

**PREDICTING PERSISTENCE OF FIRST-TIME FRESHMEN
AT A LARGE-CITY COMMUNITY COLLEGE**

A Dissertation

by

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ABSTRACT

The lack of student persistence is a burgeoning issue and over the last 40 years has become a national concern among researchers, administrators, policymakers and practitioners. Given the low persistence rates of first-year students at America's community colleges, leaders are searching for useful and successful strategies that will aid in closing the gap in student attrition. Successful completion of a degree or certificate is often considered the great economic equalizer in today's society from a public and cultural perspective.

The purpose of this research study was to empirically investigate the odds ratio associated with predicting persistence that exists between first-time freshmen students who lived in campus housing and those who live off-campus at a large-city community college referred to as LCCC. Specifically, the focus of this study was to determine whether living in on-campus housing, receiving needs-based federal financial aid (Pell Grant), ethnicity, gender and enrolling in one or more developmental education courses are predictors of persistence. This study was predicated on the collection of quantitative data from a large-city community college's student information system from the years 2010 through 2013.

The researcher has concluded based on the data analysis of this research study the results were statistically insignificant for those students living on-campus when compared to those students living off-campus. An analysis of Ethnicity as a predictor of persistence revealed that in the short-term African-American students actually persisted at higher rates than their counterparts. However, in three of the last four semesters

analyzed, African-Americans persisted at significantly lower rates than White students. Lastly, an analysis of the students who were enrolled in Developmental Education (Remedial) courses suggested that the odds are significantly lower concerning persistence versus their counterparts. However, it must be noted that both Hispanic students and those receiving needs-based financial aid (Pell) attrition was no worse than their counterparts.

Based on the complex nature of both the community college student and the unique opportunity for them to live on-campus, additional data is required in order to measure and evaluate whether housing status promotes improved academic persistence. The reported research studies pertaining to community colleges and living on-campus are meager at best.

DEDICATION

Most importantly this dissertation is dedicated to my wife Lisa Hopkins King. There have been countless hours over the last five years where she has had to go it alone because of my educational pursuits. Lisa's love and patience are endless to someone who is far less than deserving. Lastly, she has always taught me to put God and his Son first in my life. Although I am far from perfect, "He" has always been there to guide my steps and carried me when necessary.

Secondly, this dissertation is dedicated in memory of my parents William L. King Jr. and Rose Marie King. My parents spent their entire life working to insure my educational and career goals were the highest priority. Their never ending unconditional love, encouragement and support made all the difference between success and failure.

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CHAPTER I

INTRODUCTION

America's Community Colleges

According to the American Association of Community Colleges (AACC, American Association of Community Colleges, 2014), in the United States there are 1,132 community colleges that serve 12.8 million students in both credit and non-credit programs. This accounts for 45% of all undergraduates who attend institutions of higher learning in the United States. Nationally, in the fall of 2012, community college enrollment of African-Americans and Hispanics consisted of 48% and 56%, respectively, among those attending all two-year post-secondary institutions (AACC, American Association of Community Colleges, 2014).

In the 1990's, researchers began to acknowledge that community colleges' diverse student body offered a new opportunity for empirical study. Prior to the 1990's, researchers had a tendency to concentrate on traditional college students that were predominately from four-year institutions and were primarily White in ethnicity. Students of color, commuters, part-time, and those who were employed were investigated to better understand these characteristics and their relationship with cognitive and non-cognitive outcomes (Pascarella & Terenzini, 2005). Given ethnic diversity and that half of all undergraduates attend two-year institutions, it is vitally important that community college research should continue to expand (AACC, 2014; Pascarella & Terenzini, 2005).

In the new millennium, Americans now recognize that attending community college has value to both the students and a vast community of stakeholders. Public perceptions concerning community colleges have dramatically shifted in recent years. In a recent study, 70% of the participants now deem that a student is wise to begin their academic pursuits at a community college versus a four-year institution. Furthermore, 22% of children from families that earn in excess of \$100,000 are now attending community colleges as a first choice (Mullin, 2012).

Texas Community Colleges

In 2014, there were 79 public and 63 private community colleges in the state of Texas. Total enrollment for fall semester 2013 at Texas community colleges was 800,352, which was a 65% increase from the fall of 2000 (Community College Review, 2014). Community colleges are the largest sector of higher education in Texas and enroll 53.0% of the students in institutions of higher learning. Two-year institutions represent 75.8% of the first-year gendered and 77.5% of minority freshmen in Texas public higher education. Demographically, Texas public community colleges are composed of 39.1% White, 36.4% Hispanic and 13.7% African-American in the latest statistics (Texas Higher Education Coordinating Board, 2014).

Community College Persistence

No matter the ethnicity, gender or socioeconomic status of a college student in the United States, he or she possesses the opportunity to acquire the skill set necessary to matriculate and complete his or her personal higher education goals. Degree completion is often considered the great economic equalizer in today's society from a public and

cultural perspective. United States residents value educational attainment and a growing world economy demands it among its citizens to remain competitive globally (Seidman, 2005).

In the 1970's, researchers began to cultivate theoretical frameworks that focused on student persistence (Astin, 1993; Metzner & Bean, 1987; Pascarella & Terenzini, 1978; Perna & Thomas, 2006; Spady, 1970; Tinto, 1975). These paradigms were developed with the intention of explaining why students fail to persist (Melguizo, 2011). There remains a serious debate amongst researchers on the differing theoretical frameworks are used to explain why certain students persist and others fail to do so (Seidman, 2005). Historically, the theoretical framework that is most often cited in persistence research is Tinto's Theory of Student Departure (Braxton, Doyle, Hartley III, Hirschy, Jones, & McLendon, 2014; Melguizo, 2011; Yaun, 2013).

Because community college students differ demographically, socially and academically, historical paradigms are at risk in establishing an accurate depiction in describing early withdrawal. Thus, it cannot be assumed that historical theoretical frameworks can adequately explain the premature departure of community college students (Perna & Thomas, 2008). Hence, an argument is presented in Chapter II that more recent paradigms concerning persistence are better suited to theorize and explain the early departure dilemma (Melguizo, 2011; Perna & Thomas, 2008).

Despite the large volume of research on student persistence over the last forty years, there are few studies that primarily focus on community colleges (Derby & Smith, 2004; Wild & Ebbers, 2002). Researchers in the field of persistence have predominately

concentrated on students who exclusively attend four-year institutions. The lack of useful data has created a gap which is of little or no use to community college practitioners and leaders. This calls for investigators to direct their attention to studies that are finite, timely and significant concerning two-year institutions (Wild & Ebbers, 2002). Studies focused on community colleges would provide practitioners and institutional leadership the data to evaluate their strategic initiatives that are designed to improve student persistence (Wild & Ebbers, 2002; Windham, Rehfuss, Williams, Pugh, & Tincher-Ladner, 2014).

In 2015, the American Association of Community Colleges reported that 25% of all two-year colleges now offer on campus housing to their students (AACC, 2015). Hence, at American community colleges there have been extremely few studies reported that focus on whether living on campus in residence halls positively affects academic persistence. To date, there are only four reported studies pertaining to on-campus housing and persistence at community colleges in the United States (Baker, 2006; Catt, 1998; Moeck, 2005; Yaun, 2013). Although prior research is almost non-existent, on-campus housing is slowly becoming common place in two-year post-secondary institutions as administrators manage increased enrollments, as well as support strong academic initiatives for a diverse student population (Moeck, Hardy, Katsinas, & Leech, 2007). Research studies concerning four-year institutions, students living on-campus and persistence are plentiful, but empirical data concerning community colleges is meager at best (Moeck, 2005; Yaun, 2013).

Student persistence has been one of the topics in higher education that has produced an immense amount of research and dialogue over the last forty years (Seidman, 2005). However, on a consistent basis, over half of all students who enter the nation's community colleges fail to persist to their second year of enrollment (ACT, 2013; Goldrick-Rab, 2010; NCES, 2013; Nealy, 2005; Windham, Rehfuss, Williams, Pugh, & Tincher-Ladner, 2014). The parallel deficiency of persistence and degree completion at community colleges produces a unique set of challenges for its institutional leadership (McIntosh, 2009). The community college's mission of open access rests with the intention of democratizing academic opportunities for students from every demographic and socioeconomic class. By design, previous academic proficiency is not a prerequisite for enrollment at a community college. This has created a diverse student population in regards to ethnicity, gender and socioeconomic status (Goldrick-Rab, 2010).

Strategically, student persistence must be a vital consideration and focal point among community college leaders at present and in the future (Wild & Ebbers, 2002). Postsecondary institutional leaders in community college systems must develop initiatives to stem the high levels of attrition because of the potential harm to its many stakeholders (Barbatis, 2010). Key stakeholders, such as students, faculty, taxpayers, legislators and socially disenfranchised groups, will be negatively affected if this trend continues (Wild & Ebbers, 2002). Demographic shifts in the United States underscore that fact that America will be less White over the next thirty years (Swail, Redd, & Perna, 2003). Viable constructs to the problem of persistence must be studied on a much

larger basis. Many community college institutions may suffer economically and operationally if new knowledge is not created (Steinmetz, 2009; Swail, Redd, & Perna, 2003; Wild & Ebbers, 2002)

Because half of first-time freshmen students who enroll at community colleges do not persist more than one academic year, institutional practitioners must design interventions and foster environments which slow this trend (Yaun, 2013). Most disturbing is the fact that students of color and those at the low end of the socioeconomic scale fail to persist at a greater rate than their wealthier counterparts (Nealy, 2008). From a demographic perspective, community college students are usually older and represent students that are typically from disenfranchised groups. In many cases, first-time freshmen students that matriculate are not academically prepared to finish college level courses (Nealy, 2008; Thomas, 2011; Yaun, 2013). Hence, one third of these students must enroll in non-credit or developmental coursework (Barbatis, 2010).

Problem Statement

Community college leadership in the United States must face the grave fact that the lack of student persistence is economically devastating for the American economy, two-year institutions and most importantly the students themselves (Thomas, 2011). Consistently, over 50% of all students who enter the nation's community colleges fail to persist to their second year of enrollment (ACT, 2013; Goldrick-Rab, 2010; NCES, 2013; Nealy, 2005; Windham, Rehfuss, Williams, Pugh, & Tincher-Ladner, 2014). According to the latest data from the National Center for Education Statistics, 2013, first-time freshman students who entered community colleges in the fall of 2010 only

persisted at just over 50% to the fall of 2011 (National Center for Education Statistics, 2013). Community college persistence over the last two decades has remained stagnant. Hence, improvements in persistence over the last twenty years at American community colleges have been negligible at best (Yaun, 2013). Interventions must be developed, implemented and studied because improving postsecondary attainment is an urgent national priority. Increasing degree completion among the national population augments the likelihood of societal economic growth and prosperity (Offenstein & Shulock, 2010). Lastly, practitioners and institutional leaders at two-year institutions must be made aware of the potential negative economic and operational impacts that are strongly correlated with the lack of student persistence (Yaun, 2013).

