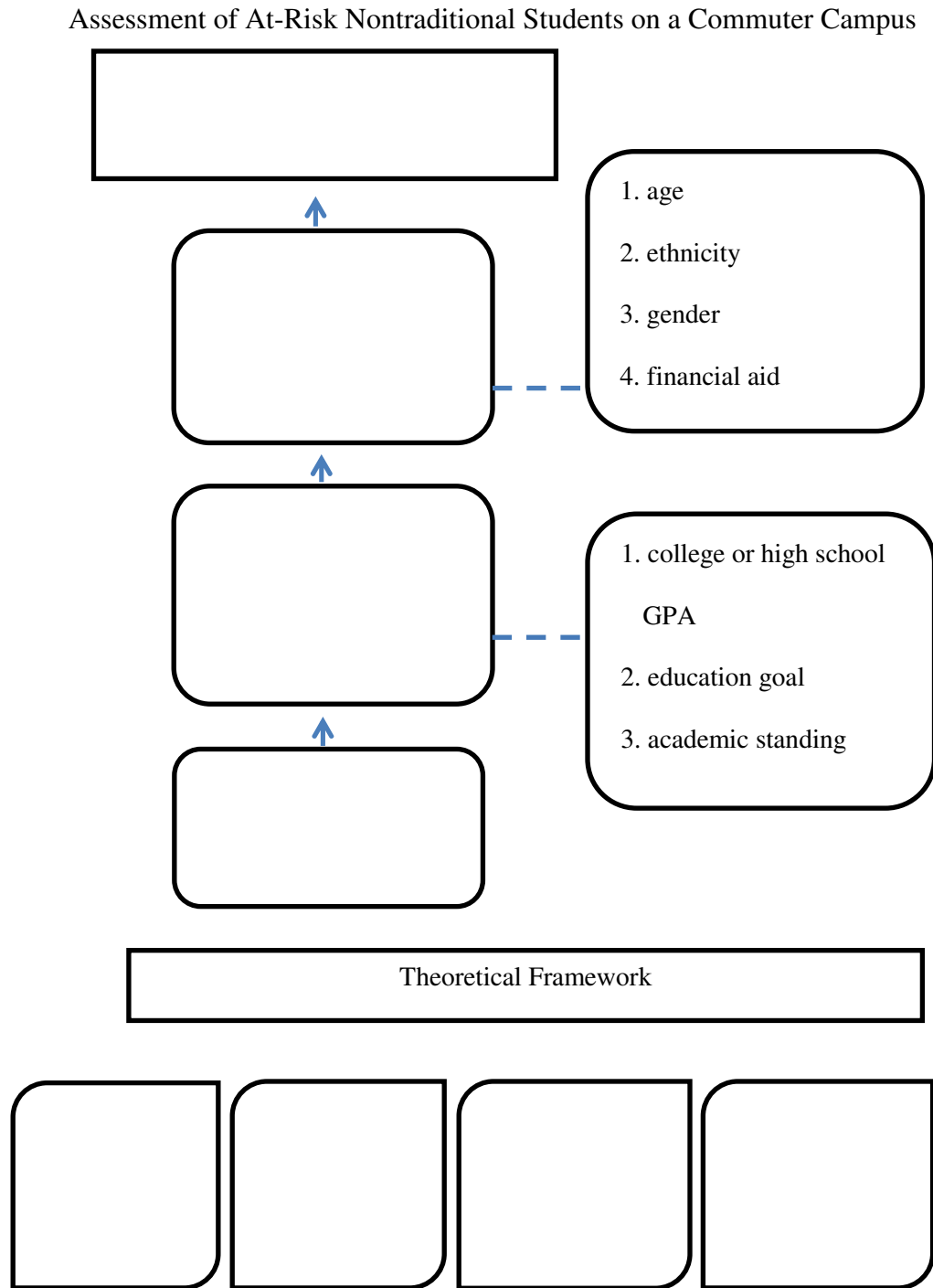


Figure 1. Conceptual framework.



## Definition of Key Terms

For purposes of this study, the following terms were defined:

1. *Commuter campus* – comprised of nonresidential students. Commuter campuses cater to students living some distance from campus and may offer a variety of nonacademic needs, such as later office hours, night classes, childcare, and management of subcultures, both dependent and independent of parents (Clark, 2006; Gianoutsos, 2011).

2. *Dropout* – someone who does not obtain a degree (Astin, 1975). This definition is problematic as students can return to college at any point and still obtain a degree. According to Astin (1975), another issue with the term *dropout* is the small percentage of students attending college for reasons other than to obtain a degree. Researchers must clarify the educational intentions in persistence studies.

3. *Logit* – in statistics, a unit of measurement to report relative differences between candidate ability estimates and item difficulties (Laerd Statistics, 2014).

4. *Offshoring* – exporting work or jobs from wealthy countries to poor countries due to a lack of availability of inexpensive local skill (Blinder, 2006).

5. *Marginality* – a feeling of not belonging or a sense of feeling ‘out of things.’ Marginality is the opposite of mattering (Kodama, 2002; Schlossberg, 1989).

6. *Matriculation characteristics* – characteristics of student’s status while attending college with regard to GPA, full- or part-time enrollment, academic status, retention, and financial aid (Gianoutsos, 2011; Terenzini & Pascarella, 1978, 1980).

7. *Nonpersister* – a student who does not enroll continuously or discontinues enrollment to withdraw (Pascarella & Terenzini, 2005).

8. *Nontraditional student* – student who is either older than 24 years or does not live in a campus residence or is a part-time student or one of the following: not greatly influenced by the social environment of the institution or chiefly concerned with academic offerings. Frequently, the term *nontraditional* and *commuter student* are used interchangeably (Bean & Metzner, 1985).

9. *Persistence* – progressive reenrollment in college, whether continuous from one term to the next, or temporarily interrupted, then resumed (Pascarella & Terenzini, 2005).

10. *Prematriculation characteristics* – characteristics associated with academic scoring measures, such as ACT and SAT tests as well as high school GPA prior to attending college (Gianoutsos, 2011; Terenzini & Pascarella, 1978, 1980).

11. *Stopout* – nonpersister still planning to obtain a degree (Astin, 1975).

12. *Transfer* – students arriving from other 2- or 4-year academic institutions, seeking a degree utilizing credits gained previously (Kodama, 2002).

13. *Traditional student* – student who likely resides on campus and more affected by social integration than external environment (Bean & Metzner, 1985).

14. *Withdraw* – a student who drops out of the education system–dropout (Astin, 1975; Tharp, 1993; Tinto, 1975).

### Summary

The United States' need for a more educated and skilled workforce is well documented (Casner-Lotto & Barrington, 2006; Dychtwald et al., 2006; Gordon, 2000; Gordon, 2007; Handel, 2003; Killian, 1982; National Center for Public Policy and Higher Education, 2004). The requirement for workers in certain skill areas and the supply of

qualified human capital are unequal since advanced technology creates a greater need for technically trained workers than are available (Handel, 2003; Wyndrum, 2006). The consequences of the skill deficit may result in the offshoring of key positions (Wyndrum, 2006) and a lower standard of living for younger Americans (Gordon, 2000; Gordon, 2007).

The role of higher education and technical training remains a key focus in economic dominance. In order to stop further economic and employment losses, President Obama introduced a goal for the nation to reach the highest proportion of adults with college degrees in the world (White House, Office of the Press Secretary, 2009). Problems exist with reaching this goal as roughly half of students attempting a college degree withdraw or drop out prior to completion (National Center for Education Statistics, 2010). Nationally, the dropout rate at a 4-year university totals 44% and can be much higher (Symonds et al., 2011).

Although dropouts from colleges and universities are not a new problem, the demographic makeup of the college student population is evolving. In order to balance living expenses and high tuition and fees, students are transferring to universities from less expensive local community colleges (Turley, 2006) as well as living at home and commuting to campuses (Sallie Mae, 2012). Minimal research exists to examine factors for nontraditional dropouts on commuter campuses. In Chapter II, the literature relating to student retention and the theorists supporting the research will be discussed. In the remaining chapters, a detailed explanation of the research methods, data collection, results, and discussion of findings with recommendations for future research will be provided.

## CHAPTER II

### LITERATURE REVIEW

The literature review includes an investigation of employer demand for higher education in the workforce, demand for college graduates, the value of college on the individual, and student retention in colleges and universities. The review revealed skills obtained as a college student sought out by employers searching for an educated and mature workforce. Retaining nontraditional students attending a commuter campus is discussed with emphasis on variables causing dropout.

The exploration of the significance of college on the individual explains the maturation of the student in developing skills employers demand for the workforce. Employers identify skills and knowledge needed to prevent extensive human capital offshoring. A serious problem facing employers as well as colleges and universities is the deficit of college graduates caused by students leaving prior to finishing their studies (Gianoutsos, 2011; Sternberg, 2012). The literature review investigated the college dropout problem and sought causes for withdrawing as well as factors that aid in predicting students at risk for non-persistence. Additionally, this chapter explores theories and models associated with student success factors and theoretical concepts outlining demographic and academic student dropout motives.

#### Employer Demand

In pre-industrial America, highly-skilled craftsmen with little or no division of labor transitioned to mass increases in production. Prior to the 1830s, consumer goods were often designed and created by the same artisan, an expert in all capacities in product conception, formation, and trade. Typical training in the field required a long

apprenticeship from unskilled through journeyman and, finally, the rank of master craftsman (Bills, 1995). Employers trained workers in the field, and the workforce was considered highly skilled. The industrialization movement caused changes in workforce readiness. An increased number of laborers were needed at the same time as the demand for jobs rose. Labor became cheap but unskilled.

By the 1840s the highly skilled portion of the craft was vetted out of the process to allow workers with less developed skills to complete steps in the production of goods. Factory work entailed one repetitive step in the mass manufacturing process. Pay was determined by demand for workers—not by skills. Standards of living increased as workers came to the factories in large numbers with few skill requirements. Workers typically changed jobs every 3 years which further decreased industry skill levels (Fisk 2003; U.S. History.org, 2013).

Three major actions boosted the industrial revolution in America:

1. Nationwide transportation developed.
2. Electricity became functional and practical.
3. Significant improvements were made to production processes (Fisk 2003; U.S. History.org, 2013).

As the railroad expanded so did supplies, patents, and corporations. People began to believe, like the famous oil billionaire, John D. Rockefeller, that with hard work they could become wealthy in America. The Bureau of Labor Statistics attributed technology, capital, demography, immigration, education, and government as a cause for a more skilled workforce.

A more educated workforce started to steadily emerge in America. Less than 14% of workers graduated from high school in 1900, and 83% of workers graduated from high school in 1999. In 1910, 3% of workers graduated from a postsecondary institution; whereas, in 1999 graduates numbered 25%. The increase in education resulted in higher wages substantially growing the economy and increasing workplace skill requirements (Fisk, 2003). Today, professions that typically pay a living wage require an education beyond high school (Glasmeier, 2013). Employers seek high skills obtained from higher education sources.

The American Society for Training and Development (ASTD) (2012), an organization dedicated to training professionals for the workplace, reported that an ever-increasing number of job openings go unfilled due to a lack of skilled workers. Employers struggle to find skilled talent even in industries downsizing and requiring fewer workers. Research conducted by a consortium of four major contributors, the Conference Board, Partnership for 21<sup>st</sup> Century Skills, Corporate Voices for Working Families, and the Society for Human Resource Management concluded that current and future entrants into professional employment are “woefully ill-prepared for the demands of today’s and tomorrow’s workplace” (cited in Casner-Lotto & Barrington, 2006, p. 9). In 2006, the consortium published a detailed report of perceptions of basic knowledge and applied skills considered *not important*, *important*, or *very important* for successful job performance. Over 400 United States employers rated the skill levels of new workers as *excellent*, *adequate*, or *deficient*. For purposes of the study, *excellent* was the standard required for competitiveness in the global arena. Participants reported skill sets considered most important for a new-hire as (a) professionalism/work ethic, (b) oral and

written communication, (c) teamwork/collaboration, and (d) critical thinking/problem solving. Participants also reported the basic knowledge categories that one may consider fundamental subjects (English, reading comprehension, writing, math, science, government/economics, humanities, foreign language, and history/geography) as important workforce skills.

The report clearly articulated that high school graduates scored lowest in the basic knowledge and skills, followed by graduates from 2-year colleges or technical schools. Although deficiencies were reported in the basic knowledge areas of writing in English and written communications of college graduates, findings indicated the basic knowledge and skills considered *very important* appeared to increase as the workforce entrant's education level increased (Casner-Lotto & Barrington, 2006).

Due to poor marks received by high school graduates, the study predicted the number of college graduates hired by businesses will increase. More than 58% of employers surveyed projected their companies would increase hiring of 4-year college graduates over the next 5 years. President Obama stated that the nation's education success is measured, in part, by the "jobs they can find and the quality of life those jobs offer" (White House, Office of the Press Secretary, 2011, para. 11). High school education is replaced by college education as a minimum qualification for employment by many managers (Casner-Lotto & Barrington, 2006).

*Applied skills*, different from simple basic skills, are defined as skills that enable new workforce entrants to use the basic knowledge acquired in school to perform in the workplace. Employers indicate that K-12 schools have primary responsibility for workforce readiness directly followed by 4-year colleges and, lastly, by the recent

workforce entrant themselves (Casner-Lotto & Barrington, 2006). Employing American workers contributes to national economic success. Education and skilled training are identified as significant factors in maintaining economic global dominance (ASTD, 2012; Carnevale, Smith, & Strohl, 2010; Casner-Lotto & Barrington, 2006; White House, Office of the Press Secretary, 2011).

### Need for Training and Education

Training and education are part of a long-standing social change movement sponsored by the United States' top leaders for the purposes of global dominance and economic stability. Job competition, once national, exists now on a global level. Economically, a more educated workforce aids all citizens by allowing better utilization of national resources. Populations earning a higher wage are less likely to become a burden to society. The need for increased training and education derives from the need for more knowledgeable, talented, technical, creative, and innovative employees with particular skills in writing and speaking. According to Carnevale et al. (2010), skills obtained in college are skills lacking in the workforce. By 2018, America will produce 3 million less college graduates than needed to fill the gaps, thereby causing a lag in economic recovery (Carnevale et al., 2010).

