

COLLEGE SENIORS AND GRADUATION: THE DEMOGRAPHIC CHARACTERISTICS
OF COLLEGE SENIORS EARNING A BACHELOR'S DEGREE

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This is dedicated to my family, friends, and colleagues for all of their support, encouragement and prayers throughout this endeavor. My two “bosses”, my children, Laila and Victoria, for making this journey all worth it. Hopefully as a father I laid the foundation for you both to realize that with God, discipline and a strong work ethic you can accomplish anything you put your mind to. Special thank you to Courtenay Hall for your encouraging words, motivation, and support. My mother, Brenda, who has just been absolutely the best!

Most of all, I dedicate this dissertation to the memory of my grandparents, Clarice Clark Addison, and Alfred and Carola McFarland, for instilling God, hard work, and great morals and values throughout our entire family. Even though neither of you earned a high school diploma, somehow you made sure that the value of education was instilled in each generation of our family. I can't say thank you enough. I'd also like to dedicate this to the memory of my uncle James “Jaz” Clark and my cousin Darrick “Heavy D” Carruth for always believing in me.

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ABSTRACT

COLLEGE SENIORS AND GRADUATION: THE DEMOGRAPHIC CHARACTERISTICS OF COLLEGE SENIORS EARNING A BACHELORS DEGREE

by Calvin P. McFarland

Student attrition in higher education has received a lot of research attention, in part because of the costs associated with student's leaving school. Most attrition research focuses on the first two years of a student's academic career. Research related to college attrition and beyond the first two years, especially those students who have attained college senior status, are lacking in the literature. The purpose of this study is to identify the demographic characteristics of college seniors who leave college without earning a bachelor's degree.

The importance of understanding why some college students, especially those declared as college seniors, do not complete a degree has been widely recognized (Bound, Lovenheim, & Turner, 2010; Bowen, Chingos, and McPherson, 2009). This study will contribute to the void in the literature pertaining to college student attrition beyond the first two years of college. This research will identify the demographic characteristics and college predictors that have led to college seniors leaving college without a degree. This study will give college administrators the information needed to target attrition, increase persistence, and graduation rates at their institutions. Henscheid (2008) urges higher education administrators to be intentional in providing resources for graduating seniors to promote closure for their transition out of college. Findings from this study will help college and university administrators, and enrollment managers, understand the scale and patterns of college non-persistence and dropout, and add new recruitment strategies for admissions officers recruiting new students to their institutions. This

study can also help high school administrators and counselors identify the needs of those students within this population become more prepared before they attend college.

This study on college seniors who dropout is a longitudinal, quantitative study that uses a secondary data set. The sample of college students includes undergraduate students who have earned at least 85 credits and maintain senior standing at a Michigan, public, four-year institution where they were enrolled fall 2005 through fall 2013 semester.

Using existing secondary data of a public university, a non-experimental research design is proposed to answer the research question. Quantitative research is defined as collecting and analyzing numerically expressed information to explain a particular phenomenon, in this case, college senior graduation. This study is non-experimental in design because students within the sample will not be controlled, manipulated, or altered in any way, defining the nature of non-experimental design (Creswell, 2009). Non-experimental research relies on methods such as surveys, secondary data, and case studies (Muijs, 2011). For this study, the researcher has no control over the variables that may influence the outcome of college seniors earning a bachelor's degree. The researcher will not influence any of the demographic characteristics, pre-college education factors, and college experiences of students.

This study utilizes existing institutional data to longitudinally, spanning an eight-year period, to address change over time. These data will be used to provide robust evidence for the findings related to senior student persistence to graduation than what could be concluded from one year of data.

This study will identify the demographic characteristics of college seniors who leave college without earning a bachelor's degree and help college and high school administrators identify the needs of college seniors as well as high school students prior to entering college.

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CHAPTER I

INTRODUCTION

President Obama has set an ambitious goal for the nation: By the year 2020, the United States will have the highest proportion of adults with college degrees in the world (Schneider & Yin, 2011). This goal aims at increasing the number of students who actually graduate from college once they enroll. The “college completion agenda as the Obama administration (along with many governors) calls it, sees this as an opportunity to increase the economic future of each state, and the nation as a whole. Young adults between the ages of 25 and 34 with a college degree, working year-round, earn about 40% more than similar age adults with some college who have not completed a degree, and about two-thirds more than similar age adults with just a high school diploma (U.S. Census Bureau, 2013). This chapter provides an introduction and background of the topic, statement of the problem, research questions, a brief conceptual framework of the study, and definitions of terms. This chapter concludes with assumptions that inform the study.

Colleges and university graduation rates are a concern for our nation. On average, only 59% of the students who start at a four-year college or university graduate within six-year years (Snyder & Dillow, 2015). A consistent problem in higher education that impact graduation is student retention, the measure of academic progress from one term or year to the next. Undergraduate retention is an effort by an institution of higher education to retain a student from admission until graduation (Berger & Lyon, 2005). Concerns over retention have led to the growth of a literature seeking to understand the problem of attrition, the reduction in overall enrollment among students less those who graduate, and to evaluate strategies for improving retention and graduation rates.

In 2014, the American College Testing Service (ACT) reported a national, first-to-second year retention rate of 67.6% and a 45.5% average six- year graduation rate for all types of institutions combined (ACT, 2014). A number of studies, dedicated to student retention during the first two years, addressed the characteristics that are likely to impact student attrition, retention, persistence and graduation rates. Some research focuses on the academic characteristics such as: include high school grade point average, (Moore & Shulock, 2009; Nagaoka, Roderick, & Coca, 2009), whereas other studies focus on non-academic pre-college characteristics such as family educational background, race, gender and socioeconomics (Adelman, 2006, Astin, 2005; Clinedinst, Hurley, & Hawkins, 2011; Deberard, Speilman, & Julka, 2004; Fike & Fike, 2008; Tinto 1993). There are also studies that examine, student persistence models that explains the factors contributing to why students' depart from college (Astin, 1987; Berger & Braxton, 1998; Braxton, 2000; Tinto, 1975).

Most studies on student departure highlight attrition within the first two years of enrollment. However, a sizeable number of students become college seniors, (students who have earned at least 85+ college credits), but fail to reach credits needed to graduate. Many students, from families with modest means must borrow significantly to attend college. This type of pressure has contributed to high dropout rates in public colleges and universities and is a serious social problem (Bowen et al. 2009). Paying for college is an increasing burden for students as state appropriations to public colleges and universities have declined which forced institutions to increase tuition to make up for funding shortfalls but without increases in financial aid to make up the difference. Higher tuition levels at most colleges may negatively affect not only the completion of a college degree but also negatively affect the time it takes to obtain a college degree (DesJardins, Ahlburg, & McCall, 2002a). Many students, once attaining college senior

status, assume a great deal of debt to finance their degree (The College Board, 2008). In the context of completing a college degree, borrowing and debt has become integral to higher education and the college experience. For many of these students, the decision to finance higher education with student loans, there exist a real risk to starting adulthood with a substantial burden of debt (Bowen, Chingos, & McPherson, 2009).

High attrition and low graduation rates negatively impact the reputation on colleges and universities. Attrition is used to measure the quality of education delivered by an institution, if there is a high attrition rate the perception is that the institution has a quality problem (Moody, 2004; Thompson, 1999). Over the past 20 years, more than 31 million students enrolled in college and left without receiving a degree or certificate (Shapiro, Dunder, Yuan, Harrell, Wild, & Ziskin, 2014). Because of this, college attrition has received a considerable amount of research attention, in part because of the number of costs associated with a student leaving school (Moores & Klas, 1989). Low graduation rates are also costly to institutions and remains one of the constant measures of institutional performance. Nevertheless, college and university performance continues to draw attention from policymakers in light of the rising issue of institutional accountability (Zhang, 2008). The push for increasing college students completing bachelor's degree has been extended to the states, mandating efforts to increase graduation rates and set benchmarks for higher education institutions to improve degree completion (Moltz, 2010).

Focusing only on the first two years leaves a gap in what we know about retention in the years that follow, specifically a student's senior year. Nora, Barlow, and Crisp (2005) note that "major gaps" exist in the persistence literature on student retention beyond the first year of college. Regardless, the reason for lack of research on attrition beyond the first two years of a

student's academic career, graduation rates are a significant issue for this population of students. Some studies (Astin, 1997; Attewell, Heil, & Reisel, 2011; Hu & St John, 2001; Tracey & Sedlacek, 1987) suggest many of these students acquire most of the skills and knowledge represented by a college degree, and move on before graduating by way of employment.

There is also a presumption that college seniors have adjusted to the many developmental transitions involved in going to college. Researchers assume that development issues are not an issue in the retention of these students (Mohr, Eiche, & Sedlacek, 1998). Leaving college can have both positive and negative connotations. Leaving can be viewed as positive if students learn that some other form of education and/or training is in their best interest. However, it can have a negative connotation, as it may intimate that a person who leaves college before completion has failed in some way (Tinto, 1993).

Problem Statement

The earliest studies of undergraduate retention in the United States occurred in the 1930s and focused on what was referred to at the time as student mortality: failure of students to graduate (Berger & Lyon, 2005). Early studies focused heavily on student attributes (Tinto, 2012). Researchers (Astin, 1984; Hermanowicz, 2006; Nora, Barlow, & Crisp, 2005; Tinto, 1993) have defined reasons for departure including: financial issues, academic struggles, and institutional integration, as reasons why college students leave college during the first two years. They have yet to develop an approach to help increase persistence and graduation rates beyond the first two years.

Student attrition is a concern for any types of educational or certification programs. Costs are incurred with respect to time, resources, tuition for students, faculty, institutions, and other

members of society (Bennett, 2003; Schneider & Yin, 2011). The costs for development, delivery, and assessment, result in wasted expenditures for the institution (Moody, 2004). This does not factor in lost tuition revenue.

There are unknowns about how students make the decision to dropout is difficult to understand, due in large part to the lack of data from these (former) students. Finding ways to decrease attrition in colleges and universities is critical both from an economical and quality viewpoint. There is even less data from students who have obtained senior status within four years but take more than six years to graduate.

There are many benefits that come to students who earn a college degree. The baccalaureate degree is the necessary for both consideration for many occupations credential and admission to graduate programs. Employers often use academic credentials as a screening process because they signify the attainment of certain abilities deemed to be of value (Adelman, 1999). Despite this gap in the attrition literature, institutional data can be used to describe the demographic characteristics, pre-college education, and college experiences of these students when they attended college. These include: gender, ethnicity, socioeconomic status, high school grade point average, earned credits, cumulative college grade point average, first year grade point average, length of time to reach senior status, major declaration, and enrollment status.

Purpose of the Study

Student attrition in higher education has received a lot of research attention, in part because of the costs associated with student's leaving school. Most attrition research focuses on the first two years of a student's academic career. Research related to college attrition and beyond the first two years, especially those students who have attained college senior status, are

lacking in the literature. The purpose of this study is to predict degree completion of college students who obtain senior status within four years but take more than eight years to graduate.

Research Question

The following question will inform this study:

1. What demographic characteristics, pre-college education factors and college experiences predict college seniors' bachelor's degree completion within eight years?

In the research question the following independent variables are demographic characteristics: ethnicity, gender, and socioeconomic status. Independent variables are: high school GPA are pre-college education factors. Independent variables for this research question that make up college experiences included; earned college credits, first year GPA, length of time to senior status, cumulative college GPA, declared major, and average credits enrolled. The dependent variable is college seniors earning a degree within six years.

Conceptual Framework

College student attrition has become one of the most studied areas in the higher education literature. There are a number of theories that exist concerning student attrition and departure. One is Tinto's (1993) model of institutional departure. This model was originally developed in 1975 to explain student departure in four-year colleges and universities. Revisions to the model were made in 1987 and 1993, and have accounted for the characteristics of college students and institutional environments. Tinto's model was developed to outline the longitudinal process of departure within an institution. The model theorized that pre-entry attributes such as: family background, prior school measures, and skills and abilities, had a direct impact on student

departure from a college. This theory was based on voluntary withdrawal and not withdrawal due to academic dismissal.

Pascarella (1980) presented a model of student departure based on students at four-year residential colleges and universities. This longitudinal model took into consideration characteristics student's brought with them to college, as well as institutional factors and college experiences. This model proposed that student background characteristics (family, high school achievement, aptitude, and personality) formed a profile of student differences brought with them to college. The pre-enrollment characteristics had a direct influence on educational outcomes and on the student's persistence and/or withdrawal decision.

Astin (1993) developed the Inputs-Environment-Outputs (I-E-O) model that looks at the expectations and characteristics of students, as well as the environment provided by each institution. The Inputs (student characteristics) and Environmental factors (Institutional characteristics) combined produce the Outputs, in this case retention and graduation. In this model, Astin suggests that inputs alone can be used to predict the output, but the impact of the environment can change the predicted output. The value of this model is that it provides a framework for institutions to assess retention beyond the first two years. It will allow colleges and universities to assess students' persistence while also allowing institutions to consider the unique characteristics of their target population.

Significance of the Study

The importance of understanding why some college students, especially those declared as college seniors, do not complete a degree has been widely recognized (Bound, Lovenheim, & Turner, 2010; Bowen, Chingos, and McPherson, 2009). This study will contribute to the void in

the literature pertaining to college student attrition beyond the first two years of college. This research will identify the demographic characteristics and college predictors that have led to college seniors leaving college without a degree. This study will give college administrators the information needed to target attrition, increase persistence, and graduation rates at their institutions. Henscheid (2008) urges higher education administrators to be intentional in providing resources for graduating seniors to promote closure for their transition out of college. Findings from this study will help college and university administrators, and enrollment managers, understand the scale and patterns of college non-persistence and dropout, and add new recruitment strategies for admissions officers recruiting new students to their institutions. This study can also help high school administrators and counselors identify the needs of those students within this population become more prepared before they attend college.

Definition of Terms

Academic Status. Academic status is the categorization of students relative to credit completion. (Karp & Logue, 2002).

Academic Persistence. Often used interchangeably with retention. The determination of a student to complete degree work as indicated by demographics, personality, and educational process (Pelteir, Laden, & Matranga, 1999).

Attrition. The diminution in the number of students enrolled resulting from lower student retention (Astin, 1971).