To date, housing and persistence research studies conducted at or in reference to community college campuses are slight at best. Researchers of these studies have determined that there is inadequate data concerning the topic of residence halls at two-year institutions. Hence, these researchers have called for additional investigations to be undertaken (Baker, 2006; Moeck, 2005; Yaun, 2013). At present, there have been no reported empirical investigations that have examined the dichotomous dependent variable defined as student persistence and its statistical association with a group of independent variables at a specific community college. This study attempted to study the relationship between these variables.

Purpose of the Study

The purpose of this research study was to empirically investigate the odds ratio associated with predicting persistence that exists between first-time freshmen students

who lived in campus housing and those who lived off-campus at a large city community college referred to as (LCCC). Specifically, the focus of this study was to determine whether living in on-campus housing, receiving needs-based federal financial aid (Pell Grant), ethnicity, gender and enrolling in one or more developmental education courses are predictors of persistence. This study was predicated on the collection of quantitative data from a large-city community college's student information system for the years 2010 through 2013.

At present there are only 224 public, two-year institutions nationwide that offer on-campus housing (Yaun, 2013). Potentially, results from this study yielded rich information on whether there was any statistical association between the persistence of first-time freshmen students and living on-campus or off-campus. This study added to the knowledge of student persistence at two-year institutions that offer on-campus housing. If a student's characteristics can accurately predict whether they are at risk of not being retained, campus practitioners and leaders can potentially use this data to reverse unacceptable persistence rates.

Significance of the Study

This research study was significant for multiple reasons. This dissertation has the potential to yield significant data that would be useful nationally. Community colleges in the United States persistence rates for first-time freshmen students are unacceptable. Approximately 50% of the students who enter community colleges any given fall do not persist to the second year (ACT, 2013; NCES, 2013). Students at community colleges pose unique challenges to practitioners and administrators. In the

state of Texas in 2013, 77.5% of the minority first-time freshmen students attend community colleges (THECB, 2014). Nationally, over 30% of entering first-time freshman students at community colleges must enroll in developmental courses (Barbatis, 2010). Hence, it is clear that practitioners and institutional leadership must develop a comprehensive understanding of their entering student body through the collection, analysis and use of recent research data before they matriculate. In addition, in the age of institutional accountability, federal, state and local stakeholders are holding colleges to a higher standard concerning persistence and degree completion (Schwartz, 2010).

College administrators must understand that stakeholders expect a great return on their investment (Thomas, 2011). Furthermore, research regarding on-campus housing and persistence at community colleges is nearly non-existent. To date, there has been only one reported study that utilized national data to investigate whether the empirical relationship of living on-campus and persistence has a significant statistical association (Yaun, 2013). Researchers strongly propose that future studies should investigate longitudinal data that would more closely examine whether a statistical association exists between living on-campus and student persistence (Moeck, 2005; Yaun, 2013).

Overview of Methodology

A quantitative method was selected for the purpose of data analysis for this research study. This selection was predicated on the fact that this empirical inquiry was defined by the nature of its research questions, data type and population size. This study was based on data collected on first-time freshmen students who independently chose to

live on-campus beginning in the fall semesters of 2010 and 2011 and were tracked until the spring semesters of 2012 and 2013, respectively.

Research Questions

RQ 1: Is Residential Hall status a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 2: Is receiving needs based financial aid (Pell Grant) a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 3: Is Ethnicity a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 4: Is Gender a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 5: Is Developmental Education a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

Null Hypothesis Statement

The significance level for this study was set at $p \leq .05$.

The following null hypothesis statement was developed from the previous research questions. It is designed to state that there is no relationship between the two measured phenomena (dependent and independent variable). The researcher designed this study to reject the null hypotheses statement. This null hypothesis statement is believed to be accurate unless the data provides evidence to disprove it.

H_{01} = The entire set of independent variables do not contribute significantly to the probability of predicting Persistence (Dependent Variable).

Limitations of the Study

In conducting this study the researcher has identified the following possible limitations:

- Because this study only involved one large-city community college in Texas that offers public on campus housing, the results will not be generalizable to other states and/or higher education sectors. Furthermore, the generalizability of this study may be applicable only to other community colleges of similar size that also have residential housing.
- The academic years 2010 through 2013 may or may not be completely representative of a typical or normal year for the selected population.
- Students, admissions, housing, financial aid and the Office of Institutional Effectiveness retrieved the archival data, hence, the data set could contain inaccuracies.

Delimitations of the Study

In conducting this study, the researcher set the following possible delimitations.

- This study was designed to be quantitative and drew no conclusions from a qualitative nature.
- Archival quantitative data was only extracted from one large city community college in Texas.
- This study involved only student cohorts enrolled at the large city community college in the state of Texas for the fall semester of 2010 through the spring semester of 2013.

- This study only involved first-time freshmen students who were enrolled during fall semester of 2010 and 2011.
- The researcher examined the dependent variable of student persistence. Other variables related to pre-college matriculation were unclear. Additionally, other variables that were considered post-enrollment as well as other institutional interventions that may affect persistence were not examined.
- An examination of first-time freshmen who by choice lived in on-campus housing was studied.
- Students who were on athletic or performance-based scholarships were not studied.

Definitions of Key Terms

For the purpose of this research study, the following terms are defined as follows:

1. American Association of Community Colleges (AACC) – is a national organization that represents 1,132 two-year colleges, that has the authority to grant associate degrees to approximately 12.8 million students as of the fall semester of 2012. The AACC serves primarily as an organization to represent the nation’s community colleges, its constituencies and help shape policy.
2. Community College – for the purpose of this research study, the community college was defined as a public, two-year educational institution of higher learning which provides a post-secondary education and has been authorized at

the federal and state level to grant associate degrees, offer certificate programs, and technical and continuing education.

3. LCCC – a pseudonym for the singular large-city community college in this study.
4. On campus housing – residential living arrangements provided to degree seeking students by the institution on a public, two-year community college campus.
5. Public institution – a community college identified by the AACC and TACC as being publicly governed and owned by the state of Texas.
6. Texas Association of Community Colleges (TACC) – is a state organization that represents 70 public community colleges and over 700,000 students who are currently enrolled in the state of Texas. TACC serves primarily as an organization that represents publicly operated Texas community colleges at the federal and state levels, representing their constituencies and helping to shape policy.
7. Student persistence – was defined in this study as first-time freshmen students who entered the large-city community college in the fall semester of 2010 and 2011 that were enrolled in the spring semesters of 2012 and 2013, respectively.

Organization of the Study

In Chapter I the researcher introduced community colleges in America and in the state of Texas. Furthermore, the researcher described the study's purpose and significance. The study's research questions and null hypotheses were presented and established. In Chapter II, historical theoretical frameworks are introduced and an alternative to Vincent Tinto's paradigm is discussed. The literature review is used to

introduce past persistence studies at community colleges in the United States and Texas. Additionally, persistence studies concerning living on-campus and academic persistence at four-year and two-year institutions are synthesized. Chapter III the researcher presents the study's research methods, design, research questions, null hypotheses statements, variables, data collection and the selected statistical analysis procedure. In Chapter IV the researcher presents the description of the population, samples and variables. Lastly, a review of the multivariate statistical findings of the study is reviewed and the results summarized. In Chapter V, there is an introduction and a thorough summary and discussion of the quantitative results. Lastly, implications for future research and practice are presented, in addition to relationships of the results to the theoretical framework, and a conclusion.

CHAPTER II

REVIEW OF THE LITERATURE

Historical Review of Student Persistence Models

In support of any research study, it is essential to formulate a comprehensive review of the competing theoretical frameworks that have advanced the selected research topic over time (Calabrese, 2006; Creswell, 2014; Gall, Gall, & Borg, 2007). Hence, in support of this empirical inquiry concerning student retention, an examination of the most cited paradigm over the past forty years will be presented in which the process of college persistence for post-secondary college students is delineated. Diminishing college degree attainment amongst half of all first-time freshmen students coupled with enduring racial inequities in persistence are an inherent danger to the United States' social structure and pose a potential economic calamity (ACT, 2013; NCES, 2013; Seidman, 2005). Regarding the lack of college attainment of individuals within the different socioeconomic subgroups, investigators and legislators have begun to scrutinize the divergent elements correlated with college persistence and academic completion (Haverman & Wilson, 2006).

With historical models of persistence now in question from a philosophical and realistic standpoint, significant theoretical advances as well as practical applications of differing conceptual contexts, have begun to emerge (Melguizo, 2011). Theoretical frameworks have been fostered in higher learning, economics, sociology, and psychology to allow researchers to both qualitatively and quantitatively investigate the

process of college persistence (Astin, 1977; Bean, 1980; Becker, 1967; Bourdieu, 1973; Manski & Wise, 1983; Morgan, 2005; Pascarella & Terenzini, 1991; Perna & Thomas, 2006; Reason, 2009; Sellers & Hauser, 1975; Spady, 1970; Tinto, 1975; Tinto, 1993).

Interactionalist Theory of Student Departure – Dr. Vincent Tinto

Vincent Tinto's *Interactionalist Theory of Student Departure* is the most cited theoretical framework in the field of higher education research pertaining to student persistence (Braxton, Doyle, Hartley III, Hirschy, Jones, & McLendon, 2014; Melguizo, 2011; Yaun, 2013). Furthermore, researchers agree that Tinto's paradigm has greatly influenced the advancement of knowledge of why students fail to persist in post-secondary education (Braxton et al., 2014). In the 1970's, Tinto provided an academic framework that was intellectually developed into a theoretical paradigm and was published in the *Review of Educational Research* (Melguizo, 2011). Essentially, he provided a literature review that was critical on the students' lack of persistence in the early 1970's and synthesized limitations of previous research efforts. Tinto contended that the attrition rate was poorly termed and very narrow in scope. Furthermore, previous scholars had failed to produce studies that captured the intricacies of student pathways. Tinto was resolved to the fact that traditional student characteristics and traditional pathways had gone through an educational and social evolution (Tinto, 1975).

In 1970, Tinto attempted to design a theoretical framework that thoroughly defined the interaction process between the student and the institution. He endeavored to fully describe why particular students depart from higher education and dissected processes that would define the dissimilar constructs of attrition behavior. The end

result was that it was taking students more than four years to complete a bachelor's degree. Furthermore, he argued that previous research by investigators had fixated on finite characteristics and essentially impugned the students from an implicit standpoint for not completing a bachelor's degree within four years (Tinto, 1975). He hypothesized that the differences in attainment rates among differing institutions meant that the colleges and administrators play a definitive role in the persistence and attainment process (Melguizo, 2011).

Tinto (1975) argued that previous work completed by educational scholars could be described as atheoretical pertaining to student persistence. A useful theoretical framework must consist of a longitudinal model that correlates student and established characteristics to the process of persistence (Melguizo, 2011). Individual student characteristics such as family history, personal attributes, and pre-college experiences directly influence persistence and his or her personal commitment to the institution (Braxton et al., 2014). Tinto emphasized that scholars had completely neglected the role of the institution in the persistence puzzle. He took issue with the absence of methodological and academic stricture in preceding research studies. He pointed out that researchers of prior empirical work did not emphasize the correlation between institutional traits and student persistence. Furthermore, scholars unsuccessfully controlled for pre-existing finite disparities. It was noteworthy that the differences in the dropout rates between institutions resulted in the type of student selected for enrollment. Lastly, he contended that previous scholarly work failed to propose any recommendations that pertained to policy implications that were relevant to practitioners

in institutions. Tinto felt strongly that scholarly output should help shape institutional practices that would lead to increases in student persistence (Melguizo, 2011).