United States leadership acknowledges that academic success contributes to global workforce readiness (U.S. Department of Education, 2011). In the 2011 State of the Union Address, United States President Barack Obama stated the following:

Over the next 10 years, nearly half of all new jobs will require education that goes beyond a high school education. And yet, as many as a quarter of our students aren't even finishing high school. The quality of our math and science education



lags behind many other nations. America has fallen to ninth in the proportion of young people with a college degree. And so the question is whether all of us—as citizens, and as parents—are willing to do what’s necessary to give every child a chance to succeed. (White House, Office of the Press Secretary, 2011, para. 34)

President Obama charged the United States Department of Education with setting state-by-state targets to achieve an overall United States goal for the highest proportion of college graduates in the world by 2020. The U.S. Department of Education determined 8 million more young adults will need an associate’s or bachelor’s degree to remain on target to meet the President’s goal (White House, Office of the Press Secretary, 2011). However, other organizations noted that degree attainment would also need to include more working adults or nontraditional students. Bosco (2012) wrote in the *College and University Journal* that the number of graduates between the ages of 24 and 35 years totaled 16 million. To achieve the President’s goal of education dominance, 27 million Americans must earn a college degree by 2020. Each state, opines Bosco, will need to increase degree attainment between 42% and 60% (Bosco, 2012).

Achieving an education beyond high school often results in “higher personal income, a better skilled and more adaptable workforce, fewer demands on social services, higher levels of community involvement, and better decisions regarding healthcare and personal finance” (Kelly, 2005, p. 1). Some deficiencies persist in employees even after college, which are listed as “writing in English, written communications, leadership, and professionalism/work ethic” (Kelly, 2005, p. 32). Therefore, hiring graduates from a 4-year college becomes more important in order to decrease the amount of training required when employed. This formal education then allows the employee more time to work on

skills, such as leadership, professionalism/work ethics, and creativity/innovation (Kelly, 2005).

Casner-Lotto and Barrington (2006) and others (ASTD, 2012; Carnevale et al., 2010; White House, Office of the Press Secretary, 2011) indicated that basic knowledge and applied skills appear to increase as new hires' education levels increase. Conversely, the survey revealed deficiencies decrease when the new hire is a graduate of a 4-year college or university. An employer hiring 4-year university graduates expects successful teamwork/collaboration, oral and written communication, critical thinking/ problem solving, reading comprehension, English language (spoken), writing in English, and mathematics (Casner-Lotto & Barrington, 2006). By increasing the number of college students and graduates, America competes for new research and new technologies to boost the workforce (ASTD, 2010). The contribution of graduates of 4-year colleges and universities to the workforce is widely researched (ASTD, 2010; Casner-Lotto & Barrington, 2006).

#### Impact of Higher Education on the Individual

Post-secondary education is considered essential to jobs requiring higher or middle skills in order to adequately equip workers with the skills and abilities required in the 21<sup>st</sup> century (Symonds et al., 2011). Pascarella and Terenzini's (2005) longitudinal study regarding the outcomes of college experiences of students indicated college education impacts students in important ways. According to models used by Pascarella and Terenzini (2005), the development of changes in college students is considered "intraindividual development" or "interindividual" (p. 18), i.e., occurring between

individuals. The post-secondary mission was to prepare students for the workforce as well as the next 50 years of their lives (Noel et al., 1985).

Several psychosocial theories describe changes occurring in college students that are important factors in the education of the workforce. As the college student matriculates, Chickering's Seven Vectors of Student Development theory categorizes seven vectors or facets that form (Chickering & Reisser, 1993). Chickering posits that progress brings increased awareness, skill, confidence, complexity, stability, and integration, which are important traits for a refined workforce. The college student is on a path toward "individualization—the discovery and refinement of one's unique way of being—and also toward communion with other individuals and groups, including the larger national and global society" (Pascarella & Terenzini, 2005, p. 21). The term *vector* in this case may indicate a direct line or a less direct, even spiral route toward achieving individualization. The vectors are as follows: (a) achieving competence, (b) managing emotions, (c) moving through autonomy toward interdependence, (d) developing mature interpersonal relationships, (e) establishing identity, (f) developing purpose, and (g) developing integrity.

According to Chickering (1974), these vectors are products evolving from the experiences gained from attendance in colleges or universities. Knowledge gained is more than academically shaping an individual's development. The first vector, achieving competence, includes intellectual areas, physical and manual, and interpersonal competence. This vector includes aesthetic and cultural sophistication. Beyond simply passing exams by thinking through meanings, higher-order cognitive skills are stressed in universities, thereby aiding in achieving competence.

The second vector, managing emotions, has great value in controlling impulses and responding appropriately to intense emotions. Emotions can be positive or negative feelings stemming from experiences. Chickering and Reisser (1993) indicated students are “loaded with emotional baggage” (p. 46) upon arrival at college, and they learn ways of dealing with and dispersing feelings in appropriate ways. Emotions, such as fear, aggression, depression, guilt, shame, care, optimism, and inspiration, are commonly found among students. Universities and colleges strive to allow expression and assistance in managing the reactions to the emotions. Many students will continue to develop this vector throughout adulthood.

Moving through independence, the third vector, addresses the ability to pursue interests beyond approval of friends, parents, and others. Independence allows an individual to feel freer to develop relationships and interests without seeking reassurance. Students learn to organize personal affairs and make confident decisions. The need to belong is balanced with the need to become independent.

In the fourth vector, developing mature interpersonal relationships introduces the valuing of diversity and differences. The student must establish and accept his or her own identity as well as recognize and appreciate others in order to establish lasting connections. The student experiences a heightened sense of varied cultures and communities. This vector requires “healthy intimacy and commitment” (Chickering & Reisser, 1993, p. 48).

Identity is established with an acknowledgement of one’s physical characteristics, personal appearance, gender realizations, as well as sexual orientation. The fifth vector also includes family and religious connections. Identity establishment derives from the

preceding vectors and experiences and can be described as “a clarity and stability . . . for this core self as capable, familiar, worthwhile” (Chickering & Reisser, 1993, p. 50).

Vector six helps develop purpose to resolve the issue of whom the student will become. The vector is the intentional forming of a life path or direction. Plans are developed, and a realization of interests occurs. Vocational interests are forming, and a desire to follow-through into career development is evident.

The last vector clarifies core values and beliefs. Developing integrity and one’s own belief system helps encapsulate the identity and consistent behaviors. Chickering and Reisser (1993) described the type of integrity based on individuals and taught experiences gained in college as a review of past values and rules and recognition of interests and values of others.

The seven vectors of the human development theory demonstrate a course individuals embark on when developing identity. In addition to acquiring academic abilities, students also gain skills, such as autonomy, personal integration, impulse expression, estheticism, complexity and thinking introversion (Chickering & McCormack, 1973). This individualization process and growth are provided on college campuses. Chickering and Reisser (1993) acknowledged the varying rate of movement through one or several of the vectors simultaneously. Students opting to drop out of colleges may not obtain the seven skills employers determine as essential in the workforce. Dropouts are less prepared for professional employment than college graduates (Chickering & Reisser, 1993; Noel et al., 1985; Pascarella & Terenzini, 2005).

## Retention

Dropout rates, the converse of retention rates, in higher education are closely studied along with the specific causes for dropout. When students drop out of college, both the individual and institution are affected financially (Metzner & Bean, 1987). Lower graduation rates result in lower workforce preparedness (Berger & Braxton, 1998) and may cause damage to the institution's reputation (U.S. Department of Education, 2011). Parents and individuals who have invested money and time into an unsuccessful college endeavor experience financial and emotional losses (Schneider & Yin, 2011a). Grants and scholarships previously awarded to a withdrawing student are unavailable for redistribution until the next term, resulting in a financial loss for potential students (Schneider & Yin, 2011a).

Astin, an educationalist at the University of California, conducted extensive research in the prevention of student departure from college. Astin, in his book, *Preventing Students from Dropping Out* (1975), discussed his 1972 longitudinal study. The 3-year study assisted institutional administrators, educational planners, guidance counselors, students, and policymakers in improving students' likelihood of completing college. Astin (1975) determined that keeping enrollment up by recruiting more students was not as cost-effective or efficient as reducing dropout rates. Astin (1975) surmised that rerouting resources from recruitment to retention was beneficial to administrators and students for three reasons:

1. The student stayed until graduation, thereby reducing the need to fill seats with more recruits each year.

2. The student can potentially earn more in wages with a degree.
3. The community gains a more educated addition to the workforce.

With a population of 101,000 participants, Astin's multi-institutional, longitudinal study utilized questionnaires mailed to freshmen upon entering college. A follow-up survey 4 years later measured student progress. The initial survey instrument included 175 items, such as age, race, gender, religion, past achievements, parents' income, parents' education, and parents' background, as well as students' educational goals, study habits, life goals, financial aid, and self-predictions of college success. In a follow-up questionnaire, Astin (1975) inquired about the educational progress, degree earned, current degree plans, education financing, residence, and work experience. Items assessed apart from the survey were SAT/ACT scores. Both survey and information from external sources were evaluated to form characteristics contributing to retention or dropout.

The characteristics were analyzed, using regression analysis, with a preliminary screening to determine variables significant to dropping out of college. Dropouts and stopouts were combined as dropouts since the reasons for leaving were similar. Variables were isolated from questionnaires completed by students as well as documents provided for admission upon entering college. Fifty-three variables were utilized. The variables were categorized under six general headings: (a) academic background and ability, (b) family background, (c) educational aspirations, (d) study habits, (e) expectations of the college, and (f) other student characteristics (Astin, 1975).

Academic background (measured from high school grade point average, college admission test scores, and the student's ranking at the high school) was most significant in determining persistence or nonpersistence. High school grades were the best predictor of college grades. The next category, family background, included religion, parental education and income, race, and type of hometown. The family background results showed a higher dropout factor if the student claimed no religion, parents earned low incomes and had less education, the race was non-white or Asian, and hailed from a small hometown. In the category of educational aspirations, Astin (1975) utilized the level of degree. For example, bachelor's, master's, or Ph.D., and intended field of study, such as business administration and nursing. Astin (1975) also included study habits and expectations for completing college, which were self-reported by the student in the questionnaire. Students expecting to complete higher degrees were less likely to drop out. Lastly, other characteristics, including smoking, age, "won a varsity letter," and marital status, were analyzed. The variables showed age and marital status as significant.

Astin (1975) summarized the seminal study by reporting that the "most 'dropout-prone' freshmen are those with poor academic records in high school, low aspirations, poor study habits, relatively uneducated parents, and from small town backgrounds" (p. 45). According to Astin (1975), this information is of interest to administrators, policymakers, and the students themselves.

Administrators and policymakers need predictions to evaluate the impact of



decisions. For students, Astin (1975) stated that, “This knowledge may influence their institutional choice” (p. 23).

The results of the Astin study included a prediction formula, which Astin called “worksheets” to identify students at risk for “dropout-proneness” (p. 183). Astin instructed the researcher to compute the prediction using 11 steps which assign regression weights to 64 variables including details regarding religion, race, degree plans, hometown, financial aid, employment, and parents’ circumstances. Retention, more than recruitment, according to Astin (1975), is the most effective approach for colleges and universities to increase enrollment (Astin, 1975, 1980, 1984; Astin & Astin, 2000; Astin & Oseguera, 2005). Astin’s study followed freshmen to identify retention factors throughout 4 years.

#### Freshmen Retention

In 2011, 68% of students entered college in the fall immediately after completing high school, up from 51% in 1975 (National Center for Education Statistics, 2012). The new freshmen hailed from diverse backgrounds and faced academic, social, and personal adjustments. Experiences and expectations varied for academic achievement, skills, engagement, learning strategies, residential, employment experiences, social interactions, values, goals, and confidence (Keup, 2004). The transition of first-year freshmen to college life is critical as many students do not return from the first to the second year. Freshmen attrition rates are 20% to 30%, and 75% of students who drop out do so in the first 2 years (Tinto, 1985). The Carnegie Foundation sponsors and collects research regarding basic skills and increasing need for community colleges to provide developmental courses to bridge the learning gap for college freshmen. According to the

Carnegie Foundation for the Advancement of Teaching (2008), few underprepared college students requiring developmental courses will reach their educational and personal goals. Most universities investing considerable resources implement programs to assist freshmen with college coping skills, such as clarifying expectations, providing academic and social support, feedback on performance, and student involvement (Tinto, 1985).

Tinto argues that first-year experiences must involve all aspects of freshman life to include residence halls, learning communities, and collaborative pedagogy rather than simply adding a freshman seminar (Tinto, 1985). First-year experience programs may include orientation, early warning signs, faculty and student interactions, advising, and benchmarking. Data revealed a decline in graduation rates over the past 20 years. However, with the efforts of public 4-year universities, first- to second-year persistence has increased by approximately 3% (College Board Advocacy, 2009).

Astin (1975, 1980, 1984, 2000), Astin & Osequera, 2005), and Tharp (1998) suggested strategies to improve retention and graduation rates but in different campus circumstances. Astin's (1975) seminal study, later revised to include 6-year graduation rates rather than 4-year rates, focused on freshmen entering a traditional college setting with high school GPA and classroom experiences included. In Tharp's (1998) research, nontraditional students on a commuter campus, in community colleges, or in work environments were acknowledged.

While Tharp (1998) discussed theoretical differences between the nontraditional student and the traditional student that may cause non-persistence, Tinto examined

student departures based on the interactionist theory. The interactionist theory states that each student interacts a certain way with the social systems of a college or university. Tinto (1975, 1985, 1998) declared that each individual student arrives at college with different experiences, perceptions, expectations, and characteristics which interact with the institution creating an individualized interface, either positive or negative. This interaction affects the persistence of a student.

Tinto's interactionist theory of causes for the student's departure was based on a longitudinal study of pre-entry attributes, such as family background, skills and abilities, and prior schooling, mixed with the individual's and institution's goals and commitments, described as intentions, goals, institutional commitments, and external commitments. The institutional experience factors are both academic and social. Academic performance and faculty/staff interaction, as well as extracurricular activities and peer group interaction, determine academic integration and social integration. The amount of integration then shapes new goals and commitments that form the departure decision (Tinto, 1985).

Tinto (1985) listed significant itemizations of possibilities for dropping out of a college or university. One study referred to the dropout rate as "puzzling" stating, Given the widespread availability of guides on the selection of colleges and universities, and the enormous amount of attention that parents, students, and college officials focus on the college selection process, we might expect that students will select the right college or university. (Berger & Braxton, 1998, p. 103)

Vast information is available to students and parents for the purpose of choosing appropriate institutions. Deciding which college would be the best fit leads to more student engagement on campus which prevents dropout (Astin, 1975, 1980, 1984; Astin & Astin, 2000; Astin & Oseguera, 2005; Berger & Braxton, 1998; Kuh, 2009; Metzner & Bean, 1987; Noel et al., 1985; Tinto, 1975, 1985).

According to Tinto, the student decision to drop out is a process similar to the decision to commit suicide as theorized by sociologist Durkheim (cited in Tinto, 1985), in the theory of suicide. Durkheim posited that suicide is more likely to occur in individuals who are insufficiently integrated in society. Durkheim observed an increase in suicide in those lacking in moral integration and collective affiliation. Although not the first to do so, Tinto (1975, 1985) applied Durkheim's (1979) theory of suicide to dropping out of college. Tinto views student attrition, like suicide, occurring in students who are disconnected and lack integration within the college or university. When a student is a good fit at a university and integration occurs, a strengthening of the student's commitment exists to his or her personal goals as well as to the institution. Tinto stated integration at the institution is vital in the decision to stay or depart (Tinto, 1975, 1985, 1994).