Dismissal. Failure to meet satisfactory academic requirements set by the institution.

Dropouts. Students who enroll in an institution but leave the institution prior to graduation and do not return (Glynn & Miller, 2003). In many cases dropouts have included all non-returning students, even if they transfer to another college (Tinto, 1993).

Grade Point Average. Calculated grade point average based on a 4.0 scale.

Institutions, Colleges, and Universities. Used interchangeably throughout this study to mean any institution of higher education. Institutions can be public or private, ranging from small college to large university (Wernsman, 2008).

Persistence. Continuous enrollment from semester to semester.

Retention. Retention is a measure of academic progress of a cohort of students from one term or year to the next. Retention rate is expressed as a percentage of the students who return each term or year.

Assumptions

The researcher assumes that college seniors attaining at least 85+ earned credits want to graduate from college because of the expended time and financial resources. In addition, an assumption that guides this study is that students who have attained senior status, (85+ credits) have the demonstrated the competence, commitment, and motivation to graduate.

Overview of Complete Document

This dissertation will consist of five chapters. Chapter one is an introduction and overview of the study. Chapter two is a review of relevant literature relating to the study. Chapter three will describe the methodology and instruments that will be used for this study. Chapter four will present the data obtained for this study, and results of the analysis of the data. Chapter five will give the conclusions and directions for future research.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The purpose of this chapter is to review the literature related to college seniors and bachelor's degree completion. This chapter contains an examination of the theory framing this study, the history of the issue as well as its relevant connections to empirical studies. The following sections overview of the changing landscape surrounding student success in higher education institutions in an effort to understand undergraduate student persistence. This overview details how institutional leaders addressed student success beginning in the 1950s to include current trends in educational policy and practice. Additionally, in an effort to understand why students who attain enough college credits to be declared college seniors do not complete a bachelor's degree, literature on relevant historical influences related to student enrollment, attrition, and departure research are addressed. This chapter also focusses on the linkage between theory and demographic characteristics, pre-college education factors, and college experiences of students as they relate to predicting bachelor degree completion within six years. Lastly, the limitations of previous research will provide the argument supporting the need for this study followed by a summary of the chapter.

This chapter begins with a review of theory then examines the demographic characteristics, pre-college education factors, and college experiences of college students who have earned at least 85 credits to be declared seniors. The demographic factors, gender and ethnicity; pre-college factors, high school grade point average; and college experience factors defined as earned credits, cumulative grade point average, first year grade point average, length

of time to senior status, major declaration, and enrollment status will be analyzed to determine their influence on college degree completion. Every year over a million students aspire to graduate from college with many road blocks to overcome. Many students persist until their senior year, yet leave college without completing a bachelor's degree. This can be viewed as a personal setback because of the amount of time and money invested, not only by the student, but the institution as well. With student retention and graduation rates at the core of major reform in higher education, identifying student dropout tendencies can help with the institutional level target strategies that support degree completion.

Accountability measures in the United States now maintain that colleges and universities address student achievement to improve persistence to graduation (Rutherford & Rabovsky, 2014). Government officials call for colleges and universities to cut spending and eliminate redundancy. While most attrition research focuses on the 64% of students who persist between their first and second year of their academic career, a sizeable number of students, who have earned enough credits to be declared college seniors, drop out of college. In an effort to facilitate student success by mean of policy support, higher education leaders have also considered the influences of college predictors such as financial aid packages, credit loads per semester, grade point average, and declared major, which have also been identified as reasons students depart from college (Clarkson & Roscoe, 1994). Despite accountability measures and efforts to improve graduation rates many students with senior level status continue to leave college for unknown reasons without earning a bachelor's degree.

Student persistence and retention studies comprise of one of the most voluminous research areas in higher education (Rendón, Jalomo, & Nora, 2006). As college and university leaders receive pressure from the federal government, state governments, business leaders,

parents, and students, to improve completion rates, many have started to examine the factors influencing persistence to degree completion and reasons for departure prior to earning a college degree. Institutional leaders are paying close attention to prospective students' academic characteristics such as high school grade point average, in addition to non-academic pre-college characteristics such as family educational background, race, gender, and socioeconomic factors known to influence student persistence in college (Hirschy, Bremer, & Castellano, 2011). In an effort to facilitate student success by means of policy support, higher education leaders have also considered the influences of college predictors such as financial aid packages, credit loads per semester, grade point average, and declared major, which are identified as reasons students depart from college (Clarkson & Roscoe, 1994).

Overview of Higher Education Growth and Development

The review of literature on college dropouts, students who enroll in an institution but leave prior to graduation and do not return, and college persistence, the determination of a student to complete degree work, are in many ways interchangeable (Glynn & Miller, 2003). Literature pertaining to the two concepts among undergraduate college students acknowledges that both contribute to whether or not a student completes a college degree. Research may be used to predict a student's propensity to either dropout or persist based upon student demographics, personality, and educational process (Pelteir, Laden, & Matranga, 1999).

Beginning in the early 1970s, many retention, departure, and non-completion theories, depicted the evolution of student retention and departure. Early studies focused on the factors influencing students, resulting in the growth of theory-driven research. These generic models were used to explain the cause of attrition and provided suggestions for retention by focusing on

very specific variables such as racial/ethnicity, socioeconomic factors, and institutional type.

The development of new theories has slowed as the number of studies has expanded, but knowledge about student persistence has continued to be refined and further developed (Seidman, 2012). The following sections address the history of the issue and its connections to empirical studies related to the research question.

Early Higher Education Developments (1950s)

Student enrollment at colleges and universities began to drastically increase towards the end of World War II. Between the years 1945 and 1975 enrollments, finances, and the higher education system expanded. These thirty years were known as the Mass Higher Education Era and considered higher education's golden age. In 1944, the Servicemen's Readjustment Act also known as the G.I. Bill was passed by Congress to provide veterans returning home from the war with benefits that included unemployment for one year, insurance, medical care, counseling services, tuition, books, and offered a stipend for living expenses while attending any educational program. Nearly half of the 15 million veterans returning home from the war received benefits by attending college, pre-collegiate, and on-the-job programs with over two million service men and women attending college in the first six years following the war (U.S. Senate Committee on Veterans Affairs, 1973). Participation of veterans increased the total enrollment in higher education institutions by more than 50% from the pre-war figures (Olson, 1974). According to Burrell (1967) and Hauptman (1999), the G.I. Bill had a dramatic effect on returning veterans level of educational attainment and is considered one of the most important educational and social transformations in American history. This bill *democratized* college campuses by making postsecondary education a viable option for many men and women limited in their ability to

obtain a higher education due to their socioeconomic background, race/ethnicity, and first-generation status.

Early Higher Education Developments (1960s)

In the early 1950s, with the G.I. Bill paved the way for anyone to attend college, a societal change became more firmly established. Two Supreme Court rulings, *Sweat v. Painter* and *McLaurin v. Oklahoma State Regents for Higher Education*, impacted the higher education landscape by calling for racial equality and desegregation across the American landscape.

During this time, the Civil Rights Act of 1964 was passed to end segregation. This Act also supported higher education by providing training to faculty and staff, assisting with problems caused by desegregation. Another expansion impacting higher education was the development of the Office of Civil Rights, which mandated that colleges and universities have a proportionate number of minority students and staff compared to the general population of students.

Universities that had been staffing and enrolling students to meet the surges in enrollments were found guilty of an oversupply of White faculty and staff. Title IX of the Education Amendments of 1972 prohibited bias on the basis of gender in any educational program or activity aiding in the proportional representation of women. This amendment providing a means for women to be enrolled as students and to be added to the hiring pools.

Due to governmental mandates, college officials began to monitor enrollments during the 1960s with a focus on preventing dropouts. Institutional leaders began monitoring the patterns of student enrollment through a systematic approach such as analyzing the influence of demographics and existing patterns of departure. This type of analysis was mostly viewed through a psychological approach, focusing on student personalities as the main reason for

continuous enrollment (Summerskill, 1962). The psychological approach was in response to concerns about students completing college, and the impact of newly recognized demographics on college campuses.

During this same time period, there were limited assessments addressing the patterns of student departure. While most of these assessments utilized psychological approaches to report patterns of departure, factors such as personality attributes (maturity, motivation, and disposition) became key reasons for persistence (Summerskill, 1962). William Spady (1971) listed six types of studies informing student enrollment trends during this time period in an effort to generate a means of forecasting a student's potential to succeed in college. Concurrently, Spady (1971) noted that previous studies lacked sufficient information pertaining to student departure and suggested that a systematic, coherent body of knowledge was needed to better inform, understand, and improve student retention.

Early Higher Education Developments (1970s)

During the 1970s, retention and the concerns of student dropouts drew the attention of administrators. During this time, studies such as Spady's (1971) seminal work, which aided in the development of sociological models of student departure, examined the interaction between the student and the college environment. This model led to the emergence of Tinto's (1975), interactionist theory of student departure. Tinto (1975) explored students' academic skills and social integrations. He noted that academic commitment level was bolstered or diminished depending on how well students become academically and socially integrated on the college campus. Another emerging researcher in this field was Alexander Astin (1977), who, like Tinto (1975), studied retention using national databases including data from colleges and universities

throughout the country. Astin (1977) concluded that student involvement was the key to student retention. He suggested that the more students were involved in their academic endeavors, more likely they were to be retained. By the end of the 1970s, these theories provided a foundation for research that would lead to an explosion of research in the following decades regarding the nature of retention.

Early Higher Education Developments (1980s)

In the 1980s, retention research used existing theories on retention that were focused on the increase of enrollment management. Retention studies emerged due to the increase in student enrollments in higher education to over 11 million. John Bean (1980, 1983) viewed retention in a different way by using the concept borrowed from organizational studies to define worker turnover (Price & Mueller, 1981). This spread of knowledge led to the development of campus-based initiatives for retention, and provided stronger information on retention for university officials who were concerned with retention and enrollment management on their campuses. The emergence of literature on retention across a wide variety of more specific programs created a growth in theory-driven studies. Research was beginning to be implemented on campuses across the country. Additionally, retention concepts moved into graduate student retention, after focusing primarily on the retention of undergraduates. During this time, college and university officials focused on better ways to attract and retain students on their campuses as they became increasingly aware that the enrollment boom during the mid-1970s was coming to an end. In an effort to maintain students, the concept of enrollment management was born (Seidman, 2012).

Enrollment Management. Jack Maguire, Dean of Enrollment at Boston College, was the first to use the term enrollment management. He began disseminating information on his campus to align efforts across the admissions, financial aid, registration, and institutional research areas in order to better control enrollment (Hossler, 2002). The enrollment management classifications employed by universities typically fell into one of the following four categories: the enrollment management committee, the enrollment management coordinator, the enrollment management matrix, and the enrollment management division. Each of these categories became progressively more formal in terms of structure, authority, and effectiveness and eventually led to developments defining student enrollment practices in the 1990s (Kemerer, Baldrige, & Green, 1982).

Early Higher Education Developments (1990s)

The 1990s were a time when studying retention became an established research field. John Braxton's (2000) research assessed Tinto's Student Departure Model and found four propositions that were logically interconnected. Those four propositions built upon one another suggesting that specific student entry characteristics were needed before a certain level of initial commitment to college could be attained. A perceived level of institutional commitment was determined necessary before students were able to become socially integrated, with the understanding that student integration led to persistence to graduation. Braxton stated that social integration, not academic integration was the key to understanding student departure. He suggested that future research explore psychological, social, and organizational influences that impact both social integration and commitment. Additional themes that emerged during this

time-period addressed the impact of financial obligations on students attending college and continuous student enrollment.

Current Higher Education Developments

Currently, degree completion is one of the key measures of institutional effectiveness. Devarics and Roach (2000) reported that at highly selective institutions, the dropout rate was 8 percent, at less selective institutions, the college dropout rate was as high as 35 percent, and at open enrollment institutions, the departure rate was nearly 50 percent of students who did not graduate. While there continues to be a number of unresolved issues regarding why students leave college, one trend being implemented to address retention includes the increase of student supports to address diversity and diverse student needs. The following section contains an examination of the theory framing this study as it relates to the research question.

Theory

Numerous student retention studies over the last 50 years have improved our understanding of student departure (Berger & Lyon, 2005). Many of these studies focus on four-year institutions, and student populations consisting of first and second year students. Tinto's (1993) theory of Student Departure will be used to frame this study in an effort to better understand the elements influencing the retention and graduation of undergraduate seniors who maintain senior status. While theories on student departure by John Bean and Barbara Metzner (1985), Alberto Cabrera, Amaury Nora and M. B. Castaneda (1992), Alexander Astin (1993) and Patrick Terenzini and Robert Reason (2010) all contain similarities when identifying student demographics as Tinto, they each maintain a specific focus on factors such as: non-traditional students, finances, student involvement, and first-year student outcomes.

Vincent Tinto's (1975, 1987, 1993) Models

Tinto (1975) is the most frequently cited researcher on college retention (Milem & Berger, 1997). Tinto's Model of Student Departure (1975) was developed building upon theory from French intellectual Emile Durkheim (1951) and Dutch anthropologist Arnold Van Gennep (1960). Durkheim (1951), viewed dropping out of college as similar to suicide, thus arguing that college persistence required successful social integration by developing friendships with other students and faculty members. Tinto (1975) included academic characteristics in his model and suggested that dropping out of college was either voluntary, like suicide, or forced because of poor academic achievement. Tinto (1987) states that in both suicide and student departure, a form of voluntary withdrawal from local communities with some type of rejection toward their present community was identified. He also hypothesized that student departure was similar to egotistical suicide because of a students' failure to integrate into their current college community providing a reason for some students to leave. Tinto (1993) went on to further his own research into one of the most researched theoretical retention models in higher education with the influence of Arnold Van Gennep (1960).

Tinto (1993) states that integration into college has functional parallels with the incorporation into a new environment. College students, especially first-year students, transitioning from high school to college, must separate themselves, to some degree, from past associations. During transition, students encounter various crises that must be addressed so that they can persist to complete their education. Failure to resolve or adapt issues enhances the likelihood of departure. The stages of these rites of passage are not always clearly sequenced. Tinto (1993) warns that the student's background traits: age, gender, past education, family education, and educational values, may influence these stages in different ways and times during

a student's academic career He suggests that there could be repeats of certain stages, overlap, and multiple stages occurring at the same time. .