Through his theoretical frame, Tinto postulated that both academic and social integration had a direct bearing on a student's dedication to their institution and to the goal to complete a degree. In principal, there was a direct association between a higher level of a student's academic integration and degree completion (Tinto, 1975).

Furthermore, the higher the student's level of social integration can be associated to an increased commitment to their post-secondary institution. If a student possesses both a high level of institutional commitment and had a strong goal to complete his or her degree, it would result in a greater chance of persistence (Braxton et al., 2014).

In 1993, Tinto produced his most influential work, *Leaving College*, where he included the work of Van Gennep (1960) to help delineate the stages of dropping out of college: separation, transition and incorporation (Melguizo, 2011). Tinto (1975) drew on the work of French sociologist, Emile Durkheim, in his discourse that used suicide as an analogy to explain dropping out. From a common-sense perspective, Tinto argued that there should be no direct correlations composed between madness and the route of student persistence: rather the two forms of student behavior could be understood as an intentional departure from local populations (Melguizo, 2011). He went on to explain that this form of voluntary separatism is as much a reflection of the community as it is the student who decides to secede (Tinto, 1993).

The crucial tenet noted is that this concept made Tinto's theory an integrationalist theory. His theory focused on the relations concerning students and the

institution, instead of just the undergraduates (Melguizo, 2011). Hence, Tinto is completely deserting his previous scholarly efforts completed by educational psychologists (Braxton, Sullivan, & Johnson, 1997; Melguizo, 2011). Tinto wanted to migrate from a deficit model of student departure where students who departed were termed as not a good fit for the institution. He felt strongly that the colleges were not taking enough accountability for student attrition (Melguizo, 2011).

Tinto postulated that Durkheim's suicide theory was a societal phenomenon that formulated the decision to leave college. He designed a theoretical framework that explained the individual process of student persistence within the vast higher educational systems in the United States. Tinto singularly focused on just one of the categories of suicide as posed by Durkheim. The primary classification was the egotistical category. According to Durkheim, egotistical suicide typically occurs among those individuals who are incapable to integrating and creating bonds within a community or society. Durkheim defined two types of integration: social and intellectual. Social integration can be defined as a personal affiliation from interactions among differing members in a society. Intellectual integration is defined by individuals in a community who share norms and values, which are held sacred by that society. Tinto adapted these two philosophies into his longitudinal theory of student departure (Melguizo, 2011).

Vincent Tinto's paradigm of student withdrawal consists of four principles. First, there is the institutional level model, which is intended to define the longitudinal process of student attrition. Second, Tinto explained that the lack of persistence that occurs during a dismissal is diminutive at best. Hence, the model utilizes a longitudinal

process by which students, of their own accord, leave an institution. In the third tenet, the model is both longitudinal and interactional. It describes the longitudinal process and the interactions that occur between students and the college. These factors, over time, seem to account for the longitudinal process of withdrawal (Melguizo, 2011). Lastly, Tinto argued that his model is relevant to the institution's policies and can be used by administrators as a benchmark for official procedures to retain their student body (Tinto, 1993).

The core of Tinto's model consists of educational communities that encompass student engagement in collaborative learning communities on campus. The model debates that the junctions between student academic goals and commitments influence not only whether students persist but also affect the way students leave an institution. He argued that the intentions and expectations as students enter higher education matters, but the interplay of complex variables after entry is what significantly impacts personal persistence. The daily interactions between the student and the institution, both in the academic and social domains, must be positive because, in large measure, this complex relationship ultimately determines a student's decision to depart or remain at the institution (Melguizo, 2011).

Tinto concluded by summarizing four important characteristics of his theoretical framework. First, the course of student departure from higher education is highly correlated with the perceptions of their personal and academic experiences within the college. In addition, he argued that his model is an interactional scheme of scholarship. Furthermore, both forms of assimilation (communal and academic) are considered the

cornerstone of student persistence. Finally, his theoretical framework of student departure is a philosophy of academic groups, with the lecture hall or laboratory at the epicenter, and student persistence (Melguizo, 2011).

The main strength of Tinto's interactionalist paradigm is that it allows personnel at institutions of higher learning to investigate their policies and take personal accountability for the poor results of student persistence. However, critics have maintained that the principal limitation of Tinto's theoretical framework is that by so closely examining the interactions within the institution, the framework neglects to summarize its microscopic and static existence. In essence, Tinto's framework does not confine the societal, economic, political, technological and international dynamics that affect individual institutions and higher education as a whole (Braxton, 2000).

Discussion and Recommendations on New Theoretical Frameworks

Melguizo (2011) poses that it is extremely disconcerting that a decade has passed since prominent scholars in the field of student retention and persistence either called for a complete new theoretical framework (Johnson, 2000; Kuh & Love, 2000) or advocated for extensive refurbishment of Tinto's Interactionalist model (Baird, 2000; Bean & Eaton, 2000; Tinto, 2000), yet educational researchers continue to rely on a lone theoretical point of view. Intellectual protagonists in the field continue to be concerned that by focusing on a single theoretical framework some researchers have created unintended consequences in the results of their work. By exclusively focusing on Tinto's model, scholars have focused on research questions that relate only to student

experience while ignoring other factors that may also contribute to student attrition (Braxton, 2000).

There is no one theoretical framework that can be used to describe student persistence for all ethnicities, subgroups and situations (Swail et al., 2003). It is vitally important that new concepts and theoretical frameworks from all the social sciences be examined and studied. This will allow scholars to research a more diverse set of questions, so student persistence can be explained and vastly improved. By examining the problem of student persistence through a different lens, scholars are poised to gain a contemporary understanding of the complex factors associated with the process of persistence (Melguizo, 2011).

Furthermore, to gain an improved understanding of the academic diversity in all college systems, new theoretical frameworks must be empirically investigated so institutions can strategically move from theory to action. Current paradigms do not easily allow institutional leaders a strategic formula that allows policy shifts enabling practitioners to develop effective interventions. Regrettably, historical and current frameworks of persistence are not well designed to complete the migration from theory to practice. This is because researcher's current theories of student persistence use abstractions and variables that are extremely difficult to operationalize and translate into institutional policies and strategies (Perna & Thomas, 2008).

A Framework for Reducing the College Success Gap and Promoting Access for All

In past decades, access to higher education has increased and the gap between high-and low-income students has decreased (Perna & Thomas, 2008). However, there remains a disparity in degree completion rates between students from lower socioeconomic status and their counterparts (Tinto, 2007). New and competing paradigms must be considered that will help to explain research results, which cannot be supported by past theoretical frameworks (Evans, Forney, Guido, Florence, Patton, & Renn, 2010). Hence, new conceptual models that thoroughly explain student success and identify efficacious strategies to reduce the gaps across socioeconomic status, class and racial/ethnic groups must be conceived and utilized. These new theoretical frameworks must inform scholars about the development, implementation and evaluation of policy and practice (Perna & Thomas, 2008).

According to Perna & Thomas (2006), participation in institutional activities such as living in on-campus housing and partaking in academic and social programming has limited effects because of three significant factors. First, existing policies and practices commonly emphasize predictors of student success, but do not define the internal and external forces that influence persistence. Second, there is no clear, comprehensive or consistent definition defining student success. Lastly, practitioners who attempt to utilize past theoretical frameworks must muddle through a non-existent agreement on what works amongst scholars concerning methodological approaches (Perna & Thomas, 2008).

Undoubtedly, the use of differing methodological approaches, as defined by disciplinary perspectives (sociology, economics, psychology), widely benefits and induces a wide-ranging understanding of student success. However, this can lead to inconsistent findings and frustrate researchers who attempt to identify, develop and sustain a successful plan that leads to significant increases in student persistence. A fresh, comprehensive theoretical framework that stands as a model for policy, practice and future research must be utilized to insure the trends of academic success are revolutionized (Perna & Thomas, 2008).

Due to the limitations in previous theoretical frameworks, Perna & Thomas (2006) proposed, “an overarching framework that policymakers, practitioners and researchers can use to develop, implement and evaluate policies and practices for addressing persisting racial/ethnic and socioeconomic gaps in student success” (p. 2). Their framework consists of principal contexts that most affect academic persistence that includes: a student’s internal context (decisions/actions), the family context, the school context and the social/economic/policy context. Perna & Thomas’s (2006) pose that there is no singular or finite pathway to post-secondary academic attainment. The researcher’s illustrate and acknowledge through their model that post-secondary access and academic persistence are inseparably interconnected. They reside together in contextual layers and each share an influence on the student’s preparation and membership in the post-secondary attainment process. This model has influenced the research questions in this study through the school context. The researcher of this study sought to rationalize whether the compounding effects associated with educational

physical resources, ethnicity, gender, academic preparation and federal financial aid are indeed predictors of group membership (Perna & Thomas, 2006).

Research Studies on Community College Persistence in the United States

As presented in Chapter I, half of all community college students drop out before they complete their stated educational goal after only one year (ACT, 2013; Goldrick-Rab, 2010; NCES, 2013; Nealy, 2005; Windham, Rehfuss, Williams, Pugh, & Tincher-Ladner, 2014). However, there has been very little research that pertains specifically to community college persistence (Wild & Ebbers, 2002; Windham, Rehfuss, Williams, Pugh, & Tincher-Ladner, 2014; Yaun, 2013). Previous empirical investigations that have been published primarily focus on students who attended four-year institutions. Hence, the data provides little to no use for community college practitioners and leaders. There is a great need for future researchers to finitely concentrate on developing and investigating successful persistence interventions at the community college level (Wild & Ebbers, 2002).

Identifying Important Research Variables Concerning Persistence

In 2002, Andreu published an article titled, “Developing and Implementing Local-Level Persistence Studies: A Challenge for Community College Institutional Researchers.” The purpose of this article was to define and delineate over 20 independent variables that would support future community college student persistence. The variables in the study were chosen from Tinto’s and Bean’s models of student persistence (Andreu, 2002). However, this article provided broad and useful definitions

for selected independent variables that are assignable to more recent theoretical paradigms.

Andreu (2002) postulated that for many community college researchers designing research studies in the area of student persistence was a formidable challenge. Accurately defining variables and selecting the proper identification from persistence theoretical constructs is not easily accomplished. She further postulated that an ex-post facto design and the use of archival data are strongly recommended from a community college database. Furthermore, such data is far more likely to be accurate and financially efficient to obtain. In turn, archival data can provide rich longitudinal results. Lastly, Andreu (2002) challenged community college researchers to use these independent variables to provide useful and practical data for community college practitioners and administrators. Rich data can be used to shape and execute important strategic decisions concerning student persistence (Andreu, 2002).