The theory of student departure (Tinto, 1975, 1985, 1994) depends largely on peer-to-peer, faculty, and staff, as well as family and college and non-college friends. Pascarella (1985) suggested five main sets of variables as indicators of success called Model for Assessing Change. The model lists students' background and precollege characteristics as one variable, the college's structural and organizational features as another, and the college's environment as the third variable which combine to make up

the fourth and fifth variables. Frequency and content of student interactions with socializing agents on campus play a major role in and count as the fourth variable. Lastly, Pascarella's model claims quality of effort is shaped by all previous variables, such as background traits, institutional environment, and influences of peers and faculty. In this model, change occurs based on "student background characteristics, interactions with socializing agents, and the quality of effort invested in learning and developing" (Pascarella, 1985, p. 57). Numerous studies exist in the field of college-level social development and retention (Chickering & Reisser, 1993; Kuh, 2009; Pascarella & Terenzini, 2005; Tinto, 1975, 1985, 1994).

Originally, American College Testing, now known simply as ACT, is a nonprofit company offering college testing and other products. The ACT completed two studies (2010a and 2010b) investigating ways to decrease the gap between college enrollment and degree completion. The ACT (2010b) study represented responses submitted by 258 chief academic affairs officers from 4-year public colleges or universities for student factors and institutional characteristics affecting attrition according to the university administration. The respondents included administrators at an institution—not students. The administrators rated the factors affecting student attrition at 4-year public colleges and universities. However, the study did not delineate colleges in which the students commuted to classes nor possible differences in retention for nontraditional students. See Table 1 for the top 10 results rated on a 5-point scale (5 = *major effect*, 3 = *moderate effect*, 1 = *little or no effect*).

Table 1

*Mean Scores of Top 10 Attrition Factors Rated by Administrators at 4-year Public Colleges and Universities*

Attrition Factor	Mean Score
Level of student preparation for college-level work	3.90
Adequacy of personal financial resources	3.90
Student study skills	3.90
Amount of financial aid available	3.65
Level of student motivation to succeed	3.64
Level of student commitment to earn degree	3.56
Level of job demands on students	3.52
Student low socio-economic status	3.49
Student aspirations and goals	3.36
Student personal coping skills	3.34

#### Nontraditional Students

Some difficulty exists in defining the nontraditional student, but an attempt was made by Bean and Metzner (1985). Bean and Metzner described individuals as follows: (a) rural or urban; (b) black, white or Hispanic; (c) 18 years old or older; (d) not employed, working, or retired, full or part-time; (e) male or female; (f) with children or childless; (g) married or single; (h) not greatly influenced by the social environment of the institution; and (i) mostly concerned with the academic offerings rather than social

outcomes. The definition is easier to explain if the student fits into one or all three of the following categories: (a) commutes to class; does not reside on campus; (b) usually 18 years or older (Bean & Metzner, 1985) or age 25 years or older (Stewart & Rue, 1983); and (c) often a part-time student with reduced student-to-student and student-to-faculty contact affecting the socializing influence of college (Pascarella, 1980). Bean and Metzner (1985) used the term *nontraditional* and *commuter student* interchangeably. The literature indicated that distinction was made to explain the differences in lower levels of interaction with faculty and peers. The student may also be less likely to advance through the Chickering and Reisser (1993) 7 vectors of self-development. Scott, Bailey, and Kienzl (2006) stated that nontraditional students have advanced tremendously, and commuter students have less opportunity to engage with peers and faculty. These findings cause a breakdown of the concept of social attachment that Bean and Metzner (1985) believe is a key factor to persistence. Based on the descriptions of attrition decisions, the nontraditional student may have distinctly different reasons for dropping out when compared to traditional students (Bean & Metzner, 1985; Tharp, 1998).

Bean and Metzner (1985) agreed with the results of studies by Pascarella and Chapman (1983) and Tinto (1975), stating nontraditional student attrition is more affected by environmental variables (i.e., finances, hours of employment, outside encouragement, and family responsibilities) than academic variables (i.e., study habits, advisement, absences, major, and course availability). In fact, when environmental support is good and the variables categorized as academic support are poor, the nontraditional student is expected to remain at the university. Bean and Metzner (1985) explained that, “if students cannot make adequate child care arrangements, or adjust their

work schedules, or pay for college, they will not continue in school regardless of good academic support” (p. 492). Therefore, even if academic support is good but nonacademic support is poor, the student can be expected to drop out (Bean & Metzner, 1985; Tinto, 1975).

Tharp (1998) of Indiana University-Kokomo posits that student enrollment records are underutilized as a tool in predicting at-risk students at a commuter college. The study tested a measurement of persistence rates between 2- and 4-year degree students by analyzing academic and demographic variables utilizing student databases. The purpose of the study was to identify students at-risk for nonpersistence using student enrollment records.

Tharp (1998) determined potential predictor variables of dropouts (both academic and environmental or demographic). The academic variables examined were high school percentile, entry status such as freshman or transfer, major, degree objective such as associate or bachelor, first semester hours enrolled, and GPA from the student’s first college semester. Demographic factors examined were gender, age, marital status, financial aid, and ethnicity. According to Tharp (1998) and others (Bean & Metzner, 1985; Tinto, 1975), one of the best predictors of academic preparedness, even in nontraditional students, is high school class rank or GPA. Students excelling in high school demonstrate individual achievement and are expected to perform well in college and therefore persist.

Tharp’s (1998) longitudinal research studied freshmen cohort groups of 940 students over a 2-year period, tracking the students for 4 years to measure degree completion ratio. Multiple regression was used to assess the 11 independent variables.



Of the 11 variables, 8 were theory-based and used by Bean and Metzner (1985) in the model of nontraditional student attrition. The 11 variables tested were first semester GPA, first semester hours, high school percentile, beginning or transfer, associate or bachelor, sex, age, ethnicity, marital status, financial aid, and major. The dependent variable in the study was degree completion success.

Tharp's (1998) study concluded that when the variables are separated into two categories, demographic and academic, the academic categories are the set that most accurately predict persistence. The research was significant, finding the background data change greatly when the academic variables are included. In fact, first-semester hours and first-semester GPA are key predictors of goal attainment. The research concluded that student background characteristics are predictor variables for commuter campuses and possible interventions can be implemented to assist students identified as at-risk.

Tables 2 and 3 summarize key research studies with theoretical frameworks for student success for commuter, residential, nontraditional, and traditional students. The tables include seminal authors and characteristics relevant to variables contributing to dropouts.

Table 2

*Significant Demographic Factors in Dropouts*

Author	Gender	Age	Marital status	Financial aid	Ethnicity	Residence	Parental education	Parental encouragement
Tinto (1975)	X				X		X	X

Table 2 (continued).

Author	Gender	Age	Marital status	Financial aid	Ethnicity	Residence	Parental education	Parental encouragement
Bean & Metzner (1985)	X	X			X	X		
Pascarella et al. (1983)	X	X	X	X	X			
Tharp (1998)	X	X	X	X	X			

*Note.* Tinto model not specific to students of community campuses.

Table 3

*Significant Academic Factors in Dropouts*

Author	High school performance	College performance	Education goals	Full-time/part-time	Institutional commitment	Intention leave/stay	Academic/social integration
Tinto (1975)	X				X		X
Bean & Metzner (1985)	X		X	X			
Pascarella et al. (1983)	X	X	X		X	X	X
Tharp (1998)	X	X	X	X			

*Note.* Tinto model not specific to students of commuter campuses.

## Residential Students

College success and retention researchers are experiencing a shift in factors influencing student persistence due to the current trend of students choosing to reside at home. Astin (1975) stated that 49% of men and 63% of women lived in a college dormitory as freshmen in 1968. Only 38% white men, 30% white women, and 44% blacks lived in their parents' home. The remaining students lived in other student housing or other accommodations. Today, approximately 20% of college students live in dorms, and 51% college students live at home (Sallie Mae, 2012). Most researchers agree that a freshman commuting to college is associated with lower persistence (Astin, 1984; Bean & Metzner, 1985; Braxton & Hirschey, 2005; Chickering, 1974; Chickering & Reisser, 1993; Tharp, 1998).

According to Astin (1984), continuous residence on campus during the first 2 years is associated with increased persistence. Astin posited that students who leave dormitories after the first year may experience a declining interest in the collegiate environment or change institutions, such as transfer to a local community college. Often, residential students experience less conflict related to family, work, and college than commuter students. Astin (1984) concluded that student involvement and living on a campus residence positively related to retention regardless of "sex, race, ability, or family background" (p. 523). The research stated that the students who live on campus residence halls have more time and opportunity to get involved in all aspects of campus life. Further, Astin (1984) posited that, "simply by eating, sleeping, and spending their waking hours on the college campus, residential students have a better chance than do

commuter students of developing a strong identification and attachment to undergraduate life” (p. 523).

Student involvement is more accessible when more time is spent on campus where exposure to peer groups, faculty interactions, involvement with student government, fraternities, sororities, and the intellectual environment are likely, thereby increasing the chance of persistence (Astin, 1984). Commuter students may achieve the level of involvement necessary to increase persistence if the institution’s administration is committed to achieving a high level of campus activities. Commuting students may experience conflicts with other commitments that interfere with persistence.

#### Commuting Students

Challenges faced by commuting students are recognized by experts in three major studies according to Stewart et al. (1985). Astin (1980), Beal and Noel (1980), and Chickering (1974) agreed that commuter students are less committed to attending and continuing college than students residing on campus. Concisely, Stewart et al. (1985) reported commuting students are less disrupted by withdrawing from school, thus making the transition out of college a less intrusive decision. The number of commuter students has increased to 61% of all college students (Stewart et al., 1985).

Difficulties commuter students experience occur because of a wide range of challenges. The student may be between the age of 18 and 24 years, full- or part-time, financially independent or dependent on parents, and may not have defined educational goals. The commuter may work part-time or full-time with or without dependents; therefore, the lack of clear definition creates challenges in developing appropriate strategies for retention of nontraditional students (Stewart et al., 1985). Astin (1975)

recounted studies suggesting dormitory living enhances college persistence but conceded that difficulties exist in collecting consistent housing data from a variety of institutions.

Astin (1975) study stated that freshmen living in dormitories is positively related to persistence; but, even then, Astin acknowledged growing changes in alternate living arrangements for traditional college students.

Stewart and Rue (1983) stated more research on the needs of the commuter student is required. The following questions were included in a seminal study on commuter students.

- How many commuting students attend the college?
- Of these, how many are full-time and how many are part-time?
- How many are traditional college age and how many are adults?
- How many are financially dependent? Financially independent? A mixture?  
On financial aid?
- Why did the student choose to attend this college?
- What majors do commuting students have?
- Where do the commuting students live?
- What are the goals of the commuting students?
- Is there a difference in the proportion of commuting students who drop out versus the proportion of residential students who do so? (Stewart & Rue, 1983, p. 167)

A campus with a student body consisting of mostly commuters may need to specialize in providing certain opportunities for retention. Stewart et al. (1985) recommended creating awareness of the commuters' needs to faculty and staff, advisors,

security guards, publication editors, food services, and mentors to add specific programs designed to promote affiliation and engagement. Interventions, such as flexible scheduling, campus jobs, commuter orientations, and special support, may be implemented. Stewart et al. (1985) posited that institutions can better serve growing numbers of commuter students by meeting needs more effectively through interventions designed with commuter students as the focus.

### Comparing Residential and Commuter Students

In 1974, Chickering published a comparison of residential students versus commuter students by analyzing the advantages and disadvantages of each. Chickering first examined the attitudes and behaviors of 5,351 randomly selected students from 270 private and public 2- and 4-year institutions from 38,000 students who responded to a questionnaire after freshman year. Chickering then reanalyzed survey responses of the next freshman class of 169,190 freshmen. Findings revealed significant differences between residential and commuter students with regard to (a) prematriculation characteristics, (b) the overall experience, and (c) educational consequences.

Chickering's (1974) study indicated private college prematriculation characteristic differences in lower parental income and education levels for commuters as well as lower high school GPAs. Chickering found residential students scored higher on precollege extracurricular activities. The findings, according to Chickering (1974), showed evidence that residential students are more likely to be involved in organizations, athletics, and non-campus social activities and more likely to be a guest in the home of a faculty member. Data also suggested residential students are more frequently supported by their parents and loans; whereas, the commuters were more likely to finance from

personal savings or earnings. However, public institution prematriculation findings showed commuter student academic performance and GPAs were higher and outcomes for residents and commuters were similar.

Astin (1975) addressed differences in residential and commuter students by studying the effects of college on students living on and off campus. Student characteristics, predictions, and outcomes were collected from over 240,000 students nationwide from 2- and 4-year institutions. Astin concluded that dropout chances were decreased by approximately 10% if the student lived on campus as a freshman. In addition, a freshman male living in a dormitory decreases his chances of dropping out by 10% and a freshman female by 6%. Astin (1975) listed benefits for residing on campus and reported no significant benefit for commuting to campus. A lack of or reduced campus involvement, both academically and socially, is considered a significant concern when addressing student persistence (Astin, 1975, 1980, 1984; Chickering, 1974; Chickering & Reisser, 1993).

Prior to 1965 student enrollment remained relatively low in the United States and limited mainly to white males with middle- or high-income levels. In 1975, there was a steep increase of college students as the population growth, G.I. Bill funding, and civil rights movement matured. As the nation recognized the economic importance of obtaining a college degree, many of those who had already entered the workforce began to return to college, thereby creating more nontraditional students than ever before (Brock, 2010). The growing nontraditional population caused an increase in commuter campuses. Commuter students may drop out for different causes and, therefore, require different interventions to persist.

## Interventions

Academic institution programs vary significantly in attempts to retain students at risk for drop out. Interventions range from holistically focusing on freshmen academic and social activities to simply journaling in English courses (Valentine et al., 2011). All retention programs intend to prepare students to face challenges and attain educational goals. Most programs target academically unprepared or at-risk students (Noel et al., 1985; Valentine et al., 2011). In addition, at-risk students may also include students unprepared in other life aspects which some interventions seek to address. Fowler and Boylan (2010) suggested that most students are identified as at-risk based on academic abilities; however, nonacademic and personal factors related to student success become increasingly important for students with weak academic skills.

Valentine et al. (2011) offered a review of 19 existing retention program studies, listing the intervention description and the at-risk target population. The studies were selected based on two criteria. First, Valentine et al. (2011) ensured any intervention in the meta-analysis was for at-risk students and, second, contained a quantitative evaluation in order to clearly code and assess data. The research discussed interventions from the time period of 1991-2008. None specifically differentiated residential or commuter students. However, some studies targeted 4-year university or community college students. Interventions, repeated by more than one institution but used in various combinations, are listed below.