Tinto (1993) interprets Van Gennep's (1960) model, the integration into new environment, as being solely dependent on the student/individual. He suggests that a student's integration into a college or university's culture, academically or socially, requires the same stages as those found in rites of passage, separation, transition, and incorporation. He continues by stating that integration into the institution could produce new levels of commitment, new goals, and stronger persistence from the student.

Drawing upon his own and existing research, Tinto (1993) did not construct a new theory of student departure, nor contradict existing theories of student departure; he added a new dimension to the understanding of the departure process. With Tinto's Theory of Departure (1993) revised to acknowledge that academic integration is more important than social integration. All of his previous models had focused on the events that occurred within the educational system and pre-college characteristics students bring with them to college. Tinto (1993) designed the model to view a longitudinal process of departure from colleges and universities. The model also included withdrawal for non-academic dismissal such as: lack of finances, personal reasons, and family problems.

Tinto's (1993) model identified pre-college characteristics varying from family background, skills and abilities, and prior school attributes, known to impact student departure and indirectly impact a students' intentions regarding their educational plans. Tinto (1993) contended that individuals enter higher education institutions with various backgrounds, personal attributes (sex, race, and disability), financial resources, and pre-college characteristics (grade point average), each having a direct and indirect effect on departure decisions. He also

contended that positive academic and social experiences of students helped to reinforce educational goals, in turn, assisting with persistence. Conversely, Tinto suggested that negative experiences could also weaken student's educational goals, promoting departure from the institution.

Figure 1 displays Tinto's (1993) model, highlighting the six stages of environmental conditions students would likely encounter during their time in college. These stages include pre-entry attributes, goals/commitments, institutional experiences, integration, goals/commitments, and outcomes. While Seidman (2012) argues that all students arrive at college with pre-college characteristics and with an initial commitment Tinto's model addresses the fact that these characteristics and commitment traits are at different levels for each student. These stages are followed by the academic and social systems which externally influence students' intentions, goals, and commitment.

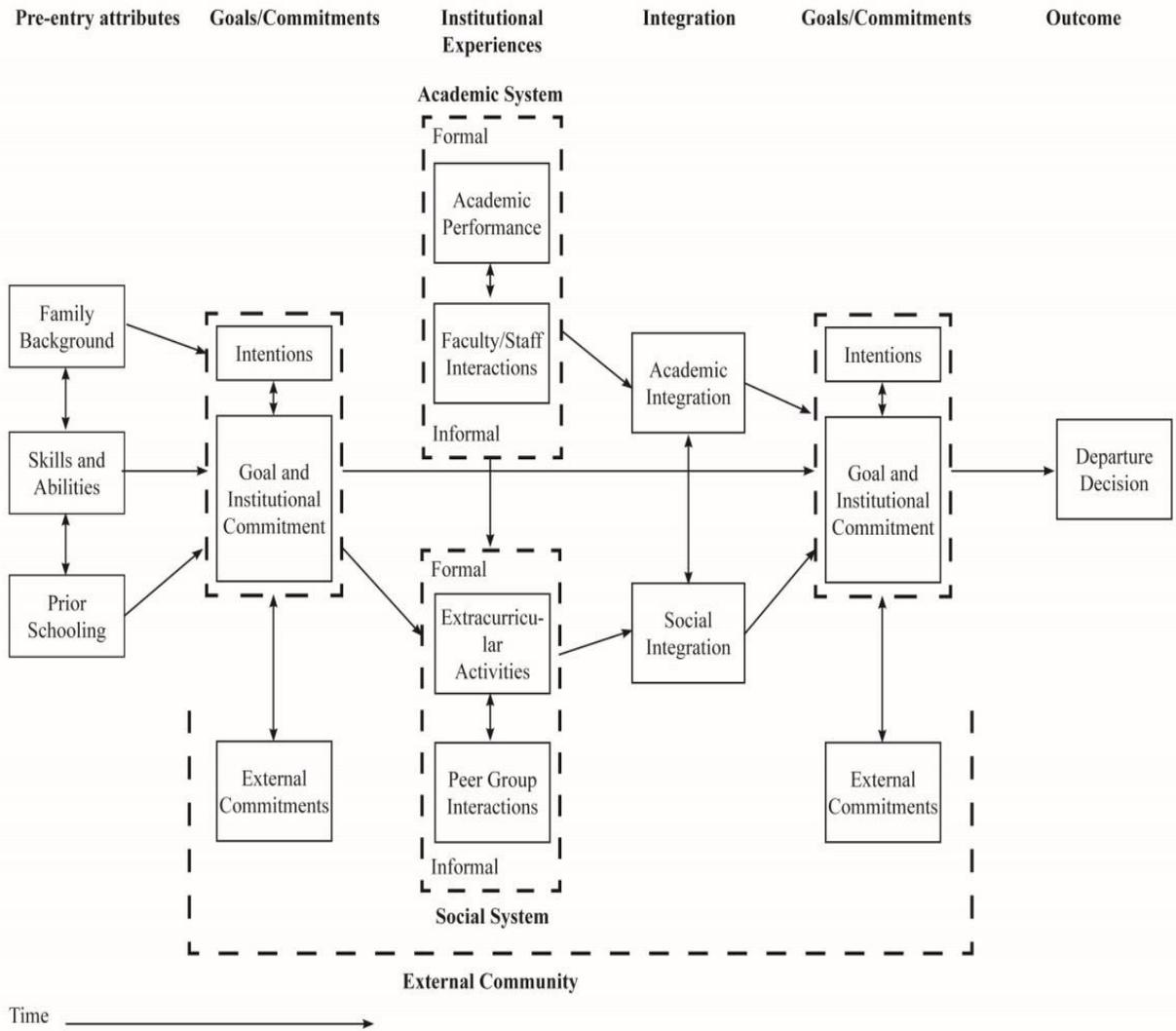


Figure 1. Tinto's Six Stages of Environmental Conditions

Empirical Persistence Studies

Student Departure Theory is one of the most widely used theories used in student persistence and departure research. Previous studies typically used data from a sample of students such as freshman or sophomore standing to address issues related to high school grade point average, race, gender, socioeconomic status, self-determination, first-year students, community colleges, living learning communities, and student-institution fit as a means to

studying the effects why students leave college prior to completing a bachelor's degree (Bowman, & Denson, 2014; Guiffrida, Lynch, Wall, & Abel, D., 2013; Palmer, Davis, & Maramba, 2011; Purdie & Rosser, 2011; Schudde, 2011; Sparkman, Maulding, & Roberts, 2012). With similar studies appearing to only have a primary focus of first and second year students, this study addresses a sample of students who have received little direct empirical attention- undergraduate seniors. Specific attention to this population would allow educational leaders to target strategies that support retention and graduation efforts for undergraduate seniors. In turn, this study may assist in increasing institutional graduation rates with students reaping the tangible benefits of graduation such as employment, higher income levels, and better health benefits in comparison to those with a high school diploma or less (U.S. Department of Health and Human Services, 2013; Zaback, Carlson, & Crellin, 2012).

This study examines one dependent variable: persistence to graduation for undergraduate seniors attending a 4-year, moderate research, doctoral granting, public university located in the Midwest region of the United States. The following sections describe each of the variables proposed for use in this study in greater detail by addressing their connection within the current literature and theory.

Dependent Variable

At the end of each academic school year, approximately 1 million college seniors will officially earn a college degree, completing the academic requirements necessary to receive a bachelor's degree (Snyder & Dillow, 2015). While college students bring with them to college various demographic and pre-college education factors, they will also experience various factors that will shape whether or not they will persist towards earning a college degree. According to

Tinto (1993), the decision to stay or leave college is a function of the student's personal and academic background and how well he/she integrates into the academic and social life of their campus. Although limited literature specifically dedicated to college seniors exists to address persistence in the last year of bachelor's degree attainment, a large number of literature addressing the undergraduate experience suggests that a series of changes and transitions that influence student growth beginning in the freshman year continue through to graduation (Astin, 1993). Understanding the senior year of college for is a critical transition during their academic career as students are began to experience the excitement of leaving college, the realization of finding employment, paying back student loans, and the uncertainty of what's next in their lives. Pascarella and Terenzini (2005) conclude that college graduates typically have a greater sense of well-being, and are likely to earn incomes up to 60 percent higher than their non-graduating counterparts. Henscheid (2008) identifies the senior year as an important transition point for many college students, colleges and universities. As institutions must also take an intentional look at steps to help students bring closure to their collegiate experience and accomplish the final undergraduate transition successfully.

Independent Variables

Admitted college students bring with them various characteristics or inputs. These characteristics fall into three categories: demographic, pre-college education factors, and college experiences. For the purposes of this study, demographic characteristics consist of ethnicity, gender, and socioeconomic status. Pre-college education factors include high school grade point average. Seidman (2005) stated that retention is a campus-based phenomenon and each college has its own expected rate of retention given the characteristics of those students admitted.

College experiences will be defined within this study as earned college credits, cumulative college GPA, and enrollment status. Astin (1997), Davidson, Beck and Milligan (2009), and DeBerad, Speilmans, and Julka (2004) argue that input variables can be used to predict student outcomes. Astin (1993), known for his research on student involvement, stated that the single input variable known to predict student persistence and retention is a student's academic performance while in college, or in other words, their grade point average. He also stated that the more prestigious the college(s), the more an institutions admissions staff tend to control these variables. Students with the desired input characteristics are selectively chosen, increasing their chances of persisting to graduation.

Demographic Characteristics

Race/Ethnicity. Earning a college degree is a dynamic process for many students. Personal characteristics such as race/ethnicity can either impede progress or can be an advantage, increasing the probability of attaining a bachelor's degree (Baker & Robnett, 2012; Carter, Locks, & Winkle-Wagner, 2013; Guiffrida, Lynch, Wall, & Abel, 2013). Research shows that various ethnicities maintain different rates of completion suggesting that race/ethnicity is related to persistence and graduation (Stoecker, Pascarella, & Wolfe, 1988; Peltier, Laden, & Matranga, 1999; Reason, 2003; Hu & St. John, 2001; Pascarella & Terenzini, 1991, 2005; Tinto 1975, 1993; DesJardins, McCall, Ahlburg, & Moye, 2002; Paulsen & St. John, 1997, 2002; Astin 1996). White students persist towards graduation at higher rates than students of minority status. Nationally, in 2007, the graduation rates for this cohort of students completing within four years was 39.4% with Whites making up 43.3%, Blacks 20.8%, and Hispanics 29.8% (US Department of Education, National Center for Education Statistics [NCES], 2014). When students within

this same cohort are measured over a 5-year period, graduation rates increased substantially to 55.1%, with Whites at 59.1%, Blacks at 35.5%, and Hispanics at 46.4%. Similar increases were observed for those students graduating within 6 years suggesting many students, regardless of race/ethnicity, need time and supports in place that facilitate completion.

The research on race/ethnicity among college students is no longer relatively young. Tinto's (1993) theory on student departure set the tone for race, emphasizing the importance of support communities for various racial and ethnic student groups who may experience difficulties transitioning to college and becoming independent. While Tinto's theory suggests that the transition to college for students is important, other studies suggest that the transitional phase is of growing concern for minority students. This phase sets the stage for later college success (Terenzini, Rendón, Upcraft, Millar, Allison, Gregg, & Jalomo, 1994; Hurtado, Carter, & Spuler, 1996; Padilla, Trevino, Trevino, & Gonzalez, 1997). Tinto (1993) also argued that in addition to the transition period and integration of students, the college experience influences the likelihood of those students remaining in college. Understanding the needs of minority students may assist colleges and universities in developing policy, facilitating degree completion.

Studies show that certain groups of students, such as minority students (Attinasi, 1989; Rendón, Jalomo, & Nora, 2000; Tierney, 1992; Harvey, 2001), are more likely to leave college and not attain a college degree. According to Morley (2003), African-American, and Latino students have historically faced disadvantages in the American educational system. These students tend to arrive on college campuses with weaker academic backgrounds compared to their White counterparts. While a number of studies support Morley's claims that race, primarily African-American and Latino students are less likely to attain a college degree (Adelman, 1999; Astin, 1993; Hu & St. John, 2001; Mingle, 1987; Mow & Nettles, 1990). Additionally, Baker

and Robnett (2012) determined that the experiences of students once they enter college significantly influence their success. Suggesting that the educational experiences of African American and Latino students prior to college place them at a severe disadvantage compared to other groups. As with race and ethnicity, gender also has an impact on student persistence.

Gender. Most of the growth in higher education occurred at the conclusion of World War II during the 1940s. This came with the inauguration of the GI Bill, which saw more than one million ex-GIs take advantage of pursuing a college education. This expansion created a tremendous gender gap in higher education as men overwhelmingly outnumbered women attending college. In 1947, 71% of the total college enrollments were men (Snyder, Dillow, & Hoffman, 2008). During the 1960s and 1970s more women began to enroll in college because of economic issues such as the need for two-family incomes, and divorce which forced women into the workforce (Upcraft & Gardner, 1990). Tinto's (1975, 1987, 1993) student departure theory states that a student's individual attributes such as gender have varying degrees of effect on the support needed by these students when entering or while enrolled in college. His research determined that gender was related to a student's propensity to drop out. Tinto also noted that women tend to leave college more for social reasons such as family rather than academic issues. Conversely, college departure for women was shown to be more voluntarily when compared to men, who were more likely to stay in college until involuntarily dismissed due to poor academics. While a number of studies support Tinto's claim that gender is related to student persistence (Christinsen & Heavey, 1990; Galicki & McEwen, 1989; Astin 1993; Lewallen, 1993; York, Bollar, & Schoob, 1993; Kane & Rouse, 1995; Jacob, 2002; Charles & Luoh, 2003; Reynolds & Burge, 2004; Riegle-Crumb, 2007; Conger, Long & Iatarola, 2009), there are studies that suggest that gender is not an influence on persistence.