Historically, Community Colleges Lack Significant Research Data

In 2002, Wild and Ebbers delineated that in spite of the large percentage of entering freshmen, ethnic diversity and first generation students who matriculate into community colleges every year, there has been a void of useful inquiry. They provided a practical and useful list of specific strategies for practitioners and leaders, which could be implemented in most community colleges and potentially may well lead to improved student persistence:

The strategies: (1) developing indicators; (2) creating learning communities and cohort groups; (3) developing directed persistence programs; and (4) developing

tutoring programs and supplemental instruction. These strategies, when further developed, would provide the stepping stones for administrators, in particular the directors of institutional research, to undertake a more comprehensive study of student retention that covers such matters as defining student retention, developing models, and increasing the amount of research on community college student retention. (Wild & Ebbers, 2002, p. 510)

Furthermore, Wild and Ebbers (2002) highlighted and complimented the fact that community colleges are well known for the flexibility, creativity and efficiency they have brought to post-secondary education in the United States. However, they called for community colleges to strategically implement initiatives concerning student retention. Developing and implementing persistence interventions must become a prime priority to practitioners and administrators nationwide. In essence, they argued that unless major and successful initiatives were undertaken soon, student persistence would become a serious problem based on the growth of this ethnically diverse student population (Wild & Ebbers, 2002).

Wild & Ebbers (2002) highlighted the fact that new initiatives in community college research must take place both at the macro and institutional level (Wild & Ebbers, 2002). Hence, in 2010, Goldrick-Rab critically reviewed over 3,000 retention studies dating from 1985 based on academic and policy research that emphasized what is known about three levels of influence: “(1) macro-level opportunity structure, (2) institutional practices, and the (3) social, economic and academic attributes students bring to college” (Goldrick-Rab, 2010, p. 438). The author presented 14 of the most

effective and utilized interventions and policies that have been evaluated to validate their achievement in furthering the retention effort in post-secondary education. These best practices were focused on three areas: altering the opportunity constructs (financial aid, institutional differentiation), institutional processes (pedagogical adaptations, strategic initiatives), and incentives to alter student behavior (academic preparation) (Goldrick-Rab, 2010).

The researcher illustrated that student driven factors appear to be more significant in predicting student persistence than institutional or policy factors. However, because of the lack of data in the area of community college student retention, these relationships require further investigation. The researcher called for a much more intense effort in the area of community college research and data development to inform stakeholders and evaluate interventions (Goldrick-Rab, 2010).

Goldrick-Rab postulated that it is extremely important that researchers create new means to empirically review the effects of new financial ventures at two year institutions to assess their intentional and non-intentional outcomes. The correlation between capital spending and student persistence is far from certain at community colleges. It is vitally important that administrators allocate their scarce resources in the most efficient and effective manner. Hence, it is imperative that administrators make data drive decisions predicated on newfound knowledge through sound research (Goldrick-Rab, 2010).

While Goldrick-Rab (2010) focused her attention on recommending specific interventions, Rankin, Katsinas and Hardy (2010) reviewed community college Chief

Executive Officers and Chief Academic Officers in terms of issues that may affect student persistence and access. The study focused on childcare, transportation and funding concerns. In this article, and what is of particular importance to this empirical study, the authors postulated that community colleges must be responsive to the needs of their diverse student body. As the American education system responds to demographic shifts, traditional methods of persistence can no longer be relied on. There is no prescriptive formula to fully describes or serves an ethnically diverse community college system nationwide. Hence, the selected theoretical framework must be flexible and be multi-faceted to support the research in question (Rankin et al., 2010).

Community College Persistence – Student Perceptions

While Rankin et al., (2010) focused on meeting the specific needs of the diverse community college student, Barbatis's (2010) study was undertaken to gain a comprehensive understanding of the perceptions of students who enrolled, but were underprepared academically. These students participated in a first-year learning community at a culturally diverse, large city campus in the southeastern United States. Two groups were interviewed, one set that completed 30 college credit hours were compared to those who did not persist. In total, 22 students voluntarily participated in this qualitative study, 6 who graduated, 12 who were retained and 4 who failed to persist (Barbatis, 2010).

Barbatis (2010) qualitative study examined the effects of participation in the learning community on the student's attitudes toward the institution with the intention of identifying factors that supported or impeded student persistence. One instrumental

factor that was brought out in this study was the need for family support after the student matriculated on campus. Parents and extended family are found to be highly relevant in the academic success of the underprepared. The authors of the study called for student affairs practitioners to develop programming and interventions that support family participation post-enrollment. It called for parental programming to be continuous throughout the student's college experience (Barbatis, 2010).

A Recent Academic Intervention and Persistence

Barbatis's qualitatively studied student perceptions of those who participated in a learning community, Windham, Rehfuss, Williams, Pugh and Tincher-Ladner (2014) quantitatively investigated what student characteristics correlated with improved student persistence at a community college located in the southeast United States. The researchers empirically investigated whether enrolling in and completing a study skills course positively affected student persistence. In this post-facto quasi-experimental study, researchers determined that students who completed the study skills course had higher rates of persistence versus those who did not enroll in the intervention. Furthermore, ethnicity and socioeconomic status were not found to be statistically significant factors of persistence. However, gender, age and the score the student obtained in the reading part of the intervention were statistically significant predictor variables (Windham, Rehfuss, Williams, Pugh, & Tincher-Ladner, 2014).

The researchers concluded that community college practitioners and administrators should offer and highly recommend that at risk students participate in a mandatory first-time freshmen orientation course (Windham et al., 2014). Many

students enter community colleges and are woefully underprepared to succeed in post-secondary education (Barbatis, 2010). Hence, the results of this study are extremely important to academic advisors, counselors and student affairs practitioners. Potential participants in the courses must be identified and proper advertisement of these types of interventions must be fully explained because of the academic benefits they provide in the effort to increase student persistence (Windham et al., 2014).

Research Studies on Community College Persistence in Texas

In 2014, there were 79 public and 63 private community colleges in the state of Texas. As previously mentioned, total enrollment for fall semester 2013 at Texas community colleges was 800,352 which was a 65% increase from the fall of 2000 (Community College Review, 2014). Community colleges in Texas compose 53% of the students in post-secondary education in the state. Two-year institutions educate 75.8% first-time freshmen of all races and 77.5% of minority freshmen in Texas public higher education. Texas public community colleges are, by design, educating all potential students providing a lower cost alternative to four-year institutions. As a prime example of diversity in their student population, community colleges serve 36.4% of the Hispanic, 13.7% African-American and 39.1% White students enrolled in Texas higher education institutions according to the latest statistics (THECB, 2014).

In 2008, Fike and Fike utilized a binary logistic regression to analyze predictors for fall-to-spring and fall-to-fall persistence for 9,200 first-time freshmen students who matriculated into a community college over a four year period. The researchers postulated that the financial impact to recruit new students is far greater than the costs to

retain its current students. However, most institutions more often than not place their priority on recruiting new students to the post-secondary process. Interestingly enough, the researchers found that if institutions utilize data to aid in the prediction of student persistence, they can begin the process of developing useful interventions to mitigate premature departure (Fike & Fike, 2008).

Fike and Fike's (2008) quantitative results yielded significant predictors for student persistence. The strongest predictor variable suggested that if students completed a developmental course in reading they were more likely to persist. Furthermore, the researchers indicated that the predictor variables of enrollment in online courses, participating in student affairs interventions, receiving financial aid, their parents educational acumen and the number of contact hours for their first semester were statistically significant with persistence (Fike & Fike, 2008).

While Fike and Fike (2008) focused on specific predictors for student persistence, Bruce, Shook, Fletcher & Smith (2011) published a report titled "With Great Challenges Come Great Opportunities: Promising Practices of Texas Community Colleges." The researchers qualitatively investigated three high performing community colleges in the state of Texas that were selected based on their higher level of student persistence, workforce placement, Pell grant recipient averages and lower than average loan default rates. In this research study, four common themes were presented across the three institutions (Bruce et al, 2011).

The researchers employed a qualitative approach to collect rich descriptive data. In selecting the participating post-secondary institutions, the researchers identified top

performing colleges by comparing the persistence and workforce placement rates from data obtained from the Texas Higher Education Coordinating Board from 2006-2007. The researchers developed and utilized an objective criterion predicated on data points that were used to classify colleges as high level or low level performing institutions (Bruce et al., 2011).

After the data was coded and examined, several common themes from the three community colleges emerged. First, each institution fostered a culture of continuous improvement. Each college was determined to be data driven in decision making, continuously developing grant funding opportunities and making process improvement a strategic priority. In addition, each college's faculty members served a dual role as educators and associates. Faculty had considerable involvement in intervention development, curriculum development, and accountability for student persistence. They continually had personal interaction with their students beyond the classroom. Furthermore, each institution was considered student driven and focused. Students were considered to be valued participants in the educational process rather than mere outputs. The colleges provided one-stop shops for all student services. They utilized various forms of communication using the latest technology to insure students stayed informed. Also, they devised micro-individualized academic plans for each student. Lastly, the colleges served the entire community by promoting early college awareness programming. They provided community access to all institutional resources including the career center. Also, the college leadership prioritized building formal relationships between the faculty and local business leaders (Bruce et al., 2011).

In concluding this section, the before mentioned studies clearly indicate that half of all community college students drop out before they complete their stated educational goal. Furthermore, there have been very few research studies completed and published that pertain specifically to community college persistence (Wild & Ebbers, 2002; Windham, Rehfuss, Williams, Pugh, & Tincher-Ladner, 2014; Yaun, 2013). Researchers of previous empirical investigations have primarily focused on students who attend four-year academic institutions with little ethnic diversity. Hence, previous historical empirical studies produced by researchers are of little use to community college practitioners and leaders. There is great need for future research to concentrate on cultivating and investigating effective persistence interventions at the two year institution level (Wild & Ebbers, 2002). Furthermore, Goldrick-Rab (2010) postulated that it is extremely important that researchers create new techniques to empirically gauge the outcomes of new financial investments at community colleges to assess their intentional and non-intentional outcomes. The large city community college in this study has allocated \$50,000,000 of its scarce financial resources constructing new residence halls over the last six years. Hence, the previous studies discussed serve as a foundation for this dissertation. Lastly, it is vitally important to institutional leadership whether the generous financial commitment it takes to plan and construct new residence halls is cultivating improved academic persistence.

A Brief Introduction to Residence Halls in the Late Twentieth Century

A prototypical difference between most four-year institutions and community colleges is the presence of residence halls for the student body (Cohen & Brawer, 2008; Tinto, 1993). In the United States, there are 1,132 community colleges that serve a diverse student population (AACC, 2014). At present there are 224 public, two-year institutions nationwide that offer on-campus housing (Yaun, 2013). In the 1960's, many states designated that the community colleges' mission was to aid commuter students and therefore residence halls were not necessary. However, in some cases, residence halls were part of the local institution's plans so students from distant locations could be adequately served (Townsend & Twombly, 2001).

In the twentieth century, residence halls in post-secondary education in the United States were significantly affected by the cultural and legislative shift. There was a philosophical paradigm change in higher education from elitism to egalitarianism. Federal legislation allowed women, students of color, and those with physical disabilities the opportunity to attend college in much higher numbers than ever before. The large number of students who matriculated to college campuses during this period forced administrators to construct residence halls at a rapid pace. To accommodate the needs of the diverse groups that were now arriving at college campuses, a shift in the roles and responsibilities of the residence life staff within student affairs was necessary (Schroeder & Mable, 1994). Residence life leadership is now responsible for financial budgeting, contractual development, Residential Director and Residential Assistant training,

educational and social programming, facilities management and student room assignments (Braxton, Doyle, Hartley III, Hirschy, Jones, & McLendon, 2014).