- Limitations on extracurricular activities and smaller class sizes required general education courses for academics one year;
- One credit college orientation class, tutoring, remedial coursework;



- Remedial coursework, small class size, academic and career advising;
- Journal writing in English composition class;
- Study skills and adjustment class requirement;
- Study skills curriculum integrated into math instruction;
- Cooperative learning in remedial math class;
- Behavior modification focusing on study skills;
- Course in time management, problem solving and university resources;
- Limitation on credit hours, courses available, class sizes, and academic skill seminar;
- Orientation and specific curriculum;
- Financial, academic, and social assistance;
- College preparation course;
- Study skills seminar;
- Mentoring;
- Peer tutoring;
- Student learning communities of 25 participants, taking three courses together and tutoring, and
- Student success course in transitioning to college, career development, and life management.

Intervention treatment duration varied from 5 weeks to 2 years with the average duration of one semester. Some interventions were required of all students in a college; whereas, others were strictly for at-risk students. Valentine et al. (2011) stated

interventions suggested small, but important, positive progress in short-term retention rates but no strong basis for making policy recommendations. Noel et al. (1985) suggested promoting affiliation or involvement in campus activities, offering part-time jobs on campus, and mentoring programs. Retention programs varied widely from college to college. Both Noel et al. (1985) and Valentine et al. (2011) agreed that increasing student commitment to the college or university increases student retention.

### Summary

Many skills obtained in college are in demand by today's employers. In addition to academic growth, changes to social skills occur in college, such as autonomy, personal integration, impulse expression, estheticism, complexity, and thinking introversion (Chickering & McCormack, 1973). Employers desire skills obtained by students in college for a more prepared workforce ready for the high demands of today's economy. Nevertheless, skill shortages exist creating a deficit of human capital in the workplace.

Since nontraditional student enrollment in colleges and universities continues to increase, understanding causes of dropout convey important financial implications to the higher education system as well as to the student. Student retention is more cost-effective with long-term benefits for the student and the institution than recruitment (Astin, 1975, 1980, 1984). Discovering causes and appropriate strategies to combat dropout varies with the type of student attending the institution (Tharp, 1998). Data obtained on individual dropout variables were lacking for nontraditional, commuter students (Hundrieser, 2012; Stewart et al., 1985; Tharp, 1998). This study compiled data for nontraditional, commuter student retention and compared the data to traditional, residential students.

## CHAPTER III

### RESEARCH DESIGN AND METHODOLOGY

Chapter III provides a detailed explanation of the research design and methodology for the present study. The purpose of the study was to examine nonresidential students withdrawing from a commuter campus in order to identify and analyze variables preventing individual goal attainment or graduation. Students who drop out contribute to a growing deficiency in workforce readiness by failing to obtain the skills needed for future progress in the United States. The Obama administration set a goal to increase the number of college graduates in the United States and exceed all other nations by the year 2020 (White House, Office of the Press Secretary, 2009). The administration's ultimate goal was to increase the country's global skill dominance, thereby speeding economic recovery. The study seeks to identify specific variables related to increased persistence of nontraditional students attending commuter campuses. The study compares dropouts at two campuses—residential and commuter.

This chapter is divided into five sections. The first section describes the research design. The second section discusses the source of data, including institutional data and the origins of the data. The third section describes the student population used in the current study. The fourth section is a detailed description of the data collection procedures. Lastly, in the fifth section, statistical analysis, specifically descriptive statistics and binary logistic regression analysis will be discussed.

In the present study, the theory presented is based on Astin's (1975) model of retaining students in higher education rather than recruiting additional students. To determine causes of drop out and likelihood of drop out, Astin noted differences in

commuter or nontraditional (Bean & Metzner, 1985) students and residential or traditional students' demographics and academic factors. Astin (1975) theorized that students are more engaged and likely to remain if involved in residential campus life activities. Bean and Metzner (1985) created a conceptual model of a nontraditional student dropout derived from behavioral theories such as Astin's (1975) dropout prevention theory. Tinto (1975) theorized that academic factors are "paramount" (Bean & Metzner, 1985, p. 489) in nontraditional students. Bean and Metzner's model of a nontraditional student dropout cited lack of social integration into the institution, less interaction in the college environment with peers or faculty, less interaction through extracurricular activities, less use of campus services, and greater interaction with the noncollegiate, external environment. Additional portions of the model included the following four dropout indicators: (a) poor academic performance, (b) intent to leave, (c) background (includes previous academic performance and educational goals), and (d) environmental variables (e.g., work, finances, lack of encouragement, family responsibilities, and perceived opportunity to transfer). With the exception of dropout indicators (e.g., intent to leave, work, lack of encouragement, family responsibilities, and perceived opportunity to transfer), the dropout indicator data were collected by most colleges and universities in the admission and advisement process. The current study examined withdrawing students by evaluating the research objectives.

An understanding of student obstacles and needs was gained throughout the study as well as context or condition of the specific cases. The following research objectives were analyzed:

RO1. Describe demographic characteristics (specifically, age, ethnicity, gender, and financial aid) of nontraditional student withdrawals on a commuter campus.

RO2. Describe demographic characteristics (specifically, age, ethnicity, gender, and financial aid) of traditional student withdrawals on a residential campus.

RO3. Describe academic characteristics (specifically, previous college GPA, education goals, academic standing, and full- or part-time load) of nontraditional student withdrawals on a commuter campus.

RO4. Describe academic characteristics (specifically, previous college GPA, education goals, academic standing, and full- or part-time load) of traditional student withdrawals on a residential campus.

RO5. Compare student demographic characteristics (specifically, age, ethnicity, gender, and financial aid) of nontraditional students on a commuter campus with traditional students on a residential campus.

RO6. Compare student academic characteristics (specifically, previous college GPA, education goals, academic standing, and full- or part-time load) of nontraditional students on a commuter campus with traditional students on a residential campus.

### Research Design

Fraenkel and Wallen (2006) described research as “careful, systematic, patient study and investigation in some field of knowledge, undertaken to discover or establish facts and principles” (p. 7). A descriptive study describes a situation as completely and carefully as possible. In educational research, descriptive statistics are the starting point for all endeavors; whereas, correlational research then determines the relationships among two or more variables (Fraenkel & Wallen, 2006). The data were examined to

investigate whether a relationship naturally exists without trying to alter these phenomena utilizing theory constructs. *Theory*, defined as “a set of interrelated constructs (variables), definitions, and propositions, presents a systematic view of phenomena by specifying relations among variables” (Creswell, 2003, p. 120).

This study utilized a descriptive, non-experimental, quantitative approach. Utilizing secondary institutional data, two groups were examined, and selected profile characteristics from residential and commuter campuses of a public 4-year university were compared. The comparison included demographic and academic characteristics. The study design included two phases: (a) descriptive and (b) analysis. The first phase of the study described two groups, commuter campus dropouts and residential campus dropouts. The research utilized categorical data to produce frequencies in order to analyze the characteristics of the groups (Holton & Burnett, 2005). The second phase of the study compared nontraditional dropout students from the commuter campus with dropout students from the traditional residential campus. Institutional records served as the source of archival data to conduct the study. This study required and received approval from the Institutional Review Board of The University of Southern Mississippi (see Appendices A and B).

#### Data Source

The institutional information collected, recorded, and referred to as secondary or archival data were utilized in the present study. According to Corbin and Strauss (2007), “working with previously collected data is no different than secondary analysis on one’s own or someone else’s material” (p. 317). The data should be examined for interest, relevant concepts, and coded. Vogt, Gardner, and Haeffele (2012) stated archival

research is the use of datasets that exists prior to the beginning of an investigation.

Archival research is considered the most frequent type of research published in the major journals in sociology, political science, and economics (Vogt et al., 2012). For this study, secondary data were utilized from two separate institutional databases at one university.

### Study Population

The institution used in the present study was established more than a century ago. The large, 4-year, doctorate granting institution is located in the southern region of the United States (Carnegie Foundation for the Advancement of Teaching, 2008). The University is divided into two campuses separated by 70 miles. One campus offers residential facilities and a wide array of extracurricular organizations and events (e.g., fraternities/sororities and a full range of athletic programs). The other campus does not offer residential facilities and accommodates fewer student organizations and activities. In addition, the nonresidential campus does not offer fraternities/sororities or athletic programs. Both campuses hold the Carnegie Foundation for the Advancement of Teaching (University of Southern Mississippi, 2013) classification, *high research activity* as well as *high transfer in*. A 2014 national university ranking in *U.S. News and World Report* placed this university ranging from 125th to 207th for various programs, such as part-time MBA, Clinical Psychology, Biology, Fine Arts, and Social Work. A majority of students (84.4%) at the university applied for need-based financial aid with an average of 71% receiving need-based financial aid. Approximately 21% of the student population received enough financial aid to fully meet the need (U.S. News and World Report, 2014).

Table 4 illustrates the undergraduate enrollment in the fall 2010 term at the institution in the present study. These data are reported for the entire university including the residential and commuter campuses. Data separating the two campuses in the categories were not available for the fall 2010 but was available for the current terms. The majority of students were between the ages of 16 and 24 years (64.8%) and female (61.4%). The institution is somewhat diverse with 56.6% white and 29.6% black, Hispanic, or other. Most students are full-time (85.9%) and classified as seniors (39.8%). Freshmen are not required to reside in the dormitories on the residential campus; however, more residence halls are in construction which will allow more students to reside on campus.

Table 4

*Institutional Enrollment Fall 2010*

Demographics	Undergraduate		<i>N</i> <sup>a</sup>	
	<i>n</i>	%	<i>n</i>	%
	12,826	81.2	15,778	18.8
Age (years)				
16-24	-	-	10,220	64.8
25+	-	-	5,558	35.2
Gender				
Male	4,949	38.6	5,986	37.9
Female	7,877	61.4	9,792	62.1



Table 4 (continued).

Demographics	Undergraduate		<i>N</i> <sup>a</sup>	
	<i>n</i>	%	<i>n</i>	%
<b>Ethnicity</b>				
White	7,265	56.6	9,371	59.4
Black	3,805	29.6	4,309	27.4
Hispanic	268	2.0	331	2.1
Other <sup>b</sup>	341	11.8	1,767	11.1
<b>Standing</b>				
Freshman	2,677	20.8	-	-
Sophomore	2,014	15.7	-	-
Junior	3,041	23.7	-	-
Senior	5,094	39.8	-	-
Full-time	11,021	85.9	12,482	79.1
Part-time	1,805	14.1	3,296	20.8

<sup>a</sup>Total includes graduates. <sup>b</sup>Asian, American Indian or Alaska Native, Nonresident Alien, Hawaiian, or Pacific Islander.

Students utilizing the University's online withdrawal system to drop from all enrolled courses from the Fall 2010 term to the Spring 2012 term served as the population for the study. These four terms were selected because the withdrawal process was archived online beginning with the Fall 2010 term. The availability of data online allowed the researcher greater access to the archival records. Dropouts from four semester terms on the two campuses were studied as "naturally occurring comparison groups" (Vogt et al., 2012, p. 194). The archival data included students who withdrew from the traditional and nontraditional campuses in Fall 2010, Spring 2011, Fall 2011,

and Spring 2012. Out of 13,618 students enrolled at the University (residential campus, 12,321; nonresidential campus, 2,554 in Fall 2011), a total of 3,752 students withdrew during the four terms and were included in the present study. The withdrawing population totaled 3,155 students from the residential campus and 597 from the commuter campus. The numbers for the commuter campus student populations who withdrew each semester and included in the present study are as follows: 160 in Fall 2010, 133 in Spring 2011, 178 in Fall 2011, and 126 in Spring 2012. The raw numbers for the residential campus students who withdrew were 744 for Fall 2010, 612 for Spring 2011, 1284 for Fall 2011, and 515 for Spring 2012. See Table 5 for an itemization of these withdrawals and all students cancelling enrollment (i.e., after enrolling in classes but prior to the start of the term) and students who withdrew after the start of term classes. The population data excluded students directed to withdraw for failure to earn a passing grade point average, i.e., students suspended for poor academic performance. Non-degree seeking transient or guest students were also excluded from this study.

Table 5

*Population Dropouts by Campus and Term*

	Term				Total
	Fall 2010	Spring 2011	Fall 2011	Spring 2012	
Dropouts					
Commuter	160	133	178	126	597
Residential	744	612	1,284	515	3,155

The population of the current study was derived from students accessing the University's online student record database and completing an online withdrawal (OLWD) form during the terms Fall 2010, Spring 2011, Fall 2011, and Spring 2012. Students who submitted the electronic request to drop all classes for the term were included in the study. Students were guided through the OLWD submission process by a series of online instructions. The students were prompted to report a reason or reasons for withdrawal and complete a survey rating the facilities of the campus. The population of the current study included the students completing the form to drop all classes from Fall 2010 to Spring 2012.

#### Data Collection

The study determined differences of selected variables between dropouts on a residential campus and dropouts on a nonresidential campus. Eight demographic data items identified in the model of nontraditional student attrition were collected (Bean & Metzner, 1985; Tharp, 1998). Archived data present in the University's data management information system provided timely and accurate demographic and academic data sets relevant to this study. Utilizing archival records offered advantages to the researcher by eliminating response bias as well as the loss of respondents over time which may occur when research is dependent on survey questionnaires (Tharp, 1993).

Table 6 describes the phases the researcher followed for the study. The collection of demographic information in Phase I assisted with research objectives 1 and 3.

Table 6

*Research Design Phases I and II*

Phase	Objective	Data Sources	Timeline
I	RO1	Age (PeopleSoft) Gender (PeopleSoft) Financial aid (PeopleSoft) Ethnicity (ImageNow)	Days 1-7
I	RO2	Academic standing (PeopleSoft) Full-time/part-time load (PeopleSoft) Previous college GPA (ImageNow) Education goals (ImageNow)	Days 8-16
I	RO3	Age (PeopleSoft) Gender (PeopleSoft) Financial aid (PeopleSoft) Ethnicity (ImageNow)	Days 17-25
II	RO4	Academic standing Full-time/part-time load (PeopleSoft) Previous college GPA (ImageNow)	Days 26-34
II	RO5	Data gathered from Phase I	Days 35-42
II	RO6	Data gathered from Phase I	Days 43-50

Information for research objectives 1 and 3 originated from two sources. These sources were the student generated admissions application and the institution's financial aid office award information which is gleaned from the required Free Application for Federal Student Aid (FAFSA) initiated by the student or parent. The approximate timeline for collecting data for research objective 1 and research objective 3 was 7 days per research objective. The data for research objectives 2 and 4 were collected from two

additional sources: Image Now (version 6.3) for scanning documents and a data management system called PeopleSoft. ImageNow is a scanned image organization program used to store and allow limited access of documents to administrators. Documents stored in ImageNow utilized in the current study included previous college transcripts and admission applications. These source documents for data were inserted into PeopleSoft software; however, access to ImageNow allowed the researcher to verify and confirm data.