While some past studies have shown conflicting results with regard to gender, more recent studies continue to suggest that gender still has an influence on persistence. According to Moores and Klas (1989) and Walton (1992), gender was not found to significantly be related to a decision to drop out or persist. However, according to Mortenson (2003), Goldin, Katz, & Kuziemko (2006) and Bergman, Gross, Berry, & Shuck (2014), women enroll more often and outperform men when pre-determinants such as: high school grades, standardized test scores, and college prep coursework are factored into the analysis. These factors, in combination with societal changes of women in the workforce, such as marriage and greater economic benefits of college for females, all contribute to the disparity observed within the literature.

More women are now women attending and completing college in larger numbers than men. During the fall 2016 academic year, over 20.5 million undergraduate students were enrolled in college, of which, 11.7 million (57%) were women and nearly 8.8 million (43%) were men (Snyder & Dillow, 2015). Both enrollment and completion rates among females continue to be higher than their male counterparts. Data from the National Center for Education Statistics, show that in 2011-12 over one million bachelor's degrees were awarded to females compared to 765,000 to males (Snyder & Dillow, 2015). These data also show that female students were less likely to leave college during their third and fourth year(s) of college when compared to males.

Socioeconomic Status/Financial Aid. In the 1960s, a serious investment was made in higher education, providing equal financial opportunities for students to attend college. During this time, the federal government became extensively involved in student financial aid, aiming to offer equal educational opportunities to students, regardless of their economic status (McPherson & Schapiro, 1999). Tinto's (1975,) theory on student departure does not give adequate

information on the role of finances on a student's decision to remain in college. He later revisited the role of finances and how critical they are to a student's higher educational career, particularly at the point of entry into college. He suggests that finances influence dropout directly in terms of financial need and those students who are from economically disadvantaged backgrounds, are most affected as finances are central to continuance.

For most students, finances occur within a broad context of costs and affecting the educational experience. When a student's experiences are positive, they are more likely to accept whatever financial burden in order to continue attendance compared to when those experiences are unsatisfactory. Tinto (1993) concludes that future researchers must be aware that finances are only one component of a much larger matrix of factors affecting a person's determination of the total costs and benefits of continued attendance. Many researchers agree that financial challenges encountered by students negatively impacts persistence to graduation specifically with regard to students from disadvantaged backgrounds, low-income families and/or maintain first-generation status (Bozick, 2007; Hurst, 2010; Martinez, Bilges, Shabazz, Miller, & Morote, 2012; McCormick, Moore, & Kuh, 2010; Mortenson, 2007; Stuber, 2011). While obtaining a college degree is viewed as important, these researchers agree that students from high risk populations are less likely to attend college, persist, and graduate regardless of their academic ability when compared to peers from higher income families or those who are not first-generation students. In an effort to test the models of Vincent Tinto, there is a growing body of research that examines the effects of student financial aid on student persistence. As previously mentioned, the original Tinto model (1975) does not address finances or financial aid in depth. Much of the early research on student persistence tended to focus on influences such as: academic performance, social integration, and personal issues. John Bean's (1983) model of

student attrition was one of the first to identify student finances and financial aid as a potential reason for students dropping out of college. This model began to shed light on the influence of finances on students and the impact of financial aid on student persistence and graduation. Researchers such as: Cabrera, Nora, and Castaneda, (1992); DesJardins, Ahlburg, and McCall, (2002); Dowd and Coury, (2006); DuBrock and Fenske, (2000); Paulsen and St. John, (2002); St. John, Paulsen, and Starkey, (1996); Cofer and Somers (1999), and Singell and Stater, (2006) all examined the effects of federal financial aid on student persistence and determined that it varied depending on the student background. While others: DesJardins, Alhburg, & McCall (2002), Lichtenstein (2002) and Singell (2004) investigated the effects of institutional scholarships, grants, and financial aid on persistence and graduation rates determining the same outcome, depending on the student background.

There are many educational barriers for students, with finances being of major concern for most students and potential students and their families. In a studies conducted by Simpson, Smith, Taylor, and Chadd (2012) and Dwyer, Hodson, and McCloud (2013), each focusing on the financial decisions a student makes (while enrolled or not enrolled), they concluded that degree attainment is negatively impacted when individuals are concerned about incurring high levels of debt that may prevent them from buying a home or raising children. A study conducted by the Bill and Melinda Gates Foundation states that the main reason students drop out of college is because they need money to finance their college education (Johson, Rochkind, Ott, & DuPont, 2011). The ability to pay for college has fallen on to students and/or their families. For the 2012-13 academic year, the annual average price for tuition, room, and board were estimated to be \$29,408 at four-year institutions, 10.3% higher than average costs in 2009-10 (Snyder and Dillow, 2015). Even though there are financial programs offering support, many students and

their families must rely on loans. During the 2012-13 academic year, about 85% of undergraduate students received some form of financial aid (grants, loans, work study, and or aid of multiple types). Policy shifts in higher education have changed the way financial aid has influenced student enrollment and persistence decisions (Chen & DesJardins, 2010). Many students face the challenge of covering the costs of attending college and persisting to earn a college degree, other pre-college factors such as: standardized test scores and high school grade point average also influences persistence and graduation.

Pre-College Factors

High School GPA. One variables that has been found that impact a student's chances to attain a bachelor's degree, is high school grade point average. Shown to be the strongest predictors of student success, this variables is the most widely used measures of predicting student success, persistence, and graduation rates (Clinedinst, Hurley, & Hawkins, 2011). Maintaining at least a 3.0 high school grade point average has been correlated with the successful completion of college courses and persistence to graduation (ACT, 2014).

With the increased accountability placed on higher education leaders to improve persistence beyond the first year of college, and to increase graduation rates, college and university leaders are evaluating outcomes that measure the progress towards degree completion. This effort is done in hopes of identifying how students with at-risk pre-college characteristics such as family background, skills and abilities, and prior school attributes, are influenced to depart regardless of their intentions or their educational goals. Tinto (1993) contends that individuals enter higher education institutions with various backgrounds and personal attributes such as pre-college characteristics (high school grade point average). His theory states that each

of these characteristics have direct and indirect effects on a student's decision to depart and/or complete a bachelor's degree. While many researchers agree with Tinto that high school grade point averages have a strong influence on persistence and graduation (Adelman, 2006; Allen & Robbins, 2010; Allen, Robbins, Casillas, & Oh, 2008; Astin, 1993; Astin, Tsui, & Avalos, 1996; Astin & Oseguera, 2003, 2005; Bean, 1980; Braxton, Duster, & Pascarella, 1988; Noble & Radunzel, 2007; Pascarella & Terenzini, 1980; Robbins, Allen, Casillas, Peterson, & Lee, 2006), there are some studies that do not support the position that high school grade point average influence persistence to graduation.

According to Fleming and Garcia (1998) and Fleming (2002) high school grade point average is not as predictive as it relates to student persistence. They also state that this is especially true among students of color. Scott-Clayton (2012) also does not agree that this characteristic influences student persistence and has challenged colleges to use alternate tests with additional information based on the student's prior education. In addition, many colleges use several student measures for students to be considered during the admissions process in an effort to help them identify which students will succeed in college. These measures, which include personal surveys and personality tests, are academically related and are used in addition to high school grade point average, standardized test scores (Clinedinst, Hurley, & Hawkins, 2011). A study by Saupe and Curs (2008) discussed a procedure for developing enrollment management scores, to include a graduation score which would predict whether a student would graduate within six years of enrolling. The use of pre-college characteristics such as high school grade point average can be easily measured to identify successful college students. But, research has also shown that this characteristic alone does not correlate to persistence and additional

research is needed to further discussion on whether pre-college characteristics can/should be modified.

College Experience

The main focus of this section is to identify some of the characteristics of a students' college experience that are relevant to the current study. With the various amounts of research on degree completion among college students, research has shown that a student's college experience such as: enrollment patterns, earned college credits, and cumulative grade point average, have a relationship with student degree completion.

College Enrollment. Enrollment patterns can help determine when or if a student in college will graduate. These patterns impact the educational outcomes and affect certain populations of students differently (Calcagno, Crosta, Bailey, & Jenkins, 2007). A study by the National Center for Education Statistics (2014) used credit attainment as an outcome for students progressing towards earning a bachelor's degree. The study used data comparing those students who had earned 24-30 credits, full-time status, in their first year to those with who earned fewer than full-time status, or were part-time students. Full-time students earned a bachelor's degree at a rate of 91% compared to 45% for those who enrolled part-time. Earned credits provided a basic measure of persistence through college. Adelman (2006) noted that students who fall to part-time status are less likely to persist in college.

Enrollment in remedial courses has been utilized as an enrollment pattern element predicting persistence to graduation. Remedial classes are college courses that some students must take in order to build up math, reading, or English skills before they are allowed to take regular college courses. Underprepared students sometimes fall behind by enrolling in remedial,

non-credit bearing courses and are not aware that these credits do not count towards graduation (Deil-Amen & Rosenbaum, 2002). Statistics show that 42% of undergraduate students take a remedial course in college (US Department of Education, NCES, 2011). Remedial courses are necessary for many college students, though research on remediation, focusing on four-year institutions suggests that students who have to take remedial courses leave college at a higher rate than those who enroll in regular credit courses (Attewell, Lavin, Domina & Levey, 2006; Bailey & Alfonso, 2005; Martorell & McFarlin, 2007).

College Grade Point Average & First Year Grade Point Average. Academic performance, meaning cumulative grade point average in college, is a significant predictor of student persistence and graduation. Literature on college academic performance and degree completion focuses on the relationship between college grades and student persistence from year to year (DesJardins, Ahlburg, & McCall, 2002; Hu & St. John, 2001; Tinto, 1987). Tinto (1993) developed a longitudinal model in regards to persistence and/or dropout behavior primarily as the quality of student interactions with the academic system of the college or university. His model shows that first year grades and goal commitment(s), degree expected and importance of graduating from college, influence not only how the student will perform, but how the student will interact and become integrated into the academic system.

Academic integration is determined by the student's academic performance and level of intellectual development. Levels of academic integration lead to what the model terms as commitments. These commitments consist of a student's dedication to the institution he/she is attending and the goals associated with graduation. Bean (1985) also states that academic integration and first year grades are useful predictors of academic success and retention and that college degree commitments can be viewed as a form of academic goal motivation. Pickering,

Calliotte, & McAuliffe (1992) also agreed that academic integration and first year grades were strong predictors to predict retention among African American students. Braxton, Sullivan, & Johnson (1997) also agreed with first year grade point average being a key in retention but emphasized the role of social engagement as well. DesJardins et al. (1999, 2002) also states that a successful grade point average lowers the risk of dropout. Robbins, Lauver, Le, Davis, Langley, & Carlstrom (2004) found that performance based and goal-based motivation constructs were also predictive of both academic performance and persistence. Pascarella and Terenzini (2005) in a review of college success literature state that the first-year college grade point average play a role in predicting educational attainment, persistence, and graduation. Allen, Robbins, Casillas, & Oh (2008) also found that first year grade point average was a strong predictor of retention and graduation, and that academic-specific motivation along with social engagement had a direct effect on retention.

Guiffrida (2006) and Reason (2009) challenged Tinto's theory and asserted the need for the theory to recognize the impact of student motivational orientation on student persistence decisions and highlighted the need to better understand relationships between student motivation and academic outcomes to increase the understanding of student persistence.

Good grades indicate to the student a realization of academic potential which decreasing the will of a student to dropout. A student's grade point average is a strong measure of academic performance. Performance pertains to class or subject matter achievement, typically measured by grade point average. Grade point average is expressed on a five-point continuous scale, ranging from 0 points (F grade) to 4 points (A grade). It is suggested that students who maintain a college grade point average of C average or lower are less likely to persist in college than their peers with higher grade point averages (Hu & St. John, 2001; Kahn & Nauta, 2001). College

students who perform poorly are subject to a lower financial return to remain enrolled (Stinebrickner & Stinebrickner, 2014).

Major Declaration. For many college students the idea of choosing a major can be intimidating, overwhelming and exciting. Many students (and their parents) walk on to college campuses and universities with the notion that the key to graduating within four years is choosing a major and staying with it. Most bachelor's degree programs in the United States have been structured to be completed within four years. Tinto (1993) states that the level of a student's academic and social integration with the institution leads to commitment to institutions and to personal goals associated with graduation and career. Wyckoff (1999) suggests that a student's commitment to educational and career goals is the strongest factor associated with persistence to degree completion. Elliot (1999) states that achievement goals are important measures of a student's emotion and motivation. Harackiewicz, Barron, Tauer, & Elliot (2002) believe that students who enter college without declaring a major have not set an achievement goal for themselves. The first few weeks of a new college student are the most critical, as students reevaluate their major decision (Upcraft & Gardner, 1990). There are also students who change their major and are sometimes put at risk for attrition, however Anderson, Creamer, & Cross (1989) found that students who changed their majors attempted and completed more credit hours than those students who had declared. Micceri (2001) stated that students who changed their major at least once during their college experience proceed to graduate at a rate ranging between 70-85% compared to students stay with their original major declaration of 45-50%. Studies tend to show that most major declarations occur after students enter college and during the "college experience. To some this can be viewed negatively because a student changing their major could keep students in college past their intended graduation date and drive up their debt. While others

view it as encouraging and a positive indicator of engagement as well as giving the student a structured path towards graduation.

College Major. There are various ways a student can persist in college. Many students enter college and continue in a particular major, while others can change their major and continue to persist at any particular college or university. One focus pertaining to student persistence is the choice of a college major as students who attend college often expect to obtain a lucrative job than they would if they had not attended college. Tinto (1993) states that the level of a student's academic and social integration with the institution leads to commitment to institutions and to personal goals associated with graduation and career. College persistence may be related to a major. Students whose major is oriented to a specific profession (business, engineering, education, or health) may have persistence rates that differ from students with other majors. Professional-oriented majors may reflect a greater goal commitment (Leppel, 2001). Thomas and Gordon (1983) found that majoring in hard or technical sciences (in contrast to education and arts & sciences) had a statistically significant positive effect on educational attainment. However, studies by Alexander and Eckland (1977) and Pascarella, Smart, Ethington, and Nettles (1987) did not find a relation between academic major and overall educational attainment. There are students who choose majors within Arts and Sciences that are not directly linked to a particular job; they may have chosen those areas of study because of interest. Pascarella and Terenzini (1991) suggests that students majoring in the arts and social sciences or humanities indirectly enhanced bachelor degree completion by positively influencing grades.