Over the last 50 years, due to the substantial increases in diverse student populations, residence life stands as an independent division of student affairs at most universities and community colleges (Braxton et al., 2014). During that time period, post-secondary education has been subjected to massive shifts in demographics, reallocation of scarce financial resources, increased legislative accountability and the need to insure student development. Through research, institutions have realized that student development and learning occurs well beyond the classroom. Hence, student affairs practitioners and residence life professionals are now expected to programmatically design interventions that academically and socially develop the whole student (Schroeder & Mable, 1994).

Collegiate Purpose for Residence Halls – Academic and Social Development

Researcher's in the field of persistence postulate that post-secondary academic results in the United States show vast room for improvement. Hence, there is a great need for institutions to create a model for continuous improvement that supports extensive advances in student learning (Schroeder & Mable, 1994). Researcher's results over the last four decades indicate that there is clear statistical evidence that students who live on campus are more likely to be retained and complete their educational goals (Pascarella & Terenzini, 2005). At many four-year institutions and 224 community colleges in the United States, residential housing provides an excellent opportunity to promote student learning and development (Yaun, 2013). Researchers' empirical results

clearly indicate that students prosper academically and socially by living communally with other residents (Pascarella & Terenzini, 2005). Residence life professionals have a unique opportunity to create developmental strategies that integrate a dual academic and social curriculum (Schroeder & Mable, 1994). Because residence life leadership has total autonomy in student placement, training of staff, governance and judicial systems, they control a unique opportunity for unmitigated student development (Chickering & Reisser, 1993).

If residential living environments are to enrich student development and significantly impact persistence, the designers of such constructs must become highly innovative in their efforts. Post-secondary institutions must not be satisfied with simply providing a relaxed living and social environment for their students. Residence halls at most institutions provide programming that promotes development of the whole student. Programming curriculum can challenge students to celebrate the diversity of other students. Creatively designed interventions in critical thinking, interpersonal skills, study habits, social responsibility and civic opportunities can all be excellent topics that would stimulate intellectual and social development. Campus housing environments have a unique opportunity to exceed the status quo. However, they must be cultivated into effective educational environments that integrate intellectual and social growth for its student population (Schroeder & Mable, 1994).

Advantages to Students Who Live in Residential Housing

Consistently, persistence researchers postulate that when compared to their counterparts, residential life student's level of involvement in academic, social, cultural

and extracurricular activities is increased in dramatic fashion (Schroeder & Mable, 1994). For post-secondary students, who voluntarily make the decision to live on campus, there are many positive advantages, including improved academic success and personal development (Thompson, Murphy-Chadwick, Sasse, & Huss, 2010).

Historically, researchers' results have suggested that communal living creates and fosters a social-psychological environment (Braxton, Doyle, Hartley III, Hirschy, Jones, & McLendon, 2014). In short, residents will typically take greater advantage of their opportunities for academic, social, cultural and extracurricular activities (Pascarella & Terenzini, 2005). This includes a significant increase in their contact hours and social interaction with both faculty and peers. Hence, students will enhance the development of their cognitive and non-cognitive skills, thus fast-tracking a maturation process (Schroeder & Mable, 1994).

Students who live in residence halls will encounter peers from diverse backgrounds who encompass strong cultural bonds and opinions (Chickering & Reisser, 1993). Living on campus offers an opportunity to encourage moral development by experiencing a variety of academic, social and cultural experiences from other students (Evans et al., 2010). Furthermore, this creates a context in which they can begin to develop an increased social tolerance and understanding. When those of differing backgrounds, values and opinions are met with empathy and tolerance, real dialogue can produce tangible personal and social development. By developing an understanding and tolerance for those students from an ever burgeoning student demographic, these bonds can begin to foster the growth of a student's personal character and integrity (Chickering

& Reisser, 1993). Rudolph (1990), in writing about the American history of dormitories, posed that “It took them from the bosom of a sheltering home and placed them under the same roof, where they might share the experiences which made men of boys” (Rudolph, 1990, p. 96).

Lastly, post-secondary communal environments offer on-campus support services that expand personal convenience and provide prompt access to students (Li, Sheely II, & Whalen, 2005; Thompson, Murphy-Chadwick, Sasse, & Huss, 2010). On-campus services often provide continuous access to programs that include academic support, advising, counseling and faculty mentors (Pascarella & Terenzini, 2005). Furthermore, institutions possess state-of-the-art technology that is extremely important to facilitate both academic and social development. On-campus, students also have access to increased security, thus lessening the risk of personal safety concerns (Thompson, Murphy-Chadwick, Sasse, & Huss, 2010).

Research on Residence Halls and Persistence at Four-Year Institutions

In 1989, Blimling published the results of a meta-analysis performed on empirical research from 1966 through 1987 where he investigated the statistical significance of college housing on academic persistence of undergraduate students in the United States at four-year institutions. Blimling (1989) reported that in the 21 studies utilized in his research that some concluded the influence of living on campus indicated those students outperformed their counterparts (lived at home) academically while others found differing results. However, for residence halls in general he postulated they do not employ a significant influence on academic persistence. Other factors such as prior

academic performance, personal motivation and curriculum may be more important (Blimling, 1989).

When students who live on-campus were compared only with students who live in off-campus apartments, researchers have suggested that they were more likely to persist. Furthermore, Blimling (1989) compared those who lived in on-campus housing to those living in social fraternity or sorority houses. The researcher suggested that residence life students performed slightly better than their counterparts. However, an interesting result from this meta-analysis emerged when on-campus students were compared to those who lived at home. Blimling (1989) concluded that although research on the influence of residence life and persistence was plentiful at public research universities, it was not representative of all post-secondary institutions. Blimling (1989) suggested that future research should be undertaken at differing types of institutions so that the knowledge base might be broadened. Researchers conclude from more recent study's the same premise (Baker, 2006; Catt, 1998; Moeck, 2005; Yaun, 2013). Because of the lack of useful data for community colleges, that is why the study was vitally important. To date, there had not been an empirical study reported at a large community college that investigated whether living on-campus positively affects student persistence.

While Blimling (1989) focused his investigation on meta-analytic results from previous studies, Zheng, Saunders, Shelley, & Whalen (2002) singularly studied a mid-western land grant university. They conducted an empirical study on the efficacy of student background characteristics, pre-college, attitudinal traits, and environment as predictors of academic performance on 3000 first-time freshmen living in residence life.

The authors of the study examined student background, psychological and environmental independent variables to statistically test their influence on academic performance. Zheng's et al., (2002) study strengthened past research by controlling for the past predictors of high school rank and ACT scores.

The investigators suggested based on their data that the independent variables such as freshmen from divorced families and first generation students are significant predictors for poor academic performance. Furthermore, the authors of the study concluded that students who were actively involved in a learning community had a greater likelihood to persist over those who did not participate. The limitations of (Zheng et al., 2002) study are that data came from a self-reported survey and students may have misrepresented their responses to conform to their perceived expectations. This study was not longitudinal by design and it was recommended that future research consider expanding the scope. Lastly, the lack of diversity, due to the minimal number of minority students, prevented a detailed analyses based on ethnic/racial backgrounds (Zheng et al., 2002).

While Zheng et al., (2002) studied specific student characteristics, Li, Sheely and Whalen (2005) published the results of an empirical investigation that focused on the living arrangements of students at a four-year, public research university located in the mid-western United States. The institution's enrollment was approximately 28,000 and surveys were sent to the 5,747 students living on campus. Students returned 2,553 reliable surveys that could be empirically studied by the researchers. Three questions were used that focused on student satisfaction with their current living arrangements,

whether they planned to attend the institution the following year, and if they planned to be employed (Li et. al., 2005).

What made these researchers' study important was that it rank ordered the predictive significance of its variables. This study was unique in that it amplified the significance of residential choices as predictors. The regression model controlled for demographic characteristics and examined the strength of association of the student's decisions regarding where to live as positive and negative predictors. The researchers's concluded that maximizing persistence opportunities for students focused on the quality of dining services, leadership opportunities, ample academic support, advanced learning communities and increased study space. This study's major limitation was that it focused on one primarily White, four-year institution and those results may vary between differing institutions (Li et al., 2005).

While Li's et al. (2005) study focused on living arrangements and student services, a research study by Lowther and Langley published in a report to the Alabama Association of Institutional Research (ALAIR) annual conference on April 8, 2005 investigated whether there was a significant statistical relationship for first-year freshmen between living on-campus and first year persistence from 2000 and 2003. The population consisted of all entering freshmen at a large four-year public institution. The group sample totaled 15,466 and was equally represented by both male and female students (Lowther & Langley, 2005).

The researchers' suggest through their findings that students in this study who lived in residence life facilities had an increased second year persistence rate. Hence,

living off campus resulted in negatively impacting a student's ability to academically return for their sophomore year. This result remained true even when differing levels of academic ability were controlled for in this empirical inquiry. Lastly, the study's authors recommended that in order for students to perform better academically, students needed a strong support network in addition to living in the physical facilities on campus. The authors concluded that students require a strong support network of academic and social services so they can adequately mature intellectually and culturally (Lowther & Langley, 2005).

While Lowther & Langley's (2005) study focused on first to second year student persistence, de Araujo and Murray (2010) conducted an empirical analysis that attempted to provide evidence on why students who live on-campus perform better academically than their counterparts. Their new findings were based on a previous study where researchers concluded that living on campus correlated with improved persistence. They investigated whether students who lived in residence life were more likely to access campus support services such as libraries, tutors, technology, and extra-curricular activities more than off-campus students. Furthermore the researchers analyzed their peer influences and interactions, which included student-led academic study groups and partaking in alcohol and drug consumption (de Araujo & Murray, 2010).

The researchers' through the analysis of their data concluded that students who lived on-campus did not take additional advantage of campus support services than those who lived off-campus. However, through the data analysis, the researchers suggested

that students who lived on-campus spent more time studying in their residence, which positively affected persistence. These students often created opportunities to spend significant time studying with their roommates or other students in their classes. Lastly, they found that residence life students consumed less alcohol on average than other students. In the aggregate, the researchers suggested a strong correlation with advanced academic performance and persistence from the behaviors exhibited by those students who live on-campus (de Araujo & Murray, 2010).

Learning Communities and Persistence

In 2010, de Araujo & Murray described student practices that directly led to increased persistence, Pike, Schroeder and Berry (1997) published an empirical study that examined the relationship between residential learning, student experiences, and persistence. First-time freshmen students were the focus of the inquiry at a four-year university. A sample of 2,678, composed of 63.6% female and 36.4% male, 85.1% White and 14.9% African-American, Asian-American, Hispanic or Native American were represented in their research study. Excluded in this study were international students living off campus and honor students (Pike et al., 1997).

In this investigation, researchers concluded that residential learning communities did not have a direct impact on student persistence. However, indirectly, these learning communities did significantly impact the faculty-student interaction, which did have a positive impact on improved academic results. The indirect effect of this intervention provided a conduit that facilitated the student's ability to academically and socially develop through these improved relationships. Lastly, the study's authors postulated that

family and peers support was a contributing factor to the persistence of first-year students in residential learning communities. One major limitation and weakness of the researchers' study was that the examined intervention was completed in the program's first year of existence. Numerous initiatives that were designed to be incorporated into the intervention were not yet implemented fully. In retrospect, by examining this intervention early, the researcher's results provided rich data so subsequent modifications could be utilized to improve the programs design (Pike et al., 1997).