Research objectives 2 and 4 were collected over 7 days for each objective. Research objectives 5 and 6 correlated data collected and described in objectives 1-4 to determine relationships utilizing Statistical Package for the Social Sciences (SPSS). Analysis for research objectives 5 and 6 data were conducted over a 14-day period. The total length of the study totaled approximately 50 days.

Independent variables in the present study differed from the variables in previous studies (Astin, 1975; Tinto, 1985) due to the impracticality of collecting certain information from the entire population, such as high school GPA percentile, marital status, and first semester GPA. Available institutional records did not collect the same information as other studies. The commuter campus in the present study contained proportionally large numbers of students who transferred from a local community college. Therefore, a small population of freshmen existed which necessitated the need to gather student transfer GPA or, in the case of a first-term freshman, high school GPA. According to Taniguchi and Kaufman (2005), marital status is not an indicator of household obligations. A better indicator is the existence of dependents. However, neither dependents nor marital status information were collected by the subject

institution; therefore, marital status was not collected for this study. Age, ethnicity, gender, and financial aid eligibility were found in the institution's student databases, specifically in a PeopleSoft® customized product, and were utilized for this study in lieu of collecting new data. Each demographic item in the present study will be described below.

### *Age*

The average age of students at residential campuses is usually younger than the average age at commuter campuses where most students transfer from a community college. Traditional students are more likely to reside on-campus, and nontraditional students are more likely to reside off-campus due to family and other obligations (Gianoutsos, 2011). Students report date of birth on the admissions application as well as month, day, and year.

### *Ethnicity*

The University admission application form provided five options for ethnicity or race: (a) White or Caucasian, (b) Black or African American, (c) Asian, (d) Native American or Alaska Native, and (e) Native Hawaiian or other Pacific Islander. Ethnicity or race selection was optional. If a student chose not to answer, the ethnicity was entered as *nonspecified*. A separate question, required by federal regulation, was "Are you of Spanish/Hispanic/Latino origin?" with *Yes/No* answer field. A student's response to this question was mandatory.

### *Financial Aid*

Eligibility for Pell Grant is determined by the U.S. Department of Education utilizing a formula that includes elements, such as (a) the student's income and assets, (b)

the parent's income and assets if the student is dependent, (c) household size, and (d) number of people in the household attending postsecondary institutions. In the 2012-2013 school year, 9.5 million students were awarded a Pell Grant (White House, Department of Education, 2015). The information was listed in PeopleSoft with various award levels, such as scholarship, subsidized loan, unsubsidized loans, and Pell grants. For this study, Pell eligibility determined if the student had financial need.

### *GPA*

GPA is a measure of academic achievement derived from dividing the numeric value of grades into the number of credits attempted. The withdrawing student's GPA was determined by the last full term attended or, in the case that the withdrawing student had not completed a full grade awarding term, the transfer GPA or high school GPA, whichever was most recent, was collected. GPA for students with more than one term at the institution was located in the PeopleSoft database. Students transferring in and withdrawing prior to completing a term are located on the official transcript. GPA range was set as a range in order to reduce the number of possibilities of GPA for analysis purposes: (a) .00-.99; (b) 1.--1.99; (c) 2.0-2.99; (d) 3.0-4.0.

### *Education Goal*

Education goal allows the student to indicate a major or undeclared major, undecided, or general studies. On the admission application, applicants must choose a major or indicate *undeclared* or *undecided*. This study considered a student without a major when undeclared or undecided was indicated.

### *Academic Standing*

Academic standing indicates a student's academic class level based on number of semester hours, such as freshman, sophomore, junior, or senior. Incoming students are assigned standings based on number of academic credit hours earned: 1 - 29 hours = freshman, 30-59 = sophomore, 60-89 hours = junior, and 90 hours and above = senior. It is possible that a student had earned more than 90 credit hours and considered a senior but not completed the hours required for graduation.

#### *Full-time/Part-time*

Full or part-time indicates the number of hours the withdrawing student took in the semester the student withdrew. Twelve hours or more indicated a full-time undergraduate student. A half-time student is enrolled in 6-9 hours, and a less than half-time student is enrolled in < 6 hours. For the current study, any student enrolled in < 12 hours was considered part-time.

#### Data Analysis

Descriptive statistics assist researchers in describing a population. Measuring the independent characteristics in an orderly and meaningful manner is necessary for analysis (Tharp, 1993). The Statistical Package for the Social Sciences (SPSS) (version 22) was employed as a means to manage, organize, and display data. SPSS coding, frequencies, means, and standard deviations were modeled after Tharp's (1993) research.

After all campus dropout records were collected and entered into SPSS, frequencies were analyzed. Descriptive statistics of the variables accurately depicted the frequencies and the central tendencies, which included the mean and the standard deviation (Green & Salkind, 2008).



Table 7 illustrates Phase I statistical analyses used for research objectives 1, 2, 3, and 4. The information was collected and coded using SPSS. Frequencies, means, and standard deviation are calculated on all variables except age. Phase II, research objectives 5 and 6, were tested using binary logistic regression to compare relationships between the two campuses.

Table 7

*Analysis of Phases I and II*

Phase	Objective	Statistical analysis	Variables
I	RO1	Demographic frequency	Age, gender, financial aid, ethnicity for commuter campus
I	RO2	Demographic frequency	Age, gender, financial aid, ethnicity for residential campus
I	RO3	Academic frequency	Standing, load, GPA, goals for commuter campus
I	RO4	Academic frequency	Standing, load, GPA, goals for residential campus
II	RO5	Binary logistic regression	Demographic variables
II	RO6	Binary logistic regression	Academic variables

*Binary Logistic Regression*

Logistic regression is used to predict a categorical variable from a set of predictor variables simultaneously (Green & Salkind, 2008; Klecka, 1980, 1985; Wuensch, 2014). Klecka (1980) stated a test called *discriminant function analysis* is used to make

mathematical predictions based on the likely outcome of the continuous variable; however, logistic regression is employed if the predictor variables are a mix of continuous and categorical and not evenly distributed as was the case in the current study. The logistic regression analysis predicts which variables are more likely to belong to a certain group. The prediction of group membership occurs when the quantitative predictor variables are entered and appraised based on a weighted sum. Klecka (1980) stated that interpretation occurs when studying ways the groups differ.

According to Klecka (1980) and Wuensch (2014), the basic prerequisites are as follows:

1. Two or more groups exist that differ on several variables.
2. The dependent variable is dichotomous.

The groups must be mutually exclusive, and each participant may only belong to one group. This study required that the population belong to one of two groups expressed as binary, which was 0 for commuter and 1 for residential. Green and Salkind (2008) added the assumption that a variable for any one participant is independent from the scores on this variable from any other participant. According to Laerd Statistics (2014), the assumptions for use of binary logistic regression are as follows:

1. Each case is independent.
2. There is “a linear relationship between the continuous independent variables and the logit transformation of the dependent variable” (Laerd Statistics, 2014, p. 4).
3. No multicollinearity. Multicollinearity indicates the need to exclude variables that overlap with other variables and predictors and are redundant. It occurs if

the model includes multiple factors that are correlated not just to your response variable, but also to each other making it difficult to attribute results to one variable (Agresti & Finlay, 2008; Green & Salkind, 2008).

4. No significant outliers or influential points.
5. Categories are mutually exclusive and exhaustive.

In the present study, differences were examined between two groups, commuter and residential withdrawing students, with eight independent variables. The variables were the selected characteristics of withdrawing students. In this study the analysis classifies or predicts, based on the independent variables simultaneously, to which group the student likely belongs or most closely resembles. The binary logistic regression procedure determines how well the characteristics discriminated and which characteristics were most powerful determinants of the group (Wuensch, 2014). All predictor data were entered at once, and each predictor was assigned the unique association it had with the groups, according to Wuensch (2014). Therefore, the purpose of the logistic regression function was to find linear combinations that maximize the difference between the groups (Klecka, 1985; Wuensch, 2014). A logistic regression was conducted to predict whether or not a withdrawing student was more likely a commuter. Predictor variables were age, ethnicity, gender, financial aid, GPA, education goal, academic standing, and full-time/part-time.

Measurement scales for gender, ethnicity, financial need, and goals (major declared or no major declared and full-time or part-time) are categorical. Academic standing, GPA range, and age were ordinal. A comparison of the variables at the commuter and the residential campus was processed using logistic regression. Using the

two campuses as groups, the binary logistic regression was computed for each categorical set or ordinal variable set based on observations obtained from archived institution data (i.e., age, ethnicity, gender, financial need, GPA, education goal, academic standing, full-time or part-time).

### Validity and Reliability

Fraenkel and Wallen (2006) stated that validity refers to the appropriateness, correctness, meaningfulness, and usefulness of a researcher's conclusion. Vogt et al. (2012) directed the researcher to consider the following questions: "Are we truly studying what we intend to study, are the methods we use appropriate for the problem, and are the conclusions we draw accurate?" (p. 355). Huck (2008) suggested the word "accuracy" is synonymous with "validity" (p. 88) in that the measurement taken must be an accurate instrument for the study. The current study did not utilize an instrument to gather data.

External validity involves researcher generalizations regarding the population based on a sample. The results of a study should have some usefulness to a larger population. In order for the study to provide the most value, the group being sampled should provide results that have wide applicability for larger populations (Fraenkel & Wallen, 2006). The present study utilized the entire population of students withdrawing during a period of 4 consecutive terms. Threats to external validity were minimized due to the use of the population which eliminated selecting inappropriate sample groups.

Internal validity tests relationships to determine if there are reasons other than expected for results. The researcher must decide, based on experience, if specific effects from variables require minimization (Fraenkel & Wallen, 2006). The current study used archival data of the entire population to control threats to internal validity.

To address construct validity, i.e., “the degree that inferences can be determined by the operationalization” in the current study to the theoretical constructs (Trochim, 2006, p. 1), past theories (Astin, 1975, 1984; Bean & Metzner, 1984; Chickering 1974; Tharp, 2006; Tinto, 1975, 1985) offer variables known to currently or previously affect student success in college. This information provided the basis for the variables selected by this researcher to compare dropout factors of nontraditional, commuter students, and traditional, residential students which, therefore, addressed construct validity.

Fraenkel and Wallen (2006) defined *reliability* as, “The degree to which scores obtained with an instrument are consistent measures of whatever the instrument measures” (p. 556). The present study did not use an instrument design; therefore, instrument consistency was not applicable.

#### Summary

This chapter presented an overview of the research design, including population, independent variables, and data collection methods, as well as the statistical procedures used in this study. The study utilized a descriptive, nonexperimental, quantitative approach. In the first phase, two groups were described as members of a commuter campus or residential campus. The study utilized categorical data to produce frequencies in order to analyze the characteristics of the groups (Holton & Burnett, 2005). In the second phase of the study, the researcher compared data from a commuter campus of nontraditional dropout students with dropout students from a traditional residential campus using archival data. The archival data were obtained from self-reported student admissions applications as well as official high school or college transcripts and financial record verification initiated by the student. Descriptive and binary logistic regression

was used to describe an existing relationship between variables within groups. The research design and methodology facilitated a description and comparison of dropouts at residential and commuter campuses.

## CHAPTER IV

### RESULTS OF ANALYSIS

This study identified predictor variables related to increased persistence of nontraditional students attending a commuter campus. With the number of nontraditional students rising, so, too, is the number of nontraditional students withdrawing (ACT, 2010a, 2010b). Students who drop out of college contribute to a growing deficiency in workforce readiness (Metzner & Bean, 1987; Schneider & Yin, 2011a). Dropouts decrease the human capital in certain skill areas causing employers to search globally to fill their needs (Casner-Lotto & Barrington, 2006; Handel, 2003).

By examining nontraditional students withdrawing from a commuter campus, factors were identified that may interfere with student goal attainment and degree completion. This study compared predictor characteristics (demographic and academic) between commuter and residential students at a public 4-year university. The researcher collected and consolidated secondary institutional data from two internal campus databases. Archival data were entered into IBM's SPSS (version 22). Descriptive statistics or frequencies were used to determine the characteristics of the population. The statistical analysis, binary logistic regression, examined how the student variables predicted group membership to one campus or the other.

This chapter provides a description of the population. Research objectives 1 and 2 are addressed first in the demographic section, then followed by the academic section. The academic section addresses research objectives 3 and 4. Finally, in the campus comparisons section, research objectives 5 and 6 are addressed. This chapter concludes with a summary of the results.

### Study Population

Of the 3,752 withdrawing students included in this study, 1,375 were disqualified from the study for one or several of the following reasons; (a) enrolled as a graduate student, (b) suspended for poor academic performance, (c) enrolled in more than 21 hours, (d) under the age of 18 years, or (e) enrolled in nonacademic or unaccredited workshops or forums. The remaining population consisted of 2,377 students who dropped out during one or more of four academic terms between 2010 and 2012. Of the 2,377 students, 20.7% ( $n = 491$ ) attended the commuter campus and 79.3% ( $n = 1,886$ ) attended the residential campus. Data for these students were derived from the University database where the student made the withdrawal request online.

The commuter student population employed in this study totaled 129 in Fall 2010, 110 in Spring 2011, 143 in Fall 2011, and 109 in Spring 2012. The residential campus students who withdrew totaled 528 for Fall 2010, 400 for Spring 2011, 617 for Fall 2011, and 341 for Spring 2012 as illustrated in Table 8.

### Demographic Characteristics

The demographic characteristics used for this study were age, ethnicity, gender, and financial need. Descriptive statistics provided an overview of identified student dropout characteristics and offered a more in-depth look at the population studied. Identifying positive associations between variables begins with describing each variable.



Table 8

*Withdrawing Population by Campus and Term*

	Term				Total
	Fall 2010	Spring 2011	Fall 2011	Spring 2012	
Dropouts					
Commuter	129	110	143	109	491
Residential	528	400	617	341	1,886
Total	657	510	760	450	2,377

The ages of the students withdrawing from each campus ranged from 18 to 71 years on the commuter campus and 18 to 75 years on the residential campus. The commuter campus indicated an older population with a mean age of 30.6 and a median age of 28 years. On the residential campus, the mean age was 24.7 years and a median of 22 years. The mean, median, mode, and standard deviation are listed for students of each campus in Table 9.