Further literature on persistence and college majors examines how gender, race and socioeconomics are related to choice of major. Green (1994) found that male students who major in business came from wealthy families compared to female students. He stated that males

regardless of socio economics were motivated by money and status in their choice of major. In comparison, women from wealth families felt more financially secure and were more willing to major in areas not directly related to a job or career. Thomas (1985) suggests that African American students aspire to majors that lead to high occupational status (Business, Engineering) were more motivated to persist than students who had lower aspirations.

Time to Senior Status & Graduation. Timely bachelor's degree completion at most colleges and universities is a growing priority. Considering that most bachelor degree programs in the United States are structured to be completed in four years, the amount of time students actually spend pursuing a college degree has increased over the years (Adelman, 1999). Many institutions are starting to develop plans to encourage students to complete their program of study within four years. Tinto's (1993) theory on student departure states that the level of a student's academic and social integration at an institution leads to a commitment to the institution and personal goals associated with graduation and career. He notes that interactions with faculty along with a sense of belonging are likely to enhance a student's academic success. While other studies agree with Tinto that academic and social integration are keys to a student's success (Bean, 1983; Pascarella & Terenzini, 1991; Cabrera, Nora, & Castaneda, 1992) there are some studies such as Braxton (2000) that suggest that researchers should attempt to revise Tinto's approach and pursue a new theoretical perspective to enhance a new scholarly inquiry on the departure puzzle. Studies by DesJardins, Kim, & Rzonca (2003) show that factors attributing to whether a student graduates in four years or less include: the more credits a student takes while enrolled and high academic level performance, students who enter college with prior college credits, and a student's choice of major all play a role in increasing the odds of a student graduating in four years or less.

Summary

In summary, research on degree completion is extensive. There are a number of factors, many of which overlap, that attribute to why students depart from college prior to earning a bachelor's degree. Although research is continually being conducted in all facets of higher education, gap in the literature exists when addressing the degree completion of college seniors. While most retention and completion research focuses its attention on the first and second year experience, another critical time in a student's academic experience, senior year is too often missed.

This literature review identified some recurring themes of student retention focusing on first and second year students. It also provides an overview of the growth and development of higher education beginning in the 1950s and extending into current growth and developments. This review of literature also examined some historical models that influenced college student retention, persistence, attrition, dropout and graduation. Predictors have been shown, and are available through the institutions research department that point to first year students and senior years as being important transition periods.

Studies have examined the relationship between demographic, precollege, and college experience factors when determining degree completion. The variables of interest used in to predict graduation rates are gender, ethnicity, socioeconomic status, high school grade point average, earned college credits, cumulative grade point average, length of time to senior status, major declaration, college major, and enrollment status. However, gap in the literature that is stressed in this research is the degree completion of college seniors. While most retention and completion research focuses its attention on the first and second year experience, the senior year is often missed.

CHAPTER III

METHODOLOGY

Purpose Statement

The purpose of this study is to examine the demographic characteristics, pre-college education factors, and college experiences of students as they relate to predicting bachelor degree completion of undergraduate students maintaining senior status within an eight-year period. This study will utilize a binary logistic analysis to address the question of degree completion.

Research Question

The following research question will inform this study:

1. What demographic characteristics, pre-college education factors, and college experiences predict college seniors' bachelor's degree completion within eight years?

This chapter describes the methodology proposed for this study to determine persistence to graduation for undergraduate students with senior status. This chapter will include the research design, the description of the population and sample, data collection, variables, a description of the tools used to analyze the data, and a conclusion of the limitations.

Research Design

This study on college seniors who dropout is a longitudinal, quantitative study that uses a secondary data set. The sample of college students includes first time in college, undergraduate students who were first enrolled in fall 2005 through fall 2008. The second sample of students includes students who have earned at least 85+ credits and maintain senior standing at a Michigan, public, four-year institution where they were last enrolled during the fall 2008 semester.

This study used existing secondary data of a public university, a non-experimental research design is proposed to answer the research question. Quantitative research is defined as collecting and analyzing numerically expressed information to explain a particular phenomenon, in this case, college senior graduation. This study is non-experimental in design because students within the sample will not be controlled, manipulated, or altered in any way, defining the nature of non-experimental design (Creswell, 2009). Non-experimental research relies on methods such as surveys, secondary data, and case studies (Muijs, 2011). For this study, the researcher had no control over the variables that may influence the outcome of college seniors earning a bachelor's degree. The researcher did not influence any of the demographic characteristics, pre-college education factors, and college experiences of students.

This study utilized existing institutional data longitudinally, spanning a six-year period, to address change over time. These data will be used to provide robust evidence for the findings related to senior student persistence to graduation than what could be concluded from one year of data.

Data Collection

This study will use secondary data from a mid-size, Midwestern public institutions' Institutional Research Office. These data will include student gender, high school grade point average, and college grade point average. In order to gain access to the secondary data, the Institutional Research Office requested permission from the institutions Provost's Office to collect the data needed for this research. The Institutional Research Office explained the benefits of this research to the institution and other higher education institutions and will share the results

of the research conducted. The Provost's Office granted permission to permit the research with the data collected.

For the protection of the participants of this study, participants were de-identified by the Institutional Research Office. Data for this research was entered into SPSS 23, a statistical software package, by copying an Excel spreadsheet into the software system. All gathered information related to the participants will be destroyed one year after the completion of this study. Since secondary data was used, there is little to no potential harm and no benefit to the participants as data were collected as part of a prior administration or research activity.

Population and Sample

In this study, the population included all students who have earned at least college senior status from a mid-sized, major, public, Michigan four-year institution but have not graduated within six-years from entering college.

The sample for this study consists of students who were admitted into the institution in the fall of 2005 through the fall of 2008 and have earned senior status within four years but failed to graduate within eight years. This sample includes transfer students from various community, public, and private institutions. This study used a purposive sample, this type of sample allows the researcher to focus on a particular characteristic of a population allowing it to become a non-biased focus that is typically not generalizable (Muijs, 2011). This cohort of students was chosen because the retention and graduation rates at the institution were the lowest of the other 15 public institutions within the state. Findings may assist in identifying the factors leading to dropout whereby increasing graduation rates.

Site

This study was conducted at a 4-year, moderate research, doctoral public university located in the Midwest region of the United States. The college serves more than 18,000 undergraduate students and offers more than 200 majors, minors, and concentrations delivered through the University’s College of Arts and Sciences; Business; Education; Health and Human Services, and Technology with five satellite locations throughout the state. This particular university was selected because it reports a 6-year degree completion of just under 40% and ranks among the lowest in the region.

Variables

The data collected for this research will consist of the following dependent and independent variables. Table 1 provides an overview of each of the variables and how they will be operationalized.

Table 1. Independent and Dependent Variables

Variable	Type of Variable	Level of Measurement	Operationalization
<i>Independent Variables</i>			
Gender	Demographic	Categorical	Male, Female
Ethnicity	Demographic	Categorical	Dept. Of Ed.
Financial Aid	Demographic	Categorical	Yes, no
High School GPA	Pre-College	Continuous	0 to 4.0
Earned Credits	College Experience	Continuous	85+
Cumulative GPA	College Experience	Continuous	0 to 4.0
First Year GPA	College Experience	Continuous	0 to 4.0
Enrollment Status	College Experience	Categorical	Full-time, Part-time
Time to Senior Status	College Experience	Continuous	0 to 8
Major Declared	College Experience	Categorical	Yes, No
<i>Dependent Variable</i>			
Degree Completion		Categorical	Yes, No

Gender was identified as either male or female; ethnicity, which was categorized by the Department of Education; socioeconomic status, was determined by the annual income stated on the student FASFA; high school grade point average included scores that range from 0.0 to 4.0; and earned college credits ranged from a minimum of 85+ credits earned to degree completion. The minimum of 85+ credits is required for senior status academically; cumulative (college) and first year grade point average includes scores that range from 0.0 to 4.0; enrollment status was identified as full-time (12 or more credits), and not full-time (12 or less credits); length of time to senior status ranges from 0 to 8; and major declaration will be identified as declared or not declared. The dependent variable is defined as degree completion and was identified as either yes or no, the student completed their degree within eight years.

Data Analysis

Data for this study was collected from the university's student database, and downloaded for analysis. The analysis used a binary logistic regression analysis to predict the effect of the independent variables on the dependent variable. Binary logistic regression analysis is chosen because the dependent variable is categorical with two outcomes. The objective of the analysis will be to determine the most predictive model for graduating students who have earned college senior status.

Descriptive statistics was used in the analysis to review for accuracy, check for any missing data, asses for outliers, and analyze how the data fits within the assumptions of the statistical procedure (Mertler & Vannatta, 2010). Descriptive statistics run on continuous variables will show mean and standard deviation of the secondary data supplied. These variables include: gender, race, major declared, financial aid awarded, senior status, and college major.

Table 2. Statistical Analysis Test for the Research Question

Research Question	Types of variables	Statistical Analysis
1) What demographic characteristics, pre-college education factors and college experiences predict college seniors' bachelor's degree completion within eight years?	<ul style="list-style-type: none"> • Ethnicity –Categorical (Independent Variable) • Gender –Categorical • Socioeconomic Status: Federal Pell/Financial Aid Eligibility – Categorical (Independent Variable) • HS GPA – Continuous (Independent Variable) 	Binary Logistic
	<ul style="list-style-type: none"> • Earned College Credits – Continuous (Independent Variable) • Cumulative (College) GPA – Continuous (Independent Variable) • First Year GPA-Continuous (Independent Variable) • Time to Senior Status-Continuous (Independent Variable) • Major Declaration-Categorical (Independent Variable) • Enrollment Status – Categorical (Independent Variable) • College Seniors earning a degree – Categorical Dependent Variable 	

Frequencies and percentages will be run to reflect the categorical variables: gender, race, major declared, financial aid awarded, senior status, and college major. Table 2 presents the dependent and independent variables for the research question and the statistical test that will be used to analyze the data.

Methodology Limitations

As with any research, the researcher was faced with barriers and/or limitations that were beyond their control. Limitations (in research) are the restrictions of a study over which one has no control (Rudestam & Newton, 2007). In this study, the researcher did not control the external conditions impacting the students of this study. These external conditions may include: curriculum changes, major/minor changes, job opportunities, and work status. Because secondary data was used, this study is limited in other available variables known to influence student persistence such as: transfer function, family problems, physical/mental disabilities, and substance abuse issues.

In this study, the research acknowledges the socioeconomic status of a student, the Family Educational Rights and Privacy Act (FERPA) restricts access to this information. Although, financial need for cost of attendance will be available, this research was limited because data was being collected only from one institution and was limited to college seniors because of ease of access to the site and the enhanced retention efforts of the institution.

Summary

In summary, this chapter describes the methodology that was used to analyze the persistence of students with senior status at one Midwestern institution. This chapter also overviewed the research design, the population and sample, and the data collection procedures. The variables for this study were identified to include an explanation of the analysis procedures.

CHAPTER IV

PRESENTATION OF DATA

Introduction

The purpose of this study is to examine the demographic characteristics of college seniors who leave college without earning a bachelor's degree. This study uses a full sample of students who obtained 1 to 84 credits and compares this sample to students who attained senior status by earning 85 or more credit hours over an eight-year period (fall 2005 through fall 2013). The comparison of each sample was used to determine the influence of variables on graduation rates between and among groups over an eight year period. Next, descriptive statistics, correlations, and binary logistic regressions for all variables are presented. Following the analysis of the descriptive statistics, correlations, and binary logistic regression, the research question is presented with a description of the test results. Finally, the chapter concludes with a summary of the findings.

The variables reviewed in this study include student demographics (ethnicity, gender, socioeconomic characteristics, and financial aid awarded); pre-college education factors (high school grade point average); and college experiences (earned college credits, first year grade point average, cumulative grade point average, major declared, and college major). All variables except for gender, ethnicity, declared major, and financial aid awarded are continuous. Gender, ethnicity, declared major, and financial aid awarded are categorical variables.

For this study, males were the reference category. Student demographics were prepared with gender identified as either male or female. The categories defined by the Department of Education were utilized to disaggregate ethnicity (White, Black or African American, Hispanic or Latino, Asian, Pacific Islander, and Unknown) along with socioeconomic status which was

determined using the annual income stated on the student FASFA. High school grade point average included a continuous range of scores extending from 0.0 to 4.0. Additionally, the college credits earned by students ranged from a minimum of one credit to the total number earned for degree completion. The minimum threshold of 85 credits was required for students to academically reach senior status while the cumulative (college) and first year grade point average include continuous scores ranging from 0.0 to 4.0. The enrollment status of students was identified as either full-time (12 or more credits) or not full-time (less than 12 credits); and the major declared status identified whether a student declared or did not declare a major. Finally, the dependent variable was defined as degree completion within an eight-year window extending from 2005 to 2013 and was coded as either yes or no representing whether a student graduated or did not graduate.

The full sample for this research consisted of 9,271 students who were first enrolled in fall 2005 through fall 2013. The second sample of students (3,968) were selected from the full sample once they earned senior status of 85 or more credits at the institution. These two groups were used to see which variables influenced graduation rates to determine if the differences exist based on the status of the students.

Descriptive Statistics

This section describes the descriptive statistics for each of the variables used within this study. First, the results of the categorical variables are described using percentages providing an overview of the proportion of students in each category. Next, the results of the continuous variables are described using the mean and including the standard deviation of the data. The

presentation of means for continuous variables provides information on the average student for the variables presented.

Descriptive statistics were run for all of the categorical variables including gender (female, male), race (White, Black or African American, Hispanic or Latino, Asian, Pacific Islander, and unknown); student status (graduation, major-declared, financial aid awarded, and senior status); and college major (Arts and Sciences, Business, Technology, Education, and Health and Human Services). Table 3 summarizes the descriptive statistics for each of the categorical variables. The following sections present the findings of this analysis.