Pike et al., (1997) concluded that learning communities in their current design did not positively affect persistence. However, Purdie (2007) completed a dissertation that empirically investigated the academic performance and persistence of first-year students who were enrolled in three academic interventions. The study was completed at a large, four-year, public research institution located in the mid-western United States. In this study, researchers utilized data between 2003 and 2005 and the sample was 14,049. The investigators primary purpose was to analyze whether participating in these interventions increased academic performance and the odds of persisting to their second year at a statistically significant level (Purdie, 2007).

Purdie (2007) utilized a multiple regression to determine whether participating in any of the three academic interventions increased the first-semester grade point average. The author's results indicated that affiliation in one of the three interventions had a positive effect on the first-semester grades for the students. A binary logistic regression was also utilized to detect whether participating in any of the programs increased the odds for persistence in school. Once again, the researchers indicated that in only one of

three interventions was the odds increased for persistence into the second academic year (Purdie, 2007). The main weakness of the researcher's study was that the authors did not analyze the difference between the three interventions. However, the researcher did add to the growing body of literature that supports the efficacy of first year interest groups (Purdie, 2007).

Who Benefits from Living on Campus?

In 2010, Lopez-Turley and Wodtke discussed that previous empirical research focused too heavily on too few large public research universities instead of a range of post-secondary institutions when investigating living on campus. Furthermore, previous researchers did not adequately investigate the effects on diverse student groups. The purpose of the researchers' study was to investigate the conditional effects of students who live on-campus on academic performance using a nationally proportional sample. In this investigation, researchers included independent variables that included race, gender and other institutional characteristics (Lopez-Turley & Wodtke, 2010).

In this empirical study, researchers utilized data (1999-2000) from the National Postsecondary Student Aid Study database (NPSAS). The researchers' study was limited to only those institutions that offered on-campus housing and that did not require first-year freshmen to live on campus by policy. The sample consisted of 2,011 students enrolled in 372 post-secondary institutions nationwide. Only full-time students between the ages of 18-25 were included (Lopez-Turley & Wodtke, 2010).

Lopez-Turley & Wodtke (2010) suggested that for the majority of students, living on-campus did not increase their first-year academic performance. The

researchers postulated that living on campus may provide the student with more opportunities for socializing in lieu of academic immersion. Social involvement and interaction are extremely important factors but these activities do not necessarily correlate with higher academic achievement. The researchers discussed that those students who were actively involved in intellectually beneficial behaviors may have a more positive influence on academic performance (Lopez-Turley & Wodtke, 2010).

However, African-American students who lived on campus did have a significant increase in their academic performance compared to their counterparts, at the same institution, who lived off-campus. Lastly, students who attended liberal arts institutions, and lived on-campus had a significantly increased academic performance over those at the same institution who lived off-campus (Lopez-Turley & Wodtke, 2010). The strength of the researchers' study was that it is one of the very few investigations that included ethnicity as a factor. The study was important because it suggests that there is a positive correlation between race and increased persistence for those students who lived on-campus. Minority academic success, namely degree completion is essential to the United States economy and wellbeing. Furthermore, domestic population prognostications forecast a decline in White population percentages and anticipate that African-American and Hispanic populations will surge to over 50% of the national populous by 2050 (Palmer, 2010). Unfortunately, the vast majority of students of color who enroll at community colleges fail to complete an associate's degree or fulfill the transfer function to a four-year institution to complete a bachelor's degree (Esters, 2007).

Lopez-Turley & Wodtke (2010) suggested that African-American students who lived on-campus had improved persistence. Hence, Schudde (2013) researched the variation in the effects of living on-campus across family histories. The researcher postulated that students who were typically disenfranchised from disadvantaged backgrounds would benefit less than their more affluent counterparts. She investigated two primary socioeconomic factors: family income and parental education. Data for the study were provided from the National Center for Education Statistics (NCES). Schudde (2013) based her longitudinal study on students who graduated high school in the spring 2004 and began their college career in the fall of the same year. The sample size was utilized in this study was gathered from 15,000 students from 750 random high schools across the country (Schudde, 2013).

Schudde (2013) suggested that living on-campus provides a small positive impact on most four-year university freshmen. However, the researcher suggested that students from low-income families and students who were first generation college students continue to be academically disenfranchised from those who lived on-campus. The investigator in this study contradicts the research results from Lopez-Turley & Wodtke's (2010) posed that found that African-Americans benefitted academically by living on-campus. Schudde recommended that further research should be conducted to examine the effects of living on-campus for a population of students from diverse backgrounds (Schudde, 2013).

Residence Hall Research and Persistence at Community Colleges

After a thorough review of the literature, only four previous studies pertaining to on-campus housing and persistence at community colleges in the United States were identified (Baker, 2006; Catt, 1998; Moeck, 2005; Yaun, 2013). Although prior research is almost non-existent, on-campus housing is slowly becoming common place in two-year post-secondary institutions as administrators manage increased enrollments, as well as support strong academic initiatives for a diverse student population (Moeck et al., 2007). Research studies concerning four-year institutions pertaining to residence life are abundant, but empirical data concerning community colleges barely exists (Moeck, 2005; Yaun, 2013). By design, a distinction between most four-year institutions and community colleges is the presence of residence halls for the student body (Cohen & Brawer, 2008; Tinto, 1993). Presently, in the United States, there are 1,132 community colleges that serve a diverse student population (AACC, 2014), out of which only 224 public, two-year community colleges offer on-campus housing (Moeck, Hardy, Katsinas, & Leech, 2007; Yaun, 2013). Most of the community colleges that offer on-campus housing are located in rural locations. In, 2005, there were 206 rural community colleges that offered 39,000 total beds for students that required on-campus housing. Many of these were designed specifically for students who were on athletic or other performance based scholarship (Moeck et. al., 2007).

In 1998, Murell, Denzine and Murell completed a study in which they examined the student perceptions of staff as well as peer contributions to the academic culture in residence life. They noted that residence halls have a unique potential to make

significant advances to the intellectual and social development of their residents. The study consisted of 14 community colleges with on-campus housing. The final survey results were returned by 783 students from nine community colleges that were representative of different regions in the United States (Murrell, Denzine, & Murrell, 1998). Student perceptions were measured with a four-point Likert scale survey that consisted of 21 questions. Fourteen questions were designed to investigate students' perceptions of peer involvement in creating an academic environment. The remaining seven items were designed by the researchers to interpret student perceptions regarding the staff's effort to foster an academic rich atmosphere (Murrell, Denzine, & Murrell, 1998).

The empirical results suggested that both the staff and peers received slightly above average ratings. The researcher's indicated that staff had a slightly greater influence when compared to that of the peer perception. One interesting result of this study was that both staff and peers at these community colleges ranked lower than when the survey was implemented at four-year institutions. After analyzing the data, the main concern from this study is that many of the community college students who were surveyed had a negative perception that correlated with their residence hall as a true academic community. The recommendations from this study were that community colleges would potentially benefit from developing residential-based learning communities. In addition, the researchers' called for a strategy of assessment so that modified and improved interventions can be integrated into community college housing. Lastly, the researchers recommended that community college administrators must

perceive their residence halls as a hidden treasure. Hence, they are called to develop robust interventions that will foster a true academic atmosphere in the residence halls (Murrell et al., 1998).

Murrell's et al., (1998) study focused on student perceptions regarding on-campus housing but Moeck (2005) postulated that research concerning four-year institutions pertaining to on-campus housing was plentiful but investigations' concerning two-year institutions was scant at best. In 2005, Moeck published a dissertation that had two purposes. First, it was written to dispel the myth that community colleges offer no on-campus housing. It also presented the process in which residence halls are administered, housing amenities, benefits of on-campus housing and its future. When this study was published, it developed the first baseline in conducting a national analysis of community colleges. At the time, there were no research studies that provided empirical results concerning community college housing (Moeck, 2005).

Moeck isolated rural community colleges that offered on-campus housing and postulated why community colleges operationalize this auxiliary service. However, the researcher did not discuss student persistence, nor did he state any recommendations pertaining to academic or social development of the student population. Moeck's (2005) focus in this empirical study generalized that public community colleges offered housing to benefit athletes on scholarship, minority students who lived out of district, and international students. The only focus on student development was found to be recommendations pertaining to clubs and other on-campus organizations (Moeck, 2005).

Moeck's (2005) study focused on a national level and did not adequately investigate the relationship between living on-campus and student persistence. In 2006, Baker completed a doctoral research investigation on student integration into on-campus living activities and persistence. Baker (2006), in her empirical study, postulated that more community colleges are making the construction and availability of residence halls a priority in an effort to improve student services. Baker (2006) attempted to determine if outside influences positively or negatively affect persistence in college enrollment. The investigator examined the relationship between employment/family obligations, integration into residence hall activities, and persistence (Baker, 2006).

This researcher conducted her study at a large community college with an enrollment of over 37,000. The total sample used in this study was 406 students. To gather data, the researcher utilized a web based survey instrument that was administered through the college's division of Institutional Effectiveness. The researcher's results did not yield a statistical significant relationship between persistence and the independent variables. Baker's (2006) results indicated that work and family obligations did not negatively affect the participant's academic persistence. Therefore, Baker (2006) recommended that further research be undertaken in the area of residence life on community colleges because of the limited availability of useful data (Baker, 2006).

Prior to Baker's (2006) quantitative study, Catt (1998) completed a doctoral dissertation that was a qualitative study by design. Specifically, Catt (1998) investigated the perceived complications that occurred for traditional-aged students while living off-

campus. The researcher emphasized that traditional-aged students are frequently overwhelmed by their daily struggles and that the local community college did not provide the proper support systems that would allow them to overcome these obstacles. The researcher recommended that the students had great need for affordable housing that was near the institution. This was a recurring theme during the interviews with both students and parents. Catt (1998) concluded through his analysis that on-campus housing would play a significant role in the student's transition into college and potentially eliminate many of the perceived personal difficulties (Catt, 1998).

Most recently, Yaun (2013) completed a doctoral dissertation in which he examined the relationship between community colleges that did and did not offer housing and the persistence of first-year students. In the study, Yaun (2013) used archival data collected from 2007 to 2011 from the Integrated Postsecondary Education Data System (IPEDS) on first year persistence rates from 448 public, community colleges located in the United States. The study was designed to investigate the potential impact of the independent variables, age, gender, financial aid, graduation rates and race (Yaun, 2013).

The researcher's results indicated that persistence rates of the students at the community colleges that offered housing were substantially lower than those without housing, which is contrary to most research concerning four-year institutions. A potential reason is that data from the IPEDS system included all first-time freshman students who were enrolled at the institutions. The ability to identify and specifically focus on students who lived in the residence halls at the colleges that provided on-

campus housing was not possible. Therefore, results from the researchers study were confounded by the inclusion of students attending the institution with on campus housing, but who did not live on-campus. Also, the 224 colleges that did not provide housing were randomly selected from the remaining 908 institutions nationwide. It is logical to argue that if a different group of campuses were randomly selected and studied, the results may have been significantly altered (Yaun, 2013).