Table 9

*Withdrawals by Age*

Age	Age of population				
	Range	<i>M</i>	<i>Mdn</i>	Mode	<i>SD</i>
Commuter	18-71	30.6	28	24	9.80
Residential	18-75	24.7	22	21	7.31

The majority of students at both campuses were White or Caucasian, 64% ( $n = 314$ ) commuter and 53.4% ( $n = 1,007$ ) on the residential campus. Black or African American students withdrawing from the commuter campus was 24.2% ( $n = 119$ ) and the residential campus was 37.9% ( $n = 715$ ). Both campuses had few Hispanic students withdrawing at 4.1% ( $n = 20$ ) at the commuter campus and 2% ( $n = 37$ ) at the residential campus. Students reported ethnicity as Asian, American Indian, Alaska Native, nonresident Alien, Hawaiian, Pacific Islander, or other on the commuter campus and 6.7% ( $n = 126$ ) on the residential campus. Fewer males than females withdrew on both campuses with only 29.3% ( $n = 144$ ) male and 70.5% ( $n = 346$ ) female commuter and 38.8% ( $n = 731$ ) male and 61.2% ( $n = 1,155$ ) female at the residential campus. There were 40.9% ( $n = 201$ ) awarded a Pell Grant at the commuter campus; whereas, 42.4% ( $n = 800$ ) were awarded a Pell Grant at the residential campus. Table 10 indicates the demographic results in categories for the demographic characteristics of ethnicity,

gender, and financial aid. The characteristics of ethnicity, gender and financial aid are listed by commuter and residential with population and percentage numbers.

Table 10

*Withdrawals by Ethnicity, Gender, and Financial Aid*

Demographic characteristic	Commuter		Residential	
	<i>n</i>	%	<i>n</i>	%
<b>Ethnicity</b>				
White	314	64.0	1,007	53.4
Black	119	24.2	715	37.9
Hispanic	20	4.1	37	2.0
Other	38	7.7	126	6.7
<b>Gender</b>				
Male	144	29.5	731	38.8
Female	346	70.5	1,155	61.2
<b>Financial aid</b>				
Yes	201	40.9	800	42.4
No	288	59.1	1,086	57.6

*Research Objective 1*

*Describe demographic characteristics (specifically, age, ethnicity, gender, and financial aid) of nontraditional student withdrawals on a commuter campus.* Descriptive statistics provided a quantitative summary of the population within each variable and as a whole. To obtain accurate information, age was computed from the date of birth to the

term the student withdrew. For the 491 students at the commuter campus, the age range was 18 to 71 years. The median age of the withdrawing commuter student was 28, with a mean age of 30.6 ( $SD = 9.80$ ). The mode was 24 ( $n = 8$ ). The highest continuous range was between the ages of 21 and 32 years. Beyond the age of 32 years, 11 students withdrew at the age of 36 years and 11 withdrew at the age of 42 years.

Students reported ethnicity utilizing a dropdown menu on online admissions application or circled race on a printed application. Since the online application only allowed the student to choose one race, students of mixed race could choose one or the option of *other*. When examining the population by enrollment location, the ethnicity of the commuter students were 64% ( $n = 314$ ) White, 24.2% ( $n = 119$ ) Black, 4.1% ( $n = 20$ ) Hispanic, and 7.7% ( $n = 38$ ) chose *other*. Overall, undergraduate ethnicity was 56.6% White, 29.6% Black, 2% Hispanic, and 2.6% reported as other.

The gender of withdrawing commuter students was 29.5% ( $n = 144$ ) males and 70.5% ( $n = 346$ ) were female. Students were required to choose either male or female on the admission application, and there were no other options, such as nonspecified or transgendered. Enrollment at the institution was 38.8% male and 61.2% female.

To measure financial need, data were collected on students meeting the criteria to qualify for aid. Students were awarded a Pell Grant based on self-reported income information on the Free Application for Federal Student Aid (FAFSA) form. Submitting an FAFSA is optional; however, a Pell grant is not awarded unless an FAFSA is completed and determined that financially that Pell assistance is needed to attend college. The awarded amounts vary as determined by need; however, for the purposes of this study, an amount of a Pell Grant was considered financially needy. Of the 491 commuter

students, 40.9% ( $n = 201$ ) were offered or received a Pell Grant; whereas, 59.1% ( $n = 288$ ) were not offered or did not receive a Pell grant. The institution reported 71% of all enrolled students were granted need-based financial aid.

### *Research Objective 2*

*Describe demographic characteristics (specifically, age, ethnicity, gender, and financial aid) of traditional student withdrawals on a residential campus.* The residential campus population of withdrawing students consisted of 79.3% of the two groups ( $n = 1,886$ ). The 1,886 students withdrawing from the residential campus ranged in age from 18 to 75 years, with the median age being 22 years and the mean age totaling 24.7 years ( $SD = 7.31$ ). The mode is age 21 years ( $n = 13$ ), which is significantly younger than the mode of withdrawing students on the commuter campus at 24 years old. The age of the student was determined from self-reported date of birth on the admission application.

The residential campus ethnicity and gender percentages are reported in this section. Residential ethnicity was majority Caucasian at 53.4% ( $n = 1,007$ ), 37.9% ( $n = 715$ ) were Black, only 2% ( $n = 37$ ) were Hispanic, and 6.7% ( $n = 126$ ) other. Just as with the commuter campus, students self-report ethnicity. For withdrawing residential campus students, 38.8% ( $n = 731$ ) were male and 61.2% ( $n = 1,155$ ) were female. More females than males withdrew on both campuses; however, these percentages were similar to the institution enrollment records. The total undergraduate percentages of withdrawing students follow closely with percentages of enrolled students at the institution with 38.5% male and 61.4% female.

On the residential campus, 42.4% ( $n = 800$ ) of students were awarded a Pell Grant, and 57.6% ( $n = 1,086$ ) were not awarded a Pell Grant. The percentage is similar

to the amount awarded to the students at the commuter campus. The number of students awarded Pell grants was inconsequential as simply qualifying for a Pell Grant demonstrated financial need. The amount awarded varied based on the federal Department of Education calculations regarding need. Demographic descriptions of students attending the residential campus covered only 4 of the 8 characteristics of the study. Academic characteristics of withdrawing students are described below.

#### Academic Characteristics

Academically, withdrawing students are described using certain factors, also known as *matriculation characteristics* (see definition of Key Terms). These are measurable features that help define an individual and his or her group membership. For this study, academic variables included GPA, education goal, academic standing, and full-time or part-time course load.

#### *Research Objective 3*

*Describe academic characteristics (specifically, previous college GPA, education goals, academic standing, full- or part-time load) of nontraditional student withdrawals on a commuter campus.* Leading researchers' findings in higher education included previous GPA as a substantial indicator of college ability and persistence (Bean & Metzner, 1985; Chickering, 1974). Student GPA, in the present study, was obtained from the student's official high school transcript submitted upon graduation or, if the student transferred from a different college, either community college or university. The GPA was obtained from official college transcripts submitted to the institution at the time of admission. The mean GPA for withdrawing students totaled 2.354. Commuter students GPAs were as follows: 43.1% ( $n = 212$ ) between 3.0 and 4.0, 49.5% ( $n = 243$ ) of students

earned a GPA between 2.0 and 2.99, 4.7% ( $n = 23$ ) students received a GPA between 1.0 and 1.99, and, finally, 2.6% ( $n = 13$ ) of commuter students earned a GPA between .00 and .99. The current study found a similar mean GPA for both campuses.

For this study, a *goal* indicated a commitment to a field of study. The goal characteristic determines if the student had an education goal or a major. The majority of the commuter students in this study (96.1%,  $n = 472$ ) declared a major; whereas, 3.7% ( $n = 18$ ) did not declare a major. In the semesters included in this study, students were able to matriculate without declaring a major and remain “undeclared” for 30 semester hours.

Academic standing is the academic level reached by the student. There were four academic standing possibilities. Students’ progressed as they accumulated hours successfully. A student was classified as a freshman from matriculation until obtaining 29 semester hours. Students were classified as sophomores from 30 to 59 credit hours. A classification of junior occurred when the student reached 60 to 89 semester hours, and a senior classification occurred after the student completed 90 hours and above. Out of the 491 commuter students, 11.6% ( $n = 57$ ) were classified as freshmen, 12.2% ( $n = 60$ ) were classified as sophomores, 34.6% ( $n = 170$ ) were classified as juniors, and 41.5% ( $n = 204$ ) were classified as seniors.

Enrollment status indicated how many semester hours the withdrawing commuter student was enrolled in at the time of withdrawal. At the University studied, students could enroll in as little as one semester hour and, with approval, as many as 21 semester hours. Semester hours taken in the fall and spring terms under 12 hours are considered part-time, and enrollment of 12 hours and more are considered full-time. A classification of three-quarter time exists; however, for the purposes of this study, a student enrolled in

< 12 hours was considered part-time, and a student enrolled in 12 hours and up to 21 hours was considered a full-time student. The number of full-time students withdrawing from the commuter campus totaled 54.2% ( $n = 266$ ), and 45.6% ( $n = 225$ ) of students were enrolled part-time.

#### *Research Objective 4*

*Describe academic characteristics (specifically, previous college GPA, education goals, academic standing, full- or part-time load) of traditional student withdrawals on a residential campus.* As with research objective 3, the same characteristics are described as they relate to the residential campus. Data were collected regarding GPA, education goals, academic standing, and whether the student attended as a full-time or part-time student. Results are reported below.

Previous high school or college GPA results for students who withdrew from a residential campus averaged 2.356, which were similar to the average GPA for the commuter students. Of the 1,886 students withdrawing from the residential campus, 42.9% ( $n = 808$ ) achieved a GPA between 3.0 and 4.0. Most residential campus students (48.6%,  $n = 916$ ) earned a GPA between 2.0 and 2.99, and 7.5% ( $n = 142$ ) of students had a GPA between 1.0 and 1.99. Finally, 1.1% ( $n = 20$ ) of students had a GPA at or below .99.

Although at the time of this study declaring a major was not required, the majority of students (94.8%,  $n = 1787$ ) had declared a major. Only 5.2% ( $n = 99$ ) had not declared a major. Students without a major were expected to follow a general education curriculum, which could take almost 2 years to complete.



The residential population revealed 26.6% ( $n = 502$ ) were freshmen. Sophomores totaled 16.4% ( $n = 309$ ), juniors totaled 23.9% ( $n = 451$ ), and seniors totaled 33.1% ( $n = 624$ ). The students' academic standing indicated the range of semester hours earned. A large number of withdrawing freshmen were expected due to obstacles in adjustment (Pascarella, 1985); however, the number of seniors noted from both campuses was also high with 39.7% overall.

The residential campus students numbered much higher in full-time students who withdrew (75.1%,  $n = 1,416$ ), while part-time students were only 24.8% ( $n = 467$ ). This number far exceeds the percentage of full-time students at the commuter campus. The overall institution percentage of full-time students was 85.9% and part-time students was 14.0%.

Table 11 depicts the academic characteristics utilized for this study. Grade Point Averages were indicated by range and separated by campus. The goal field indicated whether or not the student declared a major. Standing indicated the academic level based on the number of cumulative hours earned by the student. The last characteristic was full-time or part-time, representing the number of semester hours the student was enrolled in during the term of withdrawal. This table indicates the population in each characteristic as well as the percentage of students withdrawing from the commuter campus and the residential campus.

Table 11

*Withdrawals by Academic Variables*

Academic variables	Commuter		Residential	
	<i>n</i>	%	<i>n</i>	%
<b>GPA</b>				
0-.99	13	2.6	20	1.1
1.0-1.99	23	4.7	142	7.5
2.0-2.99	243	49.5	916	48.6
3.00-3.99	201	40.9	767	40.6
4.00	11	2.3	41	2.2
<b>Goal major</b>				
Major	472	96.1	1,787	94.8
No major	18	3.9	99	5.2
<b>Standing</b>				
Freshman	57	11.7	502	26.6
Sophomore	60	12.2	309	16.4
Junior	170	34.6	451	23.9
Senior	204	41.5	624	33.1
<b>Status</b>				
Full-time	266	54.8	1,416	75.2
Part-time	224	45.6	467	24.8

*Campus Comparison*

For the population of withdrawing students, 36.8% ( $n = 875$ ) were male, and 63.1% ( $n = 1,501$ ) were female. Ages of the population ranged from 18 to 75 years. The

mean age was 25.9 years. The ethnicity of the student population was 55.6% ( $n = 1,321$ ) Caucasian or White, 35.1% ( $n = 834$ ) were Black or African American, 2.4% ( $n = 57$ ) were Hispanic, and 6.9% ( $n = 164$ ) indicated other. The overall population of withdrawing students indicated 42.1% ( $n = 1,001$ ) received a Pell Grant financial award for college expenses, and 57.8% ( $n = 1,374$ ) of students did not receive a Pell Grant.

#### *Research Objective 5*

*Compare student demographic characteristics (specifically, age, ethnicity, gender, and financial aid) of nontraditional students on a commuter campus with traditional students on a residential campus.* According to Wuensch (2014), three outcomes should be presented for use in the interpretation of results: the Model Summary table, Classification table, and the Variations in the Equations table. To compare the predicted demographics of withdrawing students on each of the campuses, the complete data set of 2,377 records for semesters Fall 2010, Spring 2011, Fall 2011, and Spring 2012 was utilized. The dependent variable was discrete; therefore, binary logistic regression was selected as the statistical procedure (Wuensch, 2014). The logistic regression model was statistically significant,  $\chi^2(4) = 187.184, p < .0005$ . The dependent variable measures the likelihood that withdrawing students attended the commuter campus. Independent variables were categorized as either demographic or academic characteristics with four covariates in each category. Research objective 5 analyzed the demographic characteristics using SPSS (version 22, 2013). The comprehensive model correctly classified 79.3% of the original grouped cases. Based on the logistic regression model found in the Omnibus Tests of Model Coefficients, the model was statistically significant ( $p < .0005$ ).

First, the logistic regression performed to ascertain the effects of age, race, gender, and financial need on the likelihood that the withdrawing student attended a commuter campus was the model summary. The model summary contains Cox and Snell  $R^2$  and Nagelkerke  $R^2$ . These squares are methods for calculating the explained variation (Wuensch, 2014). The model summary assisted in understanding how much variation in the dependent variable can be explained by the model. This variation includes the -2 log likelihood statistic which is 2234.346 and Cox and Snell  $R^2 = .076$  and Nagelkerke  $R^2 = .119$ . The Cox and Snell and Nagelkerke indicated dependent variation is explained between 7.6% and 11.9% depending upon which test is used. According to Laerd Statistics (2014), Nagelkerke is preferred (see Table 12).

Table 12

*Explained Variation for Demographic Model*

Model	$R^2$
Cox and Snell	.076
Nagelkerke	.119

The binary logistic regression in this study estimates the probability that the withdrawing student attends a commuter campus. If the estimated probability of the withdrawing student attending the residential campus is  $\geq 0.5$  or better than even, SPSS classifies it as occurring. If the probability is  $\leq 0.5$ , SPSS classifies it as not occurring.