Table 3. Descriptive Statistics for Categorical Analysis Variables

Variable	Full Sample	Senior Status
	N=9271 % of cell	N=3968 % of cell
Student Attributes		
Gender		
Female	41.3	38.3
Male	58.7	61.7
Race		
White	62.3	69.0
Black or African American	26.4	19.9
Hispanic or Latino	2.7	2.6
Asian	2.5	2.7
Pacific Islander	0.7	0.7
Unknown	5.4	5.0
College Experience		
Graduation – Yes	44.7	86.1
Major – Declared	80.1	80.7
Financial Aid Awarded – Yes	92.9	94.0
Senior Status - Yes	49.7	100.0
College Major		
Arts & Sciences	52.8	53.0
Business	12.0	11.3
Technology	7.3	6.5
Education	15.3	17.7
Health & Human Services	12.6	11.5

Normality was confirmed using tests for skewness and kurtosis for both samples of students addressing each of the continuous variables (high school GPA, total earned credits, cumulative GPA, and first year GPA) used within this study. Although checks for normality are not required when using binary logistic regression, by assuring normality within the data of a logistic regression, the analysis yields a more stable solution with less error. As such, normality was confirmed because the assumptions of linear regression are based on ordinary least squares algorithms particularly regarding normality. This is important because logistic regression applies a non-linear log transformation when calculating the odds ratios.

Gender

The majority of students in both samples are male students. The full sample consists of over 9,200 students, of which, the majority were males (58.7%) compared to females (41.3%) with a difference (17.4%) between the two genders. The senior sample, students who earned 85 or more credits, consisted of over 3,900 undergraduate college students, of which, males (61.7%) outnumbered the females (38.3%), noting a substantial difference (23.4%) between genders. In comparison, the number of females (-3.0%) declined within the senior status sample while the number of males (3.0%) increased once senior status was attained.

Race

The majority of the students from both samples were White. For the full sample of students, the majority (62.3%) were White when compared to the senior status sample (69.0%), it was also noted that the senior status sample contained nearly seven percent more students who were White. The number of students who were Black or African American declined once senior

status was attained. Within the full sample of students, the number of Black or African American students (26.4%) decreased by seven percent when compared to the number of Black or African American students within the senior status sample (19.9%). Nominal differences were observed between the other races within this study.

College Experience

The full sample of this study consisted of over 9,200 students. The senior status sample consisted of more than 3,900 students. More students from the senior sample were White, male, graduated, declared a major, and received financial aid when compared to the full sample of students in this study. For the full sample of students 44.7 percent graduated compared to the senior status sample (86.1%) which graduated nearly twice this amount. The variable *major-declared* showed similarities between both samples. Slightly fewer students in the full sample of students (80.1%) had declared a major when compared to students who had attained senior status (80.7%). Another variable within this study was financial aid awarded. Fewer students (-1.0%) within the full sample (92.9%) were awarded financial aid when compared to students in the senior sample (94.0%).

College Major

The majority of the students from both samples signed majors within the college of Arts and Sciences. For the full sample of students, the majority were Arts and Sciences majors (52.8%) when compared to similar numbers within the senior status sample (53.0%). More students (+0.7%) within the full sample of students (12.0%) were signed to a Business major when compared to students within the senior status sample (11.3%). The number of full sample students majoring in Technology (7.3%) when compared to students in the senior status sample

(6.5%) show a decrease of one percent. A 2.4 percent difference emerged between students who majored in education from the full sample (15.3%) and the percentage of students who had attained senior status (17.7%) and had declared majors. Slightly more students who majored in Health and Human Services were from the full sample (12.6%) when compared to students from the senior status sample (11.5%). Overall, the majority of students within both samples chose Arts and Sciences as a major followed by Education, Health and Human Services, Business, and Technology majors respectively. Students who had attained senior status showed increased participation in the Arts and Sciences (+0.2%) and in Education (+2.4%) when compared to the full sample. This same sample of students also experienced declines in Business (-0.7%), Technology (-0.8%), and Health and Human Services (-1.1%).

Continuous Analysis Variables

Descriptive statistics were also run for each of the continuous variables: total earned credits, college GPA, first year GPA, and high school GPA for this study. Table 4 shows the number of participants for each sample, the means, standard deviations, along with skew and kurtosis for each continuous variable analyzed within the study.

Table 4. Descriptive Statistics for Continuous Analysis Variables

Variable	Full Sample N=9271				Senior Status N=3968	
	Mean	SD	Skew	Kurtosis	Mean	SD
Total Earned Credits	76.09	55.73	0.10	-1.49	131.10	19.70
Cumulative GPA	2.44	1.08	-0.78	-0.26	3.10	0.49
First Year GPA	2.45	1.14	0.02	0.05	2.97	0.78
High School GPA	3.04	0.54	-0.77	0.05	3.18	0.51

Total Earned Credits

Students who attained senior status had on average earned 55 credits more than students from the full sample. However, while the means would suggest a 55 credit difference between groups, it should be noted that the standard deviations between both groups were found to be markedly different. Within this study, the standard deviation for the full sample (55.73) was much higher than for the students who had attained senior status (19.70), suggesting that the number of credits earned within the full sample varied around the mean much more than what was observed in the senior status sample.

Cumulative Grade Point Average

Students within the senior status sample earned higher grade point averages than students in the full sample. The cumulative grade point average shows a difference between the two groups as students within the senior status sample earned a grade point average (3.1) that was +0.7 points higher on a 4.0 scale than students from the full sample (2.44). Again, it should be noted that the standard deviations for both groups varied substantially as the full sample (1.08) grade point averages varied around the mean more than those from the senior sample (0.49). This finding suggests that cumulative grade point averages for students with senior status were more closely related to the mean with little variance than those of the full sample.

First Year Grade Point Average

Students with senior status earned higher grade point averages their first year of college than students from the full sample. The first year grade point average also shows a difference between the two groups as students within the senior status sample (2.97) earned a grade point average that was +0.52 points higher on a 4.0 scale than students from the full sample (2.45).

Standard deviation for the senior status sample (0.78) suggests that the grade point averages of students within the senior status sample were closely related to the mean and less than those from the full sample (1.14) that varied around the mean more.

High School Grade Point Average

Students in the senior status sample attained slightly higher grade point averages in high school than students in the full sample. The high school grade point average shows a difference between the two groups as students within the full sample had a slightly lower average grade point (3.04) than students within the senior status sample (3.18). The standard deviation for both samples suggest that the grade point averages were closely related to the mean with little variance. The standard deviation for the full sample was 0.54 compared to the senior status sample (0.51).

Overall, the means for senior status students were higher for each of the continuous variables and showed less variance among the standard deviations for each variable as well. The findings also show that for each of the continuous variables, except for high school GPA, within the full sample there was more variance around the mean when compared to the senior status sample of students.

Correlations

Table 5 presents the Pearson correlation for each of the continuous independent variables: total earned credits, cumulative GPA, first year GPA, and high school GPA were used to measure the dependent variable (graduation) within this study. A correlation tests was used to measure the strength of the linear association between two variables. Variance is presented to indicate how widely the variables in a group vary, if there is a relationship between

the variables, and the strength of that relationship. The following section will describe each relationship that emerged from the data results.

Table 5. Correlation Coefficients for Continuous Variables

Variable	(1)	(2)	(3)	(4)
(1) Total Hours Earned	1			
(2) Cumulative GPA	0.24**	1		
(3) HS GPA	0.10**	0.55**	1	
(4) First Term GPA	0.11**	0.64**	0.47**	1

Note: **Denotes that the correlation is significant at the 0.01 level (2-tailed).

The two most important continuous variables that influence a student persisting towards graduation are total hours earned and cumulative grade point average. The relationship between the variable *total hours earned*, which describes the amount of credits a student has earned, and *cumulative GPA*, describing the students overall grade point average, was a weak positive relationship ($r=0.24$). This relationship accounts for 6% of the variance between these two variables, suggesting with 99% confidence that students' cumulative grade point averages are influenced by the total amount of credit hours earned.

A second relationship from the Pearson correlation test was between *total hours earned* and *high school grade point average*, which describes the students' academic performance while in high school. This weak positive ($r=0.10$) relationship accounts for 1% of the variance between the two variables, suggesting with 99% confidence that the amount of credits that a student has earned is somewhat influenced by their high school grade point average.

A third relationship emerged as significant between *total hours earned*, and *first term GPA*, which describes the student's grade point average during their first semester in college,

was a weak positive ($r=0.11$). This relationship accounts for 1% of the variance between these two variables suggesting with 99% confidence that the students' first term grade point average is influenced by the total hours earned.

A fourth relationship emerged as significant between *cumulative grade point average* and *high school grade point average*. This moderate relationship ($r=0.55$) accounts for 30% of the total variance between these two variables suggesting that students within this samples college performance can be predicted with 99% confidence based upon their high school grade point average.

A fifth relationship emerged as significant with the strongest ($r=0.64$) existing between the variable *first term GPA*, and the variable *cumulative GPA*. According to Muijs (2011) this moderate relationship accounts for 41% of the total variance between these two variables and suggests with 99% confidence that the higher a student's first term grade point average, the higher their overall or cumulative grade point average will be in college.

Finally, a moderate relationship also emerged between *high school GPA* and *first term in college GPA* ($r=0.47$). This relationship accounts for 22% of the total variance between these two variables and suggests with 99% confidence that a student's high school GPA can predict their first term GPA in college.

In summary, cumulative grade point average produced the strongest significance with its relationship with high school grade point average (0.55) and first term grade point average (0.64) with a moderate total variance between this relationship. However high school grade point average and first term grade point average had the weakest relationships with total hours earned with a 1% total variance presenting little relationship with one another. The following section of this study will discuss findings using binary logistic regression analysis.

Analysis

Binary Logistic Regression Analysis

Table 5 presents a summary of the inferential results of a regression analysis for variables predicting graduation for the full sample of students and those students who attained senior status. The research question of this study examined demographic characteristics, pre-college education factors, and college experiences that predict a senior student's college bachelor's degree completion within eight years. The study incorporated each of the independent variables to determine their effect on the dependent variable – graduation.

A binary logistic regression analysis was conducted for independent variables (gender, race, total hours earned, financial aid awarded, cumulative GPA, major declared, senior status, and college major) predicting graduation for the full sample of students and those students who had attained senior status. Nagelkerke R squared was used to assess the fit of the model using these independent variables and to show the likelihood of the results given a random sample. This study used odds ratio rather than beta values because odds ratios have a constant effect when predicting the likelihood that an outcome will occur. In this study, the effect the independent variables had on the likelihood of graduation was measurable and is presented as a percentage. In comparison, beta values only the strength each of the independent variables would have when influencing the dependent variable - graduation. The following section will summarize each individual independent variable: *gender, race, college experience, senior status, and college major(s)*.

Table 6. Summary of Regression Analysis for Variables Predicting Graduation

Student Attributes	Full Sample N= 9271		Senior Status N= 3968	
	Odds Ratio	S.E.	Odds Ratio	S.E.
Gender - Male				
Male	1.254*	0.116	1.220*	0.125
Race (White)				
Black or African American	1.068	0.245	0.929	0.277
Hispanic or Latino	0.973	0.262	0.840	0.292
Asian	1.079	0.374	0.978	0.425
Pacific Islander	0.988	0.389	0.803	0.427
Unknown	0.742	0.692	0.735	0.758
College Experiences				
Total Credit Hours Earned	1.086**	0.004	1.082**	0.004
Financial Aid Awarded	0.591*	0.231	0.708*	0.248
Cumulative GPA	10.736**	0.129	11.941**	0.146
Major Declared	0.874*	0.153	0.939	0.166
Senior Status	1.014	0.253		
College Major (Arts & Sciences)				
Business	1.916**	0.180	0.531**	1.701
Technology	0.833	0.176	0.776*	0.192
Education	0.956	0.218	0.940	0.236
Health & Human Services	0.702	0.184	0.637*	0.195
Model Fit Statistics				
r ² (Nagelkerke)	0.475		0.881	
Log likelihood	1986.47		2384.95	

Note: Variables within parentheses are held constant; Significance p<0.05* p<0.01**

Gender

Female students from both the full sample and senior status sample were more likely to graduate than male students. Table 6 shows that with the majority of both samples, comprised largely of male students, a difference observed within the descriptive statistics and regression analysis of this study, gender is worth mentioning. Male students consisted of 58.7% of the full sample while 61.7% of the senior status sample consisted of male students. Within the

regression analysis, male students were held constant. As such, the regression shows with 95% confidence that female students, when compared to males, are 25% more likely to graduate if they are part of the full sample and 22% more likely to graduate if they are part of the sample of students who attained senior status. Unlike gender, surprisingly race was not a significant factor in determining graduation from either sample but should be mentioned when comparing White students to other races.

Race

Race did not prove to be a significant factor when determining students' abilities to graduate for either group of students. However, slight differences between groups emerged that are worth mentioning. Black or African American (+7%) and Asian (+8%) students from the full sample, when compared to White students, were slightly more likely to graduate. Additionally, students from all races, if part of the full sample, were 3% less likely to graduate when compared to their counterparts within the sample of students who attained senior status (14%) were less likely to graduate. While these data did not prove significant, the findings suggest that additional study in this area is needed to better understand the differences noted among these groups of students at this particular institution.

College Experience

Four *college experience* variables were determined significant when estimating graduation for both samples: *total credit hours earned*, *financial aid awarded*, *cumulative grade point average*, *major declared*, and *senior status*. The following sections will present each of these experiences individually.

Total Credit Hours Earned

The more credits students earn, the more likely they are to graduate. The average total credit hours earned by students in the full sample was 76 earned credits compared to students within the senior status sample who had an average of 131 earned credits. This continuous variable was determined significant and produced positive effects for both samples of students. Students in the full sample were 8.6% more likely to graduate while students within the senior status sample were 8.2% more likely to graduate for each increase of one credit hour earned.

Financial Aid Awarded

Students who received more financial aid were more likely to be from low-income families or socio economic backgrounds. Thus, low-income students are less likely to not only enroll in college, but they are less likely to attain a bachelor's degree, even after persisting successfully through their academic career. The results from this study found that the more financial aid students receive, the less likely they are to graduate. Nearly 93% of students within the full sample were awarded financial aid and 94% of students within the senior sample were awarded financial aid. Financial aid awarded was also determined significant for both the full sample and the senior status sample. However, negative effects for both groups emerged with 95% confidence as students within the full sample were 41% less likely to graduate if awarded financial aid and students within the senior status sample were 29% less likely to graduate. Because both samples are at the 95th percentile and neither population is stronger than the other, student's within the senior status sample are 12% more likely to graduate if financial aid is awarded.