Dr. John Yaun's (2013) empirical study offered the first nationwide attempt to investigate whether living on-campus at a community college was statistically associated with academic persistence. Although the results were mixed, and in some cases, did not support the vast majority of historical empirical evidence based on four-year institutions, the data provided a benchmark for future investigations. Yaun (2013) recommended that future research be undertaken to complete a boarder perspective. At this point, there have been no other reported studies that have examined the effect of living on-campus and the persistence of first-year freshmen at community colleges. Dr. Yaun (2013) strongly suggested that future research should focus on a longitudinal study that would fully investigate if there are any statistical relationships between student's actually living on-campus and the persistence of first-year students. Hence, a verifiable gap in the research literature pertaining to the significance of community college residence life and student persistence currently exists (Yaun, 2013).

Empirical research regarding on-campus housing and persistence at community colleges is nearly non-existent. To date, there has been only one reported study that used national data to investigate whether the empirical relationship of living on-campus and

persistence has a significant statistical relationship (Yaun, 2013). Furthermore, Goldrick-Rab postulated that it is extremely important that researchers create new models to evaluate the consequences of new financial ventures at community colleges to assess their intentional and non-intentional outcomes (Goldrick-Rab, 2010). This present study has potentially created new knowledge by offering empirical evidence concerning the relationship of housing status and persistence. Thus, it would provide not only the large city community college (LCCC) the data they require for assessment purposes but would fill a gap in research literature for all similar community colleges that offer on-campus housing.

CHAPTER III

METHODOLOGY

Introduction

Historically, researchers who have investigated and published on student persistence suggest that students who are academically and socially integrated at an institution are far more likely to continue their post-secondary pursuits (Astin, 1977; Astin, 1993; Boyer, 1987; Kinzie & Kuh, 2004; Kuh G. D., 1995; Kuh, Kinzie, Schuh, & Whitt, 2005; Pascarella & Terenzini, 2005; Tinto, 1993). For decades, universities and community colleges in the United States have been developing interventions with the aim of increasing student engagement. Many of these programs were designed and initiated with the intent of increasing student persistence. However, it is well documented that academic persistence at community colleges continues to lack significant progress. On a consistent basis, over half of all students who enter the nation's community colleges fail to persist to their second year of enrollment (ACT, 2013; Goldrick-Rab, 2010; NCES, 2013; Nealy, 2005; Windham, Rehfuss, Williams, Pugh, & Tincher-Ladner, 2014).

There is no one theoretical framework that can be used to describe student persistence for all ethnicities, subgroups and situations (Swail et al., 2003). Hence, Perna and Thomas (2006) acknowledged that post-secondary access and academic persistence are inseparably interconnected and proposed an overarching new theoretical framework. Student persistence is mired in contextual layers and each share an

influence on the student's preparation and membership in the post-secondary attainment process. Their model has influenced the research questions in this study through the school context. The researcher of this study sought to rationalize whether the compounding effects associated with educational physical resources, race, gender, academic preparation and federal financial aid are indeed predictors for post-secondary academic success (Perna & Thomas, 2006). In the future, it is of major importance that researchers develop procedures that will facilitate the gathering and analyzing of key data. That process can aid the development of new initiatives for increased student persistence. The results from this researcher's study will potentially play a pivotal role in gauging the success of these costly social and academic interventions.

The purpose of this research study was to empirically investigate the odds ratio associated with predicting persistence between first-time freshmen students who lived in campus housing and those who lived off campus at a large city community college. Specifically, this study was focused on whether living in on-campus housing, receiving needs-based federal financial aid (Pell Grant), ethnicity, gender and enrolling in one or more remedial courses were predictors for student persistence. This study was predicated on the collection of quantitative data from an East Texas community college's student information system from the years 2010 through 2013. Chapter III has been written to describe the quantitative methodology, research perspective and design that were utilized in this study. Furthermore, the study's dependent variable, independent variables, data collection and data analysis are illustrated in Chapter III.

Research Methodology

A quantitative method was selected for the purpose of data analysis for this research study. This selection was predicated on the fact that this empirical inquiry was defined by the nature of its research questions, data type and population size. This study was based on data that was retrieved on first-time freshmen students who independently chose to live on-campus beginning in the fall semesters of 2010 and 2011 and were tracked until the spring semesters of 2012 and 2013, respectively. When employing a quantitative approach to an investigation, the researcher poses a postpositivist assertion for cultivating newfound knowledge (Creswell, 2014).

Quantitative research supports the hypotheses of objectivity and impartiality. However, it is often labeled an epistemological approach that manipulates participants into inelastic categories. In retrospect, quantitative inquiry seeks for the statistical data to be the voice of reason and requires no input or judgment from the researcher (Abusabha, 2003). In terms of a postpositivist paradigm, quantitative inquiry examines cause and effect associations, assesses theoretical frameworks, and finds knowledge through measurement. In quantitative analysis, the researcher's role is to utilize a statistical instrument that yields data that can be generalized and interpreted. It is the researcher's responsibility to translate the data and to validate the theoretical frameworks being tested (Creswell, 2014). It can be argued that numerical values of a variable can have different meaning for diverse individuals. However, a quantitative inquiry can be effectively utilized to investigate a causal relationship among social phenomena from a

mechanistic perspective (Gall et al., 2007). Hence, this study was designed to collect and study data that will be both impersonal and objective in its findings.

Research Design

This research study was a quantitative investigation of ex post facto data (Tabachnick & Fidell, 2007) obtained from the institution's student information system, and was extracted from the fall semester of 2010 to the spring semester of 2013. Ex post facto references that the data was utilized based on occurrences from the past or after the fact. For research purposes, data mining for an ex post facto design is recommended when extricating data from community college databases (Andreu, 2002). Information gathered after the fact, which is also identified as archival data, can disclose rich and valuable information for researchers at the institution being studied (Lodico, Spaulding & Voegtle, 2010). The researcher utilized archival data, which allowed this empirical inquiry to assess all students who fell within the specified date range and provide for future replication. The data provided did not allow the researcher to identify the students in this study. Only raw data without identifiers (extracted from the student information system) was provided by the Office of Institutional Research under the auspices of the college president. By design, the Office of Institutional Research did not participate in the SPSS input process and subsequent data analysis.

Casual-comparative research or research that is gathered after the fact is used to compare two groups and seeks to clarify the disparities in the groups based on similar occurrences. This researcher's study was designed to analyze the odds ratios of five independent variables in relation to one dependent variable. Odds ratios are a statistic

that is used to quantify how strongly the presence or absence of variable A is associated with the presence or absence of variable B in a given population. In essence, an odds ratio expresses “the likelihood of an event as a proportion of both occurrences and non-occurrences” (Pampel, 2000, p. 11). Mertler and Vannatta (2010) contend that “in a logistic regression application, *odds* are defined as a ratio of the probability that an event will occur divided by the probability that the event will not occur” (p. 294). This research design is considered non-experimental but it examines the effect of independent variables on a dependent variable. Simply stated, the researcher’s study was used to determine whether or not the independent variables in this investigation could be used to determine whether those characteristics can accurately predict group membership. Lastly, this design is mutually exclusive from experimental research in the fact that the independent variables relationships to the dependent variable were not randomly assigned. Because the design is ex post facto, it would be considered unethical or impossible at this point for the researcher to attempt to manipulate the independent variables in the study (Lodico et al., 2010).

Research Questions

RQ 1: Is Residential Hall status a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 2: Is receiving needs based financial aid (Pell Grant) a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 3: Is Ethnicity a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 4: Is Gender a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 5: Is Developmental Education a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

Null Hypothesis Statement

The significance level for education and behavioral science research studies is commonly set at .05 (Mertler & Vannatta, 2010). Hence, the researcher set the significance level at .05 before the data was collected for this research study.

The following null hypothesis statement was developed from the previous research questions. It is designed to state that there is no relationship between the two measured phenomena (dependent and independent variable). The hope is that data will allow the researcher to reject the null hypothesis statement. This null hypothesis statement is believed to be accurate unless the data provides evidence to disprove it.

H_{01} = The entire set of independent variables do not contribute significantly to the probability of predicting Persistence.

Participant Population

Archival data were extracted from the institution's student management system for the years 2010 through 2013. The maximum resident population in student housing at this large city community college (LCCC) was 1,058. This is based on the total number of resident beds available for the academic years 2010 - 2013 according to the Department of Residence Life at the institution. Included in the 1,058 total were returning students from the previous spring semester and members of the athletic teams,

were excluded in the study. These students were excluded because this study was designed to focus on first-time freshmen who chose freely to live on campus. The study's sample (first-time freshmen) for the fall of 2010 was 900 students or 450 matched pairs. The study's sample (first-time freshmen) for the fall of 2011 was 632 or 316 matched pairs. Each set of students who lived on campus were proportionally matched with a random set of students entering during the fall semesters of 2010 and 2012 who lived off campus. The cohort students who entered in the fall semester of 2010 were tracked until the spring semester of 2012. Those cohort students who entered in the fall semester of 2011 were tracked until the spring semester of 2013. Enrollment profile characteristics were selected to assess the predictability of persistence on whether the student's lived on-campus or off-campus, whether they accept needs based financial aid (Pell Grant), ethnicity, gender and whether they were enrolled in one or more remedial education courses.

Description of Variables

The focus of this research study was to analyze the odds ratios of select characteristics and to evaluate the predictability of student persistence, which is binary or dichotomous. When the categorical dependent variable is dichotomous or binary, the appropriate statistical analysis is commonly identified as a binary logistic regression (Meyers, Gamst, & Guarino, 2013). Social phenomena that are dichotomous are considered to be discrete or qualitative. In essence, the event occurs or it does not, so it can be classified simply as 0 or 1 (Pampel, 2000). There were five dichotomous predictor variables examined in this study. The independent variables were associated

with odds ratios that were statistically calculated. The odds ratios were used to determine the statistical association of the predictor variables with persistence and measure their predictability.

Dependent Variable

The dependent variable for this study is predicated on whether a student persists to the end of their subsequent (Spring, Fall & Spring) semesters. The data associated with this variable are student persistence for first-time freshmen students who enrolled in the fall semester of 2010 through the spring of 2012. Furthermore, first-time freshmen students who enrolled in the fall semester of 2011 through the spring of 2013 were a second cohort. Over the last thirty-five years, researchers have thoroughly examined the effect of many variables that influence student persistence (Astin, 1977; Astin, 1993; Kuh, 1995; Tinto, 1993). For this research study, persistence was defined as a student's enrollment beginning in the fall semester of 2010 or 2011 and still enrolled in the at the end of the (Spring 2011, Fall 2011 & Spring 2012) and (Spring 2012, Fall 2012 & Spring 2013), respectively.

Independent Variables

Five independent variables were used in this research study. The first predictor variable was whether the first-time freshmen student resided in on-campus housing or lived off campus and is dichotomous. Social phenomena that are dichotomous are considered to be discrete or qualitative. In essence, the events occur or it does not so it can be classified simply as 0 or 1 (Pampel, 2000). The second predictor variable was whether the student received need based federal financial aid (Pell Grant). The third

predictor variable was ethnicity, which was a categorical variable according to the college's classifications listed in the student information system. The fourth predictor variable was gender, which is also dichotomous. The last predictor variable was whether the student was enrolled in one or more developmental courses. The variable names and descriptions are illustrated in Table 1. The researcher selectively worked with his committee members to include the use of interaction terms (independent variables) as a component of this study.