The Classification table assesses "the effectiveness of the predicted classification against the actual classification" (Laerd Statistics, 2014, p. 6). The table indicated that of

all cases predicted to be commuter or residential, 79% of cases were predicted correctly. The independent and dependent variables predicted 79% of cases into their observed categories. The classification table also indicates the positive predictive value (Laerd Statistics, 2014). This value is the percentage of “correctly predicted cases with the observed characteristic compared to the total number of cases predicted as having the characteristic” (Laerd Statistics, 2014, p. 6). The formula is  $100 \times (48 \div [48 + 55]) = 46.1\%$ . That is, of all cases predicted as attending the commuter campus, 46.1% were correctly predicted. The negative predictive value is “the percentage of correctly predicted cases without the observed characteristic compared to the total number of cases predicted as not having the characteristic” (Laerd Statistics, 2014, p. 6). In this study, the formula was  $100 \times (1830 \div [443 + 1830]) = 80.5\%$ , i.e., all cases predicted as belonging to the residential campus group, 80.5% were correctly predicted (see Table 13).

Table 13

*Demographic Classification Table*

Classification	Predicted		%
	Commuter	Residential	
Commuter	48	443	9.8
Residential	56	1,830	97.0
Percentage correct	46.1	80.5	79.0

Variables in the equation output expressed the “contribution of each independent variable in the model and the statistical significance by predicting the odds” (Laerd Statistics, 2014, p. 6). The statistical significance of the Wald tests are as follows: (a) age = .000, (b) race = .078, (c) gender = .001, and (d) need = .819. Variables  $\leq .05$  are significant. Age and gender added significantly to the prediction; however; race and financial need did not. This value shows the change in the odds ratio for each increase in one unit of the independent variable. For age, an increase in one unit increases the odds ratio by .929; however; values  $< 1.000$  indicated a decreased odds ratio for an increase in one unit of the independent variable. In the case of age, the value is .929 ( $< 1.000$ ), there is a decreased odds ratio to indicate the odds that age is a factor in predicting residential campus membership; therefore, age decreases the odds of belonging to the residential campus indicating a member of the commuter campus. Ethnicity (.078) and financial aid

(.819) were not significant. Gender (.001) was significant with an odds ratio indicating commuter campus membership. The odds ratio for ethnicity (1.125) and financial need (.975) indicated a decreased odds ratio but were not significant as likely belonged to the either group. The results of the demographic portion of the logistic regression are shown in Table 14.

In Table 14, the first column lists the characteristics for the demographic variable. The Wald significance value is  $\leq .05$  with actual values listed. The odds ratio is identified for each variable. Values in Odds Ratio  $> 1.000$  indicate decreased odds ratio for commuter (Laerd Statistics, 2014). The predicted membership column displays the specific group membership, either commuter or residential. The two demographic characteristics that discriminated between commuter and residential were age and gender.

Table 14

*Predictors of Residential/Commuter Student Withdrawal Membership for*

*Demographic Factors*

Characteristic variable	<i>p</i>	<i>OR</i>	Predicted Membership
Age	.000	.929	Commuter
Ethnicity	.078	1.125	None
Gender	.001	.679	None
Financial aid	.819	.975	None

Note: Gender is for males compared with females. Financial Aid is yes compared to no.

## Academic Characteristic Comparison

### *Research Objective 6*

*Compare student academic characteristics (specifically, previous college GPA, education goals, academic standing, full-time or part-time load) of nontraditional students on a commuter campus with traditional students on a residential campus.*

Similar to research objective 5 as the second comparison objective, this objective makes an academic comparison of the variables of withdrawing students from a commuter campus and withdrawing students from a residential campus using binary logistic regression. The logistic regression model was statistically significant,  $\chi^2(4) = 105.033$ ,  $p < .0005$ . As with the demographic comparison, the constant states that in the two-group options (491/2377 = 20.7% withdrew from the commuter campus, 79.3% withdrew from the residential campus), one could assume that the student belongs to the commuter campus and be correct 79.3% of the time. The logistic regression model found in the Omnibus Tests of Model Coefficients indicated the model is statistically significant ( $p < .0005$ ). Three tests are presented: Model Summary table, Classification table, and the variations in the equations table.

The Model Summary includes the -2 log likelihood statistic which is 2316.498 and Cox and Snell  $R^2 = .043$  and Nagelkerke  $R^2 = .068$ . This value indicates dependent variation is explained between 4.3% and 6.8%. Table 15 is Explained Variation for Academic Variables table.



Table 15

*Explained Variation for Academic Model*

Model	R <sup>2</sup>
Cox and Snell	.043
Nagelkerke	.068

The Classification table cut value is .500 indicating if the probability of a case being classified into the commuter category is > .500, then the case is classified into the residential category. The positive predictive value is 0. The negative predictive value is  $100 \times (1886 \div [491 + 1886]) = 79.3$ . As Table 16 indicates, of all cases predicted as belonging to the commuter campus group, 0% were correctly predicted.

Table 16

*Academic Classification Table*

Classification	Predicted		%
	Commuter	Residential	
Commuter	1,886	491	0
Residential	491	1,886	100.0
Percentage correct	0	79.3	

In variations of the equation, the statistical significance of Wald results for each variable were as follows: (a) GPA = .937, (b) major = .152, (c) standing = .000, and (d) full-time or part-time = .000. The GPA and major variables were not  $\leq .05$ , thereby indicating no significance to the prediction. The student's academic standing and the distinction of being a full-time or part-time student were significant in the prediction.

According to Agresti (1997) and Laerd Statistics (2014), the odds ratios of each of the independent variables over 1.000 are increased as belonging to the dependent variable coded "1". Academic standing and Full-time/Part-time variables were significant with the odds ratio indication membership on the commuter campus. The results of the demographic portion of the logistic regression are shown in Table 17.

Table 17

*Predictors of Residential/Commuter Student Withdrawal Membership for Academic Factors*

Characteristic	<i>p</i>	<i>OR</i>	Predicted Membership
GPA range	.937	1.006	None
Education goal	.152	.680	None
Academic standing	.000	.778	Commuter
Full-time/part-time	.000	.462	Commuter

## Summary

The purpose of this chapter was to present the results of the study. The demographic and academic characteristics that discriminated between students enrolled at a commuter campus and students enrolled at a residential campus were presented to inform and predict non-persistence. These data focused on variables that were collected from institutional archived enrollment archives and admission documents.

The population of students withdrawing from a commuter and residential campus was examined descriptively and with eight predictor covariates. A logistic regression was performed to first ascertain the effects of age, ethnicity, gender, and financial need on the likelihood that student membership indicated a commuter campus or a residential campus. The logistic regression model was statistically significant,  $\chi^2(4) = 187.184, p < .0005$ . The model explained 11.9% (Nagelkerke  $R^2$ ) of the variance in demographic covariates and correctly classified 79.0% of cases. Positive predictive value was 80.5%, and negative predictive value was 46.1%. Of the four predictor variables, only two were statistically significant: age and gender. Age and gender were associated with an increased likelihood of withdrawing. A second logistic regression was completed to ascertain the effects of GPA, major, standing, and part-time or full-time class load on the likelihood of membership of the commuter campus or residential campus. The logistic regression model was statistically significant,  $\chi^2(4) = 105.033, p < .0005$ . The model explained 6.8% (Nagelkerke  $R^2$ ) of the variance in academic covariates and correctly classified 79.3% of cases. Positive predictive value was 0%, and negative predictive value was 79.3%. Of the four predictor variables, only two were statistically significant: Academic standing and status. Differences in academic standing had higher odds to

withdraw from a commuter campus. Status, full-time or part-time, also indicates withdrawals are more likely from the commuter campus. Data presented in this chapter will be used to present the findings in Chapter V.

## CHAPTER V

### DISCUSSION AND RECOMMENDATIONS

The previous chapters introduced the problem, the research purpose, objectives, conceptual framework, literature review, methodology, and research findings. This study examined characteristics of student dropouts from a commuter campus and a residential campus at a large research-based, 4-year public university. Student characteristics, categorized as demographic and academic, were collected using institutional archived data. The withdrawing student characteristics at each campus, commuter and residential, were compared to reveal potential differences. The focus of this chapter is to summarize the study and discuss the results and findings and offer recommendations for future research.

#### Discussion

The National Center for Education Statistics (2012) reported first-time, full-time college dropout rate at 44%. However, in the United States post-secondary degree completion is essential to increase individual prosperity, economic security, and strength of democracy (White House, Office of the Press Secretary, 2009). The Obama Administration estimates that to meet employer demand 60% of adults should possess a post-secondary degree by 2020. Retaining college students through degree completion is strategic to meet the demand for skilled employees and vital to meet workforce readiness. Retention efforts intensify as college costs rise and competition to recruit students increases. Preventing college attrition is an important step toward economic success.

Recognizing the needs and differences between colleges and universities where traditional and nontraditional students attend has been studied since Astin's extensive

1974 longitudinal study (Astin, 1975); whereas living on campus has been positively correlated with student engagement and campus involvement. Many researchers agree that student engagement and involvement along with interaction with faculty and peers beyond the classroom assist in decreasing dropout rates (Astin, 1975; Bean & Metzner, 1985; Braxton & Hirschey, 2005; Chickering, 1974; Gianoutsos, 2011; Metzner & Bean, 1987; Pascarella, 1980; Pascarella & Chapman, 1983; Schlossberg, 1989; Schneider & Yin, 2011b; Terenzini & Pascarella, 1980; Tharp, 2006; Tinto, 1985). Without residence halls, students commute to campus from their family home which usually competes for involvement and engagement with campus activities. Students typically arrive on campus for a class or two and depart for work or home-life activities (Tharp, 2006).

A review of the literature revealed theories to explain the significance of college education as well as dropout prevention. Astin's (1975) student involvement theory or dropout prevention model refers to the investment of physical and psychological energy of a student tied to developmental outcomes. The theory surmises that a student residing or working off-campus has less time and energy to devote to academics and campus life putting students at risk for attrition (Astin, 1975).

The interactionalist theory claims that to increase persistence the college or university must involve every aspect of freshman life. Tinto (1985) argues that first-year experience programs are necessary for integration and may include orientation, early warning signs, faculty and student interactions, advising, and benchmarking. Tinto (1985) suggests the college or university's commitment to the student in the first year increases retention. The interactionalist theory discusses student assimilation into a new community and adopting the ideals and behavior of the existing members of the

institution. The theory also states that the lower the income, the less likely it is that the student will have access to information regarding higher education. This notion may make social integration even less likely and a student more likely to drop out (Tinto, 1985).

Chickering and Reisser (1993) considered college a place to develop and mature outside of the classroom. The Seven Vectors of Student Development theory discusses the importance of residential college life on interpersonal and social skills. Chickering and Reisser (1993) listed the following seven competencies that change a student positively: (a) developing competence, (b) managing emotions, (c) moving toward autonomy and interdependence, (d) developing mature interpersonal relationship, (e) establishing identity, (f) developing purpose, and (g) developing integrity. These important social skills may not be acquired appropriately if the student is not retained.

The model for assessing change (Pascarella, 1985) analyzes certain traits and conditions to predict the effects of institutional factors as well as academic and social impacts on student development. Pascarella (1985) did not find direct institutional deterrents; however, indirect institutional influences were not ruled out. The model seeks to identify factors to transition postsecondary students to successful outcomes. The above four theories and models serve as a theoretical framework for this study.

Since the focus of this study was to describe and compare withdrawing students' profile characteristics from a residential and a commuter campus, the researcher conducted descriptive statistics as well as logistic regression. Although student categories vary in different higher education retention studies, student profiles here were categorized as demographic and academic. Included in each category were four variables

listed in the research objectives: (a) age, ethnicity, gender, financial aid, and GPA; (b) education goals, (c) academic standing, and (d) full- or part-time. Archival data, or data already available in institution records rather than survey or questionnaire, were accessed and extracted (Tharp, 1998).

To define the target population, information from student dropouts ( $N = 2,377$ ) of four semester terms (Fall 2010, Spring 2011, Fall 2011, and Spring 2012) were collected from existing institutional data. These data included demographic variables comprised of age, ethnicity, gender, and financial need as well as academic variables containing GPA, education goal, academic standing, and full-time or part-time. The researcher utilized descriptive statistics to explore and summarize the population from each campus and logistic regression to compare the characteristics for group membership as reported in Chapter IV.

#### Demographic Characteristics

According to education researchers Astin and Oseguera (2005), common findings view students' efforts toward degree attainment as a function of their individual background. These background variables and combinations of variables differ from student to student. Only some of the key factors present in dropouts may be predicted. Many pre-college characteristic data collected by researchers (Astin & Oseguera, 2005) differed in "their ability to predict retention" (p. 121) when examined in different combinations. To determine key factors in the present study, logistic regression predicted group membership based on the four demographic variables or the four academic variables.



### *Age*

Age carries many implications for student retention. The age of the nontraditional student is older than 24 years (Bean & Metzner, 1985; Metzner & Bean, 1987; Pascarella, 1980; Tinto, 1975). The possibility exists that an older student may have more personal obligations and less available time for on-campus involvement. An older student may be more mature and focused. However, the younger age student may indicate more preparedness and involvement in the college selection process with exposure to the various vocations and education options available while in junior high and high school. The post-secondary education selection process begins at around the 8th grade when students opt for courses on the academic or vocational track. The student is also exposed to college recruitment events and presentations. Career discovery courses, also designed to assist and guide students in their decision-making process, are generally included in high school curricula. A student opting to attend a university has access to wide-ranging information regarding that selection and, therefore, more prepared for campus life.

### *Ethnicity*

In the present study withdrawing student ethnicity was not significant in predicting the likelihood of attending one campus or the other. The majority of students were White or Black similar to the general university population. A small number of students indicated ethnicity as Asian or other.

### *Gender*

A comparison of gender indicates significant differences between campuses. A higher percentage of females (61.4%) were enrolled at the university than males (38.6%). Withdrawing females from the commuter campus were 70.5% and males were 29.5%

indicating more commuter females withdrew than males. Residential female and male withdrawal percentages were more closely aligned with the general university population.

### *Financial Need*

Eligibility for a Pell Grant implies financial need. Financial need is common with commuters and students in residence halls; however, students from lower socioeconomic backgrounds tend to live and work off-campus, as financial aid is not adequate to meet the needs of students residing on campus (Gianoutsos, 2011). Commuters are likely to reside with family members or roommates to deflect the cost of paying rent, utilities, food, and other household expenses (Gianoutsos, 2011). Residential students are given less flexibility on how they spend funds for living costs but are decidedly more engaged in campus life. In this study financial need as a variable was not found significant in predicting campus membership.

### Academic Characteristics

Academic characteristics are factors used to predict a student's abilities to complete a college curriculum required to obtain a degree. Education administrators test and measure student performance to anticipate success in college. Academic characteristics may include class ranking, standardized test scores, grades and GPA. Other influences in college persistence may include financial support, ability to attend classes full-time or part-time, and selecting a major (Astin, 1975).