Cumulative Grade Point Average

For students within this study, the higher their grade point average the more likely they were to graduate. The average cumulative grade point average for students within the full sample was 2.44 in comparison to students within the senior status sample who had an average grade point average of 3.10. This variable also produced positive effects and were significant in both the full sample and senior status sample in the 99th percentile. Students within the full sample were nearly 11 times more likely to graduate with every one point increase in their cumulative grade point average. By comparison, students within the senior status sample were nearly 12 times more likely to graduate with every increase of one point to their cumulative grade point average.

Major Declared

Students from the full sample were less likely to graduate if they had declared a major while declaring a major did not have a significant effect on students with senior status. Within both samples, slightly over 80 percent of the students declared a major. Declaring a major proved to be a significant factor in predicting graduation within the full sample but did not have a significant influence on graduation for students who had attained senior status. With 95% confidence, this study shows that students within the full sample with a declared major were 12.6% less likely to graduate. Although not significant, students in the senior status sample were less than 1% less likely to graduate if they had declared a major.

Senior Status

Senior status was not significant among students within the full sample prompting the need to disaggregate this group from the population. Although the senior status as a whole is not

significant, many elements within the group of students who had attained senior status were found significant and different from the full sample of students within this study.

College Majors

College major proved to be a strong and positive predictor of graduation for students majoring in Business within the full sample but not for students in the senior status sample. Students in the full sample were twice as likely to graduate with a business degree when compared to students majoring in the Arts and Sciences. Conversely, for the senior status sample, three of the four majors: Business, Technology, and Health and Human Services were determined to be significant but with negative effects. Education was not determined to be significant and had negative effects. The following sections discuss each major separately.

Business Majors

Students in the full sample were twice as likely to graduate with a business degree while students with senior status were less likely to graduate when compared to peers in the arts and sciences. This study showed that 12 percent of the students within the full sample majored in Business compared to 11.3 percent of students within the senior status sample. With 99 percent confidence, this study suggests that students in the full sample were almost twice as likely or nearly 92 percent more likely to graduate with a Business degree when compared to students in the Arts and Sciences. Conversely, students in the senior status sample majoring in Business were 47% less likely to graduate when compared to senior status peers majoring in the Arts and Sciences.

Technology

Students with senior status were less likely to graduate with a technology degree when compared to peers in the arts and sciences. Students majoring in technology consisted of 7.3 percent of the full sample and 6.5 percent of the senior sample population. Although, students majoring in technology did not produce significant results within the full sample, students within the senior status sample with technology majors did prove to be significant with a negative effect. These students were nearly 23 percent less likely to graduate.

Education

Significant results were not produced for students majoring in education when compared to students in the Arts and Sciences. Students majoring in education consisted of 15.3 percent of the full sample compared to 17.7 percent of students within the senior status sample majoring in education. Unlike the other majors, obtaining an education majors did not prove to be a significant factor for either the full sample or the senior status sample. Students within the full sample were four percent less likely to graduate and those students within the senior status sample were six percent less likely to graduate when compared to Arts and Science majors.

Health and Human Services

The full sample of students majoring in health and human services was 12.6 percent compared to 11.5 percent of students majoring in this area within the senior status sample. Like technology, this major was not proven to be significant a significant factor within the full sample as students were nearly 30 percent less likely to graduate when compared to Arts and Science majors. Although a negative factor, health and human service majors within the senior status

sample were determined to be significant within the 95th percentile as students majoring in this area were 36 percent less likely to graduate when compared to Arts and Sciences majors.

Summary

This chapter presented the descriptive, correlational, and regression results of this study. This study identified factors such as the total number of credits a student earned, if financial aid was awarded, cumulative grade point average, major declared, and college major as significant, each playing an important role in predicting the ability of students to graduate. The outcomes suggest that for the full sample of students, gender is a significant factor in determining graduation along with college experiences (total credit hours earned, financial aid awarded, cumulative grade point average, and declaring a major) and a college major such as business may influence graduation. Concurrently, the outcomes of this study also suggest that for the senior status sample, gender, college experiences (total credit hours earned, financial aid awarded, cumulative grade point average), and college majors such as business, technology, and health and human services influence graduation. For the total credit hours earned, both groups of students experienced positive effects while financial aid produced negative effects. Of interest is the influence of declaring a major on a student's ability to graduate. While producing negative effects for the full sample, this variable was not found significant for the senior status sample.

Lastly, race was not found to be significant factor within the full sample and senior status sample when determining whether a student graduates. Although not a significant factor, these outcomes are important contributions to existing literature. These finding will provide a starting point for future studies when determining the influences college graduation.

The findings of this chapter conclude that the acquisition of senior status among college students at this particular institution influences whether a student graduates from college. This study also refuted some of the literature as it relates to student demographics and completion. Student persistence towards graduation plays a major role in how higher education officials create policies and procedures to increase graduation rates at their institution. As college tuition increases, there is a possibility that students earning higher grades and persisting through college can earn a college degree without incurring a lot of debt.

Chapter five discusses the results of this study by addressing the research question. Each section will include a discussion of the key findings, connections to the literature and theory, implications for policy and practice, and suggestions for future research.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of this study was to examine the demographic characteristics of college seniors who leave college without earning a bachelor's degree. Specifically, this study focused on the student demographics: gender, race; college experience: graduation, major-declared, financial aid awarded, and senior status; and college major. This chapter discusses the key findings in relation to the study's purpose. Four sections inform this chapter: research question, key findings for the research question, theoretical connections and implications, limitations, and future research. The following research question framed this study.

Research Question

What demographic characteristics, pre-college education factors and college experiences predict college seniors' bachelor's degree completion within eight years?

Summary of Findings

The findings of this study provide a starting point for future research that addresses the influence of additional variables in an effort to determine their impact on student's completing a bachelor's degree. These findings are important and offer contributions to the already existing literature. For practitioners, these findings may inform policy and practice as colleges and universities become increasingly student centered in an effort to improve completion rates. The following sections address the key findings regarding pre-college characteristics such as: high school grade point average; student demographics such as: gender and race; college experiences such as: declared major, financial aid awarded, cumulative grade point average, first year grade

point average, and college major, connections to the literature and theory, and offering recommendations to the possible impact on policy.

Gender

This study showed that the number of females attaining senior status and graduating, typically during a student's third and fourth year(s) of college, declined by three percent when compared to the number of females in the full sample. Concurrently, the number of males attaining senior status and graduating increased by three percent. This finding suggesting that female attrition occurs at higher rates prior to senior status attainment than what is observed for male students in this sample. Tinto (1975, 1987, 1993) in his research noted that women tend to leave college more for social reasons such as family rather than academic reasons. This study also found that there were more men in this sample, yet women were more likely to graduate, which refutes most literature as it provides uncharacteristic results with men outnumbering women enrolled in college (Snyder & Dillow, 2015). Yet, these findings concurrently support the same literature which states that women tend to out-perform men academically and are more likely to graduate. According to Mortenson (2003), Goldin, Katz, & Kuziemko (2006) and Bergman, Gross, Berry, & Shuck (2014), women enroll more often and outperform men with increasingly more women attending and completing college when compared to men. The data from this study also supports the findings of Tinto's (1975, 1987, 1993) student departure theory which states that a student's individual attributes such as gender have varying degrees of effect on the support needed by these students when entering or while enrolled in college.

The majority of students in both samples of this study were male students. The full sample consists of over 9,200 students, of which, the majority were males (58.7%) compared to

females (41.3%) with a difference of 17.4 percent between the two genders. The senior sample, students who have earned 85 or more credits, consisted of over 3,900 undergraduate college students, of which, males (61.7%) outnumbered females (38.3%), noting a substantial difference of 23.4 percent between genders. Female students, when compared to males, were 25 percent more likely to graduate if they were part of the full sample and 22 percent more likely to graduate if they were part of the sample of students who attained senior status.

During the fall 2016 academic year, over 20.5 million undergraduate students were enrolled in college nationally, of which, 11.7 million (57%) were women and nearly 8.8 million (43%) were men (Snyder & Dillow, 2015). Data from the National Center for Education Statistics (Snyder & Dillow, 2015) show that in 2011-12 over one million bachelor's degrees were awarded to females compared to 765,000 to males.

Race

Race was not determined to be significant within this study when predicting graduation rates. The data from this study neither supports nor refutes the literature suggesting that personal characteristics such as race/ethnicity can either impede progress or can be an advantage, increasing the probability of attaining a bachelor's degree (Baker & Robnett, 2012; Carter, Locks, & Winkle-Wagner, 2013; Guiffrida, Lynch, Wall, & Abel, 2013). Research shows that various ethnicities maintain different rates of completion suggesting that race/ethnicity is related to persistence and graduation (Stoecker, Pascarella, & Wolfe, 1988; Pelteir, Laden, & Matranga, 1999; Reason, 2003; Hu & St. John, 2001; Pascarella & Terenzini, 1991, 2005; Tinto, 1975, 1993; DesJardins, McCall, Ahlburg, & Moye, 2002; Paulsen & St. John, 1997, 2002; Astin 1996). As such, it cannot be determined whether this study supports the findings within the

literature which state that Black or African American or Hispanic students arrive on college campuses with weaker academic backgrounds and are less likely to graduate (Adelman, 1999; Astin, 1993; Hu & St. John, 2001; Mingle, 1987; Morley, 2003; Mow & Nettles, 1990). Because these data are not consistent with the current literature about race, further research is needed to determine what factors, if any, at this institution are creating conditions where race is not a factor when determining persistence to graduation. Nationally, in 2007, the graduation rates for this cohort of students completing within four years was 39.4 percent with White students making up 43.3 percent, Black students 20.8 percent, and Hispanic students 29.8 percent (US Department of Education, NCES, 2014). When students within this same cohort were measured over a 5-year period, graduation rates increased substantially to 55.1%, with 59.1% of White students, 35.5% of Black students, and 46.4% of Hispanic students graduating in this time frame. The findings of this study parallel those of the NCES suggesting that the additional year of coursework substantially improves graduation rates for all students regardless of race. Of particular interest are the substantial increases in graduation rates among Black and Hispanic students in this cohort of students when compared to the national averages presented by the NCES. Additional research is needed to determine if these differences are due to an anomaly within this cohort or if certain college experiences at this institution support these racial groups of students in a way that persistence to graduation is influenced significantly more than the national average.

The majority of the students from both samples were White. For the full sample of students, the majority (62.3%) were White when compared to the senior status sample (69.0%). Black or African American (+7%) and Asian (+8%) students from the full sample were slightly more likely to graduate when compared to White students. By comparison, White students were slightly more likely to graduate when compared to Black or African American students (-7%),

Hispanic or Latino (-16%), Asian (-2.2%), and Pacific Islanders (-20%) within the senior status sample. Although it was not determined to be significant, the students from the senior status sample were less likely to graduate when compared to their counterparts within the full sample of students. While the number of White students on college campuses has traditionally outnumbered non-White students, the past decade has seen significant increases in the number of Black or African American, Hispanic or Latino, and Asian students attending college. However, this increase in diversity has led to a decrease in persistence and graduation, especially among Blacks or African Americans and Hispanic or Latinos.

College Experiences

Declared Major

Slightly over 80 percent of the students from both samples had declared majors. For the full sample (80.1%) had declared a major when compared to the senior status sample of students (80.7%). Declaring a major proved to be a significant factor in predicting graduation within the full sample but did not have a significant influence on graduation for students who had attained senior status. Students within the full sample with a declared major were 12.6 percent less likely to graduate while students in the senior status sample were six percent less likely to graduate if they had declared a major. Many students (and their parents) walk on to college campuses and universities with the notion that the key to graduating within four years is choosing a major and staying with it. Most bachelor's degree programs in the United States have been structured to be completed within four years with students enrolling in a structured program starting during their freshmen year.

Declaring a major was determined to be significant within the full sample of this study when predicting graduation rates but not significant once senior status was attained. The data from this study neither supports nor refutes the literature suggesting that students who have a declared major can impede progress or can be an advantage of increasing the probability of attaining a bachelor's degree (Elliot, 1999; Wyckoff, 1999). The literature on college majors shows that students having a declared major is related to persistence and graduation (Harackiewicz, Barron, Tauer, & Elliot, 2002; Upcraft & Gardner, 1990). As such, it cannot be determined whether this study supports the findings within the literature which state that students who changed their major at least once during their college experience proceed to graduate at a rate ranging between 70-85% compared to students stay with their original major declaration of 45-50% (Anderson, Creamer, & Cross, 1989; Micceri, 2001). However, many students change their major which may have an impact of student attrition and why senior status students were not significant. Because these data does not determine if the student changed their major or not, further research is needed to determine, if any, if a student changed their major or the number of times that they changed their major. The findings of this study does however parallel those of the research graduation percentages.

Financial Aid Awarded

Financial aid was significant when predicting graduation rates. The data supports the literature suggesting that financial challenges encountered by students negatively impacts persistence to graduation specifically with regards to students from disadvantaged backgrounds, low-income families and/or maintain first-generation status (Bozick, 2007; Hurst, 2010; Martinez, Bilges, Shabazz, Miller, & Morote, 2012; McCormick, Moore, & Kuh, 2010;

Mortenson, 2007; Stuber, 2011). As such, this study supports the findings within the literature which state that the effects of federal financial aid on student persistence and determined that it varied depending on the student background (Cabrera, Nora, & Castaneda, 1992; DesJardins, Ahlburg, & McCall, 2002; Dowd & Coury, 2006; DuBrock & Fenske, 2000; Paulsen & St. John, 2002; St. John, Paulsen, & Starkey, 1996; Cofer & Somers, 1999; Singell & Stater, 2006).

Research shows that the financial decisions a student makes (while enrolled or not enrolled), that degree attainment is negatively impacted when individuals are concerned about incurring high levels of debt that may prevent them from buying a home or raising children (Simpson, Smith, Taylor, & Chadd, 2012; Dwyer, Hodson, & McCloud, 2013). This study supports these findings within the literature as data demonstrated that the more financial aid a student received the less likely they were to graduate.