Table 1
Binary Logistic Regression Variable Values

Variable Name	Description of Variable
Persistence (DV)	1 = Enrolled 0 = Not Enrolled
Housing Status (IV)	1 = Live On-Campus 0 = Live Off-Campus
Financial Aid (F/A) (IV)	1 = Accept F/A 0 = Not on F/A
Ethnicity (IV)	1 = African American, 2 = Hispanic, 3 = White
Gender (IV)	1 = Male 0 = Female
Developmental Courses (IV)	1 = Enrolled 0 = Not Enrolled

Data Collection

The researcher utilized archival data extracted by the college's Office of Institutional Effectiveness (IE) department headed by the Office of the Provost under the auspices of the college president. In close cooperation with the institution's lead

researcher, IE extracted the student data from the college's student information system. Data were mined on 600-900 first-time freshmen students who lived on campus beginning in the fall of 2010 and 2011, respectively. The data were presented in raw form (either 0 or 1) and identification of the students was not possible. A proportionally matched cohort set was randomly selected from the remaining first-time freshmen students from a group of approximately 2000, which was derived from the remaining students post-matriculation.

Data Analysis

A Binary Logistic Regression analysis utilizing SPSS was determined as the most appropriate statistical procedure for various reasons. Most importantly, this procedure was selected on the basis that the dependent variable is dichotomous or binary in nature (Meyers et al., 2013). The dependent variable, persistence, was coded "non-persistence = 0" and "persistence = 1" in this study. Furthermore, the study was undertaken to examine the association of the dependent variable (persistence) and whether the independent variables accurately predict group membership. Lastly, binary logistic regression was selected as the statistical analysis procedure because of the assumption that a linear relationship does not exist between the dependent variable and independent variables. Hence, the data in this study were assumed not to be normally distributed (Tabachnick & Fidell, 2007).

Binary Logistic Regression Model Tests of Validity

There were various statistical tests utilized in this research study that assessed the viability of the binary logistic model. The tests that were used in support of this model were as follows:

The omnibus Chi-Square test of coefficients measured the absolute validity of the coefficients. The tests were used to analyze the null hypothesis to determine if all of the coefficients were equal zero. The Chi-Square test is similar to the F-test used in linear regression. The test was used to compare the difference in the constant only model which contains no predictors and the full model that contain the predictors. If the Chi-Square test is found to be significant, the conclusion is that the independent variables enhance the prediction capability in lieu of them not being utilized (Meyers, Gamst, & Guarino, 2013).

In the Pseudo R^2 tests, the Cox & Snell (0 to .75) and Nagelkerke (0 to 1.0) are two similar statistical techniques used to estimate the percentage of variance in the dependent variable explained by the independent variables. It is important to note that neither of these tests for variance generates the same R^2 as in multiple linear regression analysis. In technical terms, a true R^2 cannot be calculated in logistic regression, thus the term *pseudo* was used to describe the results. However, the results were used to interpret the variance similarly to least square regression (Meyers et al., 2013).

The Hosmer and Lemeshow test was used to analyze the model for fit and to measure whether the predicted probabilities are equivalent to the observed probabilities. In a logistic regression, the researcher anticipates a nonsignificant p value for this test.

In this statistical model, a researcher would be hopeful that the independent variables would precisely predict the actual probabilities. In SPSS, the test was utilized on the entire sample as an overall examination of model fit (Meyers et al., 2013).

Summary

The methodological processes described by the researcher in Chapter III have illustrated in detail the research methodology, design and statistical procedure that were utilized in this study. The research questions and null hypothesis were discussed. The dependent variable and independent variables were also identified and discussed. Data collection was designed to utilize archival information extracted from the institution's student information system. A statistical procedure, Binary Logistic Regression was selected on the basis that the odds ratios of the independent variables can be analyzed to determinate their merit of predictability of group membership.

CHAPTER IV

RESULTS

Introduction

Over the last thirty-five years, researchers have examined the effect of many variables that influence student persistence (Astin, 1977; Astin, 1993; Kuh, 1995; Tinto, 1993). The purpose of this research study was to empirically investigate the factors associated with predicting persistence that occurs between first-time freshmen students who live in on-campus housing and those who live off-campus at a large city community college (LCCC). Specifically, the focus of this study was whether living in on-campus housing, receiving needs-based federal financial aid (Pell Grant), ethnicity, gender and enrolling in one or more developmental (remedial) courses are educational predictors of persistence. This study was predicated on the collection of quantitative data from the LCCC's student Banner information system from the years 2010 through 2013. All archival data for this research study were provided and certified by the LCCC's Office of Institutional Effectiveness and Research. The sections of this chapter consist of a description of the population, variables and descriptive statistics. Then, a brief review of the research questions and the hypotheses statement are presented. Lastly, the researcher presents the multivariate statistical findings of this study.

Population, Variables and Descriptive Statistics

Archival data were extracted from the institution's Banner system for the years 2010 through 2013. At the time of this study, the maximum resident population in

student housing was 1,058. This was based on the total number of resident beds available for the academic years 2010-2013 according to the Department of Residence Life at the institution. Included in the 1,058 total were returning students from the previous spring semester and members of the athletic teams, were excluded from the study. These students were excluded because the focus of this study was first-time freshmen who freely chose to live in on-campus housing.

Each set of students who lived on-campus were proportionally matched by the Office of Institutional Effectiveness and Research at the LCCC with a random set of students entering during the fall semesters of 2010 and 2011 who lived off-campus. Enrollment profile characteristics selected to assess the predictability of persistence were living in on-campus or off-campus housing, acceptance of needs-based financial aid (Pell Grant), ethnicity, gender and enrollment in one or more developmental education courses.

The dependent variable for this study was whether students persisted to the end of the subsequent spring, fall and spring semesters of their cohort. All three semesters were analyzed for each cohort (Spring 2011, Fall 2011, Spring 2012 and Spring 2012, Fall 2012, Spring 2013) for the purpose of data enrichment. For this research study, persistence was defined as a student's enrollment beginning in the Fall semester of 2010 or 2011 and still being enrolled in the spring, fall and spring semesters of their cohort.

Five independent variables were analyzed for this research study for the purpose of determining if they were valid for predicting the dependent variable. The first predictor variable was residential status (whether the first-time freshmen student resided

in on-campus housing or lived off-campus) and was coded as dichotomous. The second predictor variable was whether the student received needs-based federal financial aid (Pell Grant) and was coded dichotomous. The third predictor variable was ethnicity, which was a categorical variable according to the college's classifications listed in the student information system. The fourth predictor variable was gender and was coded dichotomous. The last predictor variable was whether the student was enrolled in one or more developmental education (remedial) courses and was coded dichotomous.

Descriptive Statistics - Ethnicity

As presented in Table 2, the sample of first-time freshmen for this study in the Fall of 2010 was 900 students or 450 pairs. African-American students (485) comprised 54% of the sample and White students (321) 36% may be seen in Table 2. As presented in Table 3, the study's sample for first-time freshmen in the Fall of 2011 was 632 or 316 pairs. African-American students (400) consisted 63% of the sample and White students (184) 29% (Table 3).

Table 2
Frequency Distribution of Participants by Ethnicity - Fall 2010

Variable	Number	Percent
<u>Ethnicity</u>		
African-American	485	54%
White	321	36%
Hispanic	52	6%
Other	42	5%
Total	900	100%

Table 3

Frequency Distribution of Participants by Ethnicity - Fall 2011

Variable	Number	Percent
<u>Ethnicity</u>		
African-American	400	63%
White	184	29%
Hispanic	24	4%
Other	24	4%
Total	632	100%

Descriptive Statistics – Gender

As exhibited in Table 4, Male students (343) comprised 38% of the sample and Female students (557) 62% of the Fall 2010 cohort. As presented in Table 5, Male students (416) comprised 66% of the sample and Female students (216) 34% of the Fall 2011 cohort.

Table 4

Frequency Distribution of Participants by Gender - Fall 2010

Variable	Number	Percent
<u>Gender</u>		
Male	343	38%
Female	557	62%
Total	900	100%

Table 5

Frequency Distribution of Participants by Gender - Fall 2011

Variable	Number	Percent
<u>Gender</u>		
Male	416	66%
Female	216	34%
Total	632	100%

As exhibited in Table 6, Pell students (66) comprised 7% of the sample and Non-Pell students (834) 93% of the Fall 2010 cohort. In Table 7, Pell students (272) comprised 43% of the sample and Non-Pell students (360) 57% of the Fall 2011 cohort.

Table 6

Frequency Distribution of Participants by Pell Status - Fall 2010

Variable	Number	Percent
<u>Pell</u>		
Yes	66	7%
No	834	93%
Total	900	100%

Table 7

Frequency Distribution of Participants by Pell Status - Fall 2011

Variable	Number	Percent
<u>Pell</u>		
Yes	272	43%
No	360	57%
Total	632	100%

Descriptive Statistics – Residence Hall Status

As exhibited in Table 8, Residence Life students (450) comprised 50% of the sample and Non-Residence Life students (450) 50% of the Fall 2010 cohort. As presented in Table 9, Residence Life students (316) comprised 50% of the sample and Non-Residence Life students (316) 50% of the Fall 2011 cohort.

Table 8

Frequency Distribution of Participants by Residence Hall Status – Fall 2010

Variable	Number	Percent
<u>Residence Hall</u>		
Yes	450	50%
No	450	50%
Total	900	100%

Table 9

Frequency Distribution of Participants by Residence Hall Status – Fall 2011

Variable	Number	Percent
<u>Residence Hall</u>		
Yes	316	50%
No	316	50%
Total	632	100%

Descriptive Statistics – Developmental Education Status

As exhibited in Table 10, Developmental Education students (477) comprised 53% of the sample and Non-Developmental Education students (423) 47% of the Fall 2010 cohort. As presented in Table 11, Developmental Education students (353)

comprised 56% of the sample and Non-Residence Life students (279) 44% of the Fall 2011 cohort.

Table 10
Frequency Distribution of Participants by Developmental Education Status - Fall 2010

Variable	Number	Percent
<u>Developmental Education</u>		
Yes	477	53%
No	423	47%
Total	900	100%

Table 11
Frequency Distribution of Participants by Developmental Education Status - Fall 2011

Variable	Number	Percent
<u>Developmental Education</u>		
Yes	353	56%
No	279	44%
Total	632	100%

Research Questions

RQ 1: Is Residential Hall status a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 2: Is receiving needs based financial aid (Pell Grant) a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 3: Is Ethnicity a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 4: Is Gender a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

RQ 5: Is Developmental Education a predictor of Persistence for first-time freshmen as indicated by the odds ratio?

Examination of the Hypothesis Statement

The following null hypothesis statement was developed from the before mentioned research questions. It was designed to state that there is no relationship between the two measured phenomena (dependent and independent variable). This null hypothesis statement was believed to be accurate unless the data provides opposing evidence.

H_{01} = The entire set of independent variables do not contribute significantly to