### *GPA*

GPA has been touted as the most important factor when predicting college success. Some institutions may have high GPA requirements which presumably ensure only the most prepared students are offered admission. Most public universities are

competing for students and are more likely to have a low to medium GPA range requirement. In the current study the average GPA was shared by withdrawing students on both campuses.

#### *Education Goal*

The absence of a selected major may indicate a lack of commitment to a profession or a goal (Tinto, 1985). The researcher found no indication that students withdrawing without declaring a major were more likely to attend either campus by not having a major.

#### *Academic Standing*

Standing is calculated by the number of credit hour successfully completed. The highest number of withdrawing students from both campuses were seniors. Seniors were statistically significant and likely to belong to the commuter campus.

#### *Status*

Upon examination of the status of withdrawing students, the students enrolled at the commuter campus were likely to have been enrolled part-time. More full-time students (75.2%) withdrew from the residential campus. The comparison depicts statistical significance and an odds ratio as commuter.

### Findings, Conclusions, and Recommendations

The findings of this quantitative study are derived from the research objectives, the data, and the results. The examination and comparison of withdrawing students from two types of campuses, commuter and residential, revealed four findings and four conclusions. Recommendations are offered for researchers and administrators.

#### *Finding One*

Demographically, students were similar on each campus and for the university overall with the exception of age. The median student age at the commuter campus is older than the residential student age. The range of student ages was similar; however, the mean, median, and mode for age were older on the commuter campus with the median age of 28 years versus the residential median age of 22 years. The commuter campus had an older dropout population than the residential campus.

*Conclusion.* The average commuter student is older than the average residential student. Older students may be viewed in several ways. One may argue that the older student is encumbered with off-campus commitments, such as employment and family responsibilities, which create distractions and obstacles in areas such as attendance and focus. Students with more off-campus commitments are less engaged on campus and less available for good practices in undergraduate education, such as student-to-faculty and peer interactions (Kuh, 2009). Conversely, an older student may experience a strong desire to persist, recognize the value of a college degree in the workforce, and demonstrate motivation to complete educational goals.

*Recommendation.* Students older than 24 years are nontraditional students who may require alternatives in terms of scheduling, scholarship opportunities, events, and social opportunities. Class times, events and, interactions to accommodate working students may include increased night class offerings and online options. On-campus involvement, such as clubs and organizations, should consider older and more experienced student engagement. Events specifically for commuter campus students should be designed for both traditional and nontraditional participation.

*Recommendation.* Many educational institutions are reluctant to accommodate nontraditional students in an attempt to remain traditional in teaching methods. However, older commuter students are nontraditional and at-risk for nonpersistence. A variety of interventions may be implemented to support the needs of this type of student ranging from mentoring to coaching or counseling. Commuter institution practitioners should be mindful of the needs of the nontraditional student when considering best practices in retention.

### *Finding Two*

Female commuter students were more likely to withdraw than male students, either commuter or residential. The Wald test indicated a significance in gender ( $p=.001$ ) with an odds ratio of .679. A demographic characteristic comparison point to a higher occurrence of females at the commuter campus.

*Conclusion.* The university as a whole reports the percentage of females enrolled in 2010 was 61.4%. Withdrawing females departing from the commuter campus were 70.5%. Females are more at-risk than males when attending a commuter campus. Female students encounter more difficulties when attempting to persist in college. Female students may not aspire to complete college if they do not see the necessity.

*Recommendation.* Female students require assistance to decrease distractions and obstacles in attendance and persistence. Strategies to assist female students include discussions regarding the need for an educated workforce as well as raising the aspirations for female students to persist in college.

### *Finding Three*

The University reported that 85.9% of the students enrolled as full-time students, e.g., taking a course load of 12 hours or more, whereas students enrolled as full-time commuters was 54.2%. The University's part-time students comprised only 14%; however, 45.6% ( $N = 224$ ) were part-time, withdrawing commuter students. Part-time commuter students are less likely to persist than full-time students.

*Conclusion.* The large difference between the overall percentage of part-time students and the part-time withdrawing commuter students may be attributed to commitment and engagement (Astin & Oseguera, 2005; Kodama, 2002; Tharp 2006). A commuter student can be somewhat marginalized, feeling isolated, from campus by residing elsewhere with competing demands and obligations (Kodama, 2002). This study clearly indicated higher incidence of withdrawing commuter students if they were enrolled part-time. If a commuter student feels disconnected or marginalized, a part-time commuter student can be more at-risk and, therefore, more likely to withdraw.

*Recommendation.* Commuter students may not have the luxury or desire to spend more time on campus except to attend classes. In order to combat feelings of isolation and disconnectedness for commuter students, college administrators should strive to ensure meaningful learning, such as active learning experiences incorporated in the classroom during class time. Active learning may include on- or off-campus field experiences, civic engagement, volunteer experiences, or internship opportunities. Activities that actively engage students as well as promote the development of peer and faculty relationships could make strides in decreasing nonpersistence (Kuh, 2009).

*Recommendation.* Nontraditional commuter students may be more interested than traditional students with the usefulness and practical value of what they are learning

along with its application to the real world (Kuh, 2009). Practical simulations may compel students to become more actively engaged in the classroom without requiring a commitment to more time on campus. Practical simulations and group work can be incorporated in online courses.

#### *Finding Four*

The academic variables (average GPA, education goal, standing, and whether the student is taking a full-time or part-time load) were tested together for the likelihood of membership of either the commuter campus or the residential campus. In past studies, GPA has been determined to be the paramount indicator of academic success (Gianoutsos, 2011). In the current study, students were admitted to the University with adequate GPAs. The Wald test comparison indicated GPA was a predictor of campus membership and an indicator of commuter campus membership; however, at the time of withdrawing, the average GPA of both commuter and residential withdrawing population was an average of 2.34.

*Conclusion.* Typically, admission to a university requires a measurement indicating academic preparedness. This indicator may be previous GPA, test scores, written essay, recommendation, or a combination of these items. In the present study, the descriptive statistical average GPA was similar on both campuses; however, regression results indicated either higher or lower GPA group membership belongs to the commuter campus. The GPA fluctuated less at the residential campus. This group membership did not serve as a stronger predictor to indicate non-persistence. Minimal evidence was found to imply, based on GPA alone, that commuter students are more or less likely to succeed than residential students.

*Recommendation.* Administrators should be aware that GPA alone is not an adequate predictor of non-persistence. Other variables, such as status, part-time or full-time as stated in Finding Two, are more solid predictors of non-persistence. Overall GPA was used to indicate preparedness to matriculate but was not a clear indicator for the purpose of prediction using archival information. Other methods of measuring academic success such as ACT scores, class standing or entrance exams along with GPA may be a better indicator of success.

### Limitations

A number of limitations were found in this study. One of the main limitations was that the study was conducted at a single institution; therefore, similarities and applications to other organizations are unknown. Differences in institutions and regions with broad generalizations regarding this study should be avoided.

In this study, many of the students at the commuter campus were transfers from the local community colleges. This path may have had an impact on academic and societal preparedness. In some cases students are not ready to attend a traditional university and decide to take the smaller step to attend community college first. The perception is that the more serious student would choose to attend university as a new freshman to ensure a consistent education. In the present study a majority of the commuter campus students transferred in from the local community college, and on the residential campus most students began as freshman. The differences in academic experience may affect persistence or non-persistence.

Academic level (freshman, sophomore, junior, and senior) was based on numbers of total credit hours earned. The number of seniors tended to be out of proportion since



any student taking undergraduate courses with over 90 credit hours was categorized as a senior. Although the researcher attempted to remove students earning a second bachelor's degree or students taking prerequisites for admission to a graduate program, some students could have remained in the study population. The appearance that a large number of seniors withdrew before earning a degree may not be accurate.

The population of dropout data collected on the residential campus also supported the data collected for the commuter students. In this study there may have been withdrawing students from the residential campus who commuted. Therefore, the characteristics for departing residential campus students may mirror the commuter campus students, but they were inaccurately grouped with residential students based on lack of data accessibility.

This study compiled data from students who voluntarily withdrew during the 2010-2012 academic school years. During the timeline studied, students were dropped for poor academic performance by the institution. The students with low GPAs who were dropped automatically by the enrollment management program were not included in this study. The average GPA results would likely have appeared  $< 2.34$  had these students been included.

#### Recommendations for Future Research

Recognizing that there are differences between nontraditional commuter and traditional residential students is essential to retention. Various treatment or interventions should be developed that allow nontraditional students to feel valued and engaged on either campus. Traditional universities are slow to progress toward innovations that would engage today's students. Many seminal studies still referenced are over 30 years

old, presumably due to the expense of conducting large scale, longitudinal research (Astin, 1975; Pascarella, 1980; Tinto 1985). First, large scale research, gathered from many organizations with applications at many institutions, is needed to reflect the changes in student learning and preferences.

Since the results of this study indicated a large disparity of part-time students enrolled, the university, and part-time commuter students who dropped out, further research should be explored to identify the reasons for nonpersistence in part-time commuter students. At a commuter campus one might expect there would be a high number of part-time students, so meeting the needs of this population could prove important to retention. A higher incidence of academic success is achievable, and universities have an obligation to provide academic support to students requiring assistance, such as mentoring, tutoring, and developmental courses.

The last topic for further study should cover the area of diversity. This research had a low incidence of ethnicities beyond Caucasian and African American. Recruiting a more diverse body of commuter students may assist in transitioning to college life as well as meeting the education needs of the area population. Studies should be directed toward methods of matching the ethnicity of the region with the ethnicity of the campus population to include Hispanic, Asian, and others. Attempting to broaden ethnic backgrounds on college campuses and match the needs of the community would make minorities more comfortable and more likely to persist.

### Conclusion

The importance of education in society cannot be understated. Economical, societal, and psychological benefits can be derived from educating Americans formally

and informally. In the workforce, education contributes positively to individual economic and social health. A solid education transforms people into human capital. That human capital is likely to be more productive and earn a higher income than those lacking education. Education is arguably the greatest gift one can achieve.

In 2009, a United States Presidential mandate declared that by the year 2020 the goal is to have the highest proportion of college graduates in the world. This national effort strives to increase the number of students who attend and graduate from college. According to Schneider and Yin (2011a), on average, about half the students who begin a 4-year college or university actually graduate within 6 years. In this country education is valued, supported, and encouraged. The federal Pell Grant program provides education dollars to individuals in need and sponsors student loans and scholarships. The GI Bill is used as an incentive to serve in the military and allows veterans and family members access to education dollars. Assumptions are common that students will continue their education upon graduation from high school. Admission recruiters and college counselors are placed in and around high schools and colleges to assist students desiring to continue learning.

Nonpersistence in college is caused by numerous factors, including academic and emotional unpreparedness, financial hardship, family responsibilities, work obligations, lack of motivation, lack of confidence, social anxieties, and lack of interest. Since roughly half of the students who attempt college dropout, one must consider ways to mitigate barriers to completion. Some obstacles, such as social and academic integration and motivation, are known (Tinto, 1985) and may be resisted with student engagement and interactions to help create staying power.

The U.S. Census Bureau cited in Schneider & Yin, 2011b reported that college graduates earn approximately 40% more in salaries than similar aged adults with some college who did not persist and earn approximately 66% more than similar aged adults with a high school diploma only. Although a college degree does not guarantee success or even employment, clearly there is value in obtaining higher order knowledge.

Chickering's Seven Vectors of Student Development Theory (Chickering & Reisser, 1993) discusses the value of pursuing a college degree beyond the diploma. Stages of maturity and exposure to diverse populations and ideas that are obtained on a college campus may be as important to national superiority as post-secondary academics.

In this study, the researcher examined the population of students who decided to withdraw from a university. Withdrawing students from a commuter campus were older and appeared less committed as evidenced by the high number of part-time dropouts. Conversely, the students from the residential campus were mostly full-time and appeared to be departing for other reasons. Although the prediction model indicated an unclear advantage for future use, the descriptive comparison held value in uncovering campus population differences.

The findings of this study contribute to the body of knowledge regarding commuter campus retention by focusing on the withdrawals. Population characteristics were categorized and compared rather than concentrating on individual reasons for withdrawing. For the growing number of commuter students, assistance to degree completion is well worth the effort. The institution, however, does not gain any reporting status by graduating students not included in the cohort group, e.g., any student who did not begin as a full-time, new freshman, although the nation and world gain additional

members of the valued and more educated workforce. Human capital development is a fundamental objective for colleges and universities.

## APPENDIX A

## APPROVAL OF INSTITUTIONAL REVIEW BOARD

**INSTITUTIONAL REVIEW BOARD**

118 College Drive #5147 | Hattiesburg, MS 39406-0001

Phone: 601.266.5997 | Fax: 601.266.4377 | [www.usm.edu/research/institutional-review-board](http://www.usm.edu/research/institutional-review-board)**NOTICE OF COMMITTEE ACTION**

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.  
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **14033101**PROJECT TITLE: **Assessing Nontraditional Student Dropouts on a Commuter Campus**PROJECT TYPE: **New Project**RESEARCHER(S): **Mary Funk**COLLEGE/DIVISION: **College of Science and Technology**DEPARTMENT: **Human Capital Development**FUNDING AGENCY/SPONSOR: **N/A**IRB COMMITTEE ACTION: **Exempt Review Approval**PERIOD OF APPROVAL: **04/14/2014 to 04/13/2015**

**Lawrence A. Hosman, Ph.D.**  
**Institutional Review Board**

## APPENDIX B

## INSTITUTIONAL REVIEW BOARD NOTICE OF COMMITTEE ACTION



THE UNIVERSITY OF  
**SOUTHERN MISSISSIPPI.**  
GULF COAST

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OFFICE OF THE VICE PRESIDENT  
730 East Beach Boulevard | Long Beach, MS 39560  
Phone: 228.865.4531 | Fax: 228.214.3415 | [www.usm.edu/gc](http://www.usm.edu/gc)

March 10, 2014

Mary Funk  
Student Success Coordinator  
The University of Southern Mississippi Gulf Coast  
730 East Beach Boulevard  
Long Beach, MS 39506

Dear Ms. Funk:

I have reviewed your request to conduct research at The University of Southern Mississippi-Gulf Coast using archival institutional data. I give my permission to collect demographic and academic data for the doctoral study regarding nontraditional student dropouts at a commuter campus. Institutional research such as this can provide valuable insight into improvement initiatives regarding non persisting student.

Utilizing archival institutional data without student contact ensures the probability and magnitude of harm or discomfort is nonexistent. You have my full support to research student dropout information from students who withdrew in the fall 2010, spring 2011, fall 2011 and spring 2012 terms.

Sincerely,

A handwritten signature in cursive script that reads "Frances Lucas".

Dr. Frances Lucas  
Vice President/ CEO  
The University of Southern Mississippi-Gulf Coast

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