Financial aid is a factor when determining persistence to graduation. During the 2012-13 academic year, about 85% of undergraduate students received some form of financial aid (grants, loans, work study, and or aid of multiple types) (Snyder & Dillow, 2015). The findings of this study parallel those of the NCES suggesting that students attending this institution were awarded financial aid at higher percentage than the national average.

The majority of the students from both samples were awarded financial aid. For the full sample of students the majority (92.9%) were awarded financial aid compared to the senior status sample (94%). Although financial aid was determined to be significant, negative effects for both groups emerged as students within the full sample were 41 percent less likely to graduate if awarded financial aid in comparison to students within the senior status sample were 29 percent less likely to graduate. Because neither samples are stronger than the other, students within the senior status sample were 12% more likely to graduate if financial aid is awarded.

Traditionally, costs to attend college and financial aid have always been a key component to college student persistence. The increase in first generation and minority college students from low socio economic environments has led to an increase in reliant upon financial aid to support their academic career.

Cumulative GPA

Cumulative grade point average was determined to be significant within this study when predicting graduation rates. The data from this study supports the literature suggesting that academic performance and degree completion focuses on the relationship between college grades and student persistence from year to year (DesJardins, Ahlburg, & McCall, 2002; Hu & St. John, 2001; Tinto, 1987). Because this data is consistent with the current literature about cumulative grade point averages, the data from this research shows that students within the full sample were nearly 11 times more likely to graduate with every one point increase in their cumulative grade point average. By comparison, students within the senior status sample were nearly 12 times more likely to graduate with every increase of one point to their cumulative grade point average.

For this study, students within the senior status sample earned higher cumulative grade point averages than students in the full sample. The cumulative grade point average shows a difference between the two groups as students within the senior status sample earned a grade point average (3.1) that was +0.7 points higher on a 4.0 scale than students from the full sample (2.44). It should be noted that the standard deviations for both groups varied substantially as the full sample (1.08) grade point averages varied around the mean more than those from the senior sample (0.49).

This finding suggests that cumulative grade point averages for students with senior status were more closely related to the mean with little variance than those of the full sample. Students who have attained senior status tend to have a declared major as well which means that they are more engaged academically in their concentration of interest. These students with senior status have earned 85 or more credits showing that cumulative grade point average influences the amount of credit hours earned. Findings from this study also show the relationship between cumulative grade point average and total hours earned ($r=0.24$) college suggests that students' cumulative grade point averages are influenced by total amount of credit hours earned.

First Year GPA

Students with senior status earned higher grade point averages their first year of college than students from the full sample. The data from this study supports the literature suggesting that first year grades are useful predictors of academic success, retention, and graduation (Allen, Robbins, Casillas, & Oh, 2008; Bean, 1992; Braxton, Sullivan, & Johnson, 1997; Pascarella & Terenzini, 2005; Pickering, Calliotte & McAuliffe, 1992). Research shows that good grades indicate to the student a realization of academic potential which decreasing the will of a student to dropout and that college academic performance and degree completion focuses on the relationship between college grades and student persistence from year to year (DesJardins, Ahlburg, & McCall, 2002; Hu & St. John, 2001). As such these data shows that students that persist to senior status had greater academic success during their first year which led to persistence towards graduation. The first year grade point average shows a difference between the two groups as students within the senior status sample (2.97) earned a grade point average that was +0.52 points higher on a 4.0 scale than students from the full sample (2.45). The

findings of this study also show that the relationship between first year grade point average and total hours earned ($r=0.11$), cumulative grade point average ($r=0.64$), and high school grade point average ($r=0.47$) is a strong predictor of students most likely to persist towards graduation.

High School GPA

Students in the senior status sample attained slightly higher grade point averages in high school than students in the full sample. The data from these study supports the literature suggesting that high school grade point average is shown to be a strong predictor of student success, and is the variables that is the most widely used measures of predicting student success, persistence, and graduation rates (Clinedinst, Hurley, & Hawkins, 2011). ACT (2012) states that maintaining at least a 3.0 high school grade point average has been correlated with the successful completion of college courses and persistence to graduation. The findings of this study parallel those of ACT suggesting that a high school grade point average 3.0 or higher is a strong predictor of a student attaining a college degree. Of particular interest is the misconception that high school grade point averages alone correlates to persistence and graduation. (Fleming, 2002; Scott-Clayton, 2012; Saupe and Curs, 2008). Additional research is needed to further discuss whether pre-college characteristics such as high school grade point average can/should be modified.

The high school grade point average shows a difference between the two groups as students within the full sample had a slightly lower average grade point (3.04) than students within the senior status sample (3.18). The use of pre-college characteristics such as high school grade point average can be easily measured to identify successful college students. The findings of this study show the relationship between high school grade point average and total hours

earned ($r=0.10$), cumulative grade point average ($r=0.55$), and first term grade point average ($r=0.47$) is a predictor that students will persist to graduation.

College Major

The majority of the students from both samples signed majors within the college of Arts and Sciences. College major proved to be a strong and positive predictor of graduation for students majoring in business within the full sample but not for students in the senior status sample. Because of this, the data from this study neither supports nor refutes the literature suggesting that college persistence may be related to a major and that students whose major is oriented to a specific profession (business, engineering, or health) and or hard or technical sciences (in contrast to education and arts and sciences) may have persistence rates that differ from students with other majors and have a statistical significant positive effect on educational attainment (Leppel, 2001; Thomas & Gordon, 1983). As such, it cannot be determined whether this study supports findings in the literature which state that there was no relation between academic major and overall educational attainment (Alexander & Eckland, 1977; Pascarella, Smart, Ethington, & Nettles, 1987). These data does determine that majors such as business does have a significant relationship with graduation in both samples, yet education majors in both samples do not have a significant relationship with graduation. It also cannot be determined whether this study supports findings in the literature which state that males and Blacks or African Americans major in business and technology because they were motivated by money and having a high occupational status job (Green, 1994; Thomas, 1985). Because these data does not determine how gender and race are related to choice of major, further research is needed to determine, if any, the impact this has on graduation rates. Not all college majors was

determined to be significant when predicting graduation rates. Business was the only major that was significant in both samples. Technology and health and human services were only significant in the senior status sample and education majors were not determined to be significant.

Implications for Policy and Practice

The findings from this study focus on the influence of demographic characteristics, pre-college education factors, and college experiences on determining graduation of college seniors. Completing an undergraduate degree is no longer considered to be a task that can be done within four years. With the average student, graduation rates typically hover around six years, and student retention and graduation rates at the top of every higher education administrator's watch list, identifying strategies and student tendencies that influence student persistence. While most of the research in current literature focuses on the first and second years of college, lost are the influences of a student's remaining years. These years, which focus on the growing number of students who attain senior status may last four to five additional years beyond the sophomore year. Because college seniors have transitioned from being a college freshman, sacrificed time, and invested money on college campuses, it is assumed that they would graduate with an undergraduate degree. Until now, literature identifying the influences affecting graduation on this population's progress towards attaining a degree has been limited. One implication is that research of graduation rates needs to be conducted not only for year four, but for years five, six, seven, and eight as well.

With college campuses becoming more diverse each academic year, institutional leaders need to work towards creating a gender and racially balanced academic environment that

enhances the success of all students. Understanding the specific needs of students based on race can assist in cultural awareness, financial needs, and social integration tend to influence students of various races decision to stay or leave college. Because of the racial injustice that African Americans or Blacks have experienced within the past five years, these changes may seem to address only this population of students, but all races: Hispanics or Latinos, Asian, and Pacific Islanders should garner the same attention with the understanding that each college campus' student demographics is different, and could change accordingly. As seen within this study, in comparison to White students, Black or African American students (-7%), Hispanic or Latino (-16%), Asian (-2.2%), and Pacific Islanders (-20%) were all less likely to graduate once attaining senior status.

There have been a strong commitment amongst institutional leaders to improve retention and graduation rates. Colleges and universities should routinely (every 3 years) conduct mandatory academic audits for students nearing or at senior status. The use of technology, primarily degree audits systems, makes this an efficient and effective reporting procedure. Institutions can also use the same report to identify students who have attained senior status, yet have not been enrolled for a minimum of one year. These reports allow enrollment managers to follow-up and determine the reasons for dropped enrollment. This initiative can be done as a general follow-up or can be handled by each individual college within the institution. If each dean follows up with students with declared majors within their college they can better identify the academic needs of each student by offering course substitutions and/or independent studies to help students meet graduation requirements. This also allows the institution to hold each of the colleges accountable given that senior status business majors are 47 percent less likely to graduate, technology 22 percent, and health and human services nearly 37 percent compared to

arts & sciences, deans would be willing to increase the number of graduates within their college. With nearly 81 percent of the senior status sample have a declared major and only 6 percent less likely to graduate this initiative almost guarantees students with a declared major in their senior year are overwhelmingly likely to graduate. This initiative can also help create a policy that mandates all seniors have a declared major.

Additionally, there needs to be a similar report run for this population of students identifying those seniors who may have a past due balance that may prohibit them from registering for courses. Considering this study shows that nearly 30 percent of the senior status sample are less likely to graduate even though they were awarded financial aid is a concern. A policy can be implemented that allows student's with senior status with no more than a year to complete their degree to be allowed to register. This implementation will discourage student stop out or dropout among students close to completing their degree requirements.

Although this study did not address this variable, institutions should implicate a mandatory senior seminar courses may be offered within each major that help prepare senior students for the transition to post college life. This course would incorporate the connection between their academic major and career exploration, improvement upon pre professional development, prepare them for post graduate education, and effective life planning and adult decision making.

Finally, this study contributes to the literature by providing a platform to the existing literature base for further research on college seniors. Regardless of any institutions best efforts to graduate college seniors, some of these students will not complete a college degree. While these findings suggest that students who attain senior status are more likely to graduate, there continue to be students who have attained senior status and failed to graduate. As Tinto (1987)

suggests that leaving college is not necessarily a negative outcome for every student. Many students acquire the necessary skills needed to get jobs during their time spent in college. Regardless it is important for policy makers and higher education officials to adapt, accommodate and continue to identify ways to increase the graduation rate of college seniors on their campus.

Critique of the Study

This study on college seniors who dropout is a longitudinal, non-experimental, quantitative study that uses a secondary data set. The sample of college students includes first time in college, undergraduate students who were first enrolled in fall 2005 through fall 2008. The second sample of students includes students who have earned at least 85 or more credits and maintain senior standing at a Michigan, public, four-year institution where they were last enrolled during the fall 2008 semester. Secondary data from the institution was in the form of student gender, race, financial aid awarded, high school grade point average, earned college credits, cumulative grade point average, first year grade point average, major declared, and college major. Data analysis reviewed the results of a descriptive statistics, Pearson Correlation and binary logistic regression tests.

The data for this study used a full sample of students who obtained 1 to 84 credits and compares this sample to students who attained senior status by earning 85 or more credit hours over an eight-year period (fall 2005 thorough fall 2013). The comparison of each sample was used to determine the influence of variables on graduation rates between and among groups over an eight year period. If the data in this study was broken down by each academic year, perhaps the influences of each variable on graduation rates would have changed.

The study did not specifically compare the senior status students who did not graduate. This would have been helpful to determine which variables had an influence on preventing students with senior status from graduating. This study was also limited because the data source used was secondary.

Recommendations for Future Research

This study analyzed the relationship between student demographics, college experiences, and college major and students who have attained senior status by earning 85 or more credit hours over an eight-year period (fall 2005 through fall 2013) and whether or not they graduated. The data from this study encompassed eight years. Given the current climate of higher education and many student retention initiatives aimed at promoting the increase of graduation rates amongst students of color. Further research is needed to determine what factors at institutions are creating conditions where race is not a factor when determining persistence to graduation. Also, additional research is needed to determine if certain college experiences at this institution or others support these racial groups of students in a way that persistence to graduation is influenced significantly.

An interesting variable to consider for future research is declaring a major, and when did a student declare their major, if a student changed their major, if so when during their academic career did the change occur, and the number of times a major change occurred, if any. Additional research is also needed to further discuss whether or not a student's high school grade point average can or should be modified to be used as a predictor of persistence and graduation.

Although there is limited research there is not current evidence from the literature on how academic majors influence a student's educational attainment. Considering that most students

enter college seeking a major that will bring them a high occupational status and money current research would be beneficial with the shift in the job market within the last 20 years.

As universities work toward balancing participation rates by gender, future research to understand the influences that promote or inhibit success become increasingly more important as both enrollment and completion rates among females continue to be higher than their male counterparts. Understanding and addressing the specific needs of students based on gender may assist in program creation such as on-campus, low cost child care, or policy that addresses the various other social reasons, such as family, which tend to influence female students more than male students. While these changes may at first intentionally address the needs of many female students, the inclusiveness of such a policy could also address the needs of single fathers, a small but overlooked population on campus.

Additional research also needs to be done to collect more institutional data to find the value in the services provided for students of various racial ethnicities and how well these services are communicated to the student body population. Finally, there were over 500 students who reached senior status within this study who did not graduate and/or departed. Future research (qualitative) is needed to find out what prevented these students from attaining a bachelor's degree.

Conclusion

Many students have attended college, many have persisted through the first two years of college, and many have reach college senior status. But, identifying the influences of whether these students graduate has lacked in the literature, as most student retention research has focused on the first two years of college. This study found that gender was found to be

significant when predicting graduation. Female students were more likely to graduate and outperform male students academically even though the majority of the samples were male students.

Surprisingly, race was not found to be significant influence within this study when predicting graduation rates. Future research will need to be conducted to determine which factors this institution are creating where race is not a factor in determining graduation.

College experiences such as: declared major, financial aid awarded, cumulative grade point average, first year grade point average, and college major collectively all were a significant factor of predicting graduation rates. Over 80 percent of the students in these sample had a declared major. Better than 90 percent of the students of both samples received financial aid which was higher than the national average. Cumulative grade point average within this study showed that students were 11-12 times more likely to graduate with every point increase in their cumulative grade point average. First year grade point average within this study showed that students earning senior status earned a higher first year grade point average compared to the full sample. This study showed that the majority of students signed majors within the college of arts and sciences. College major proved to be a strong predictor for graduation rates for students majoring in business. Finally, this study showed that students who obtained senior status had a higher high school grade point average compared to those within the full sample.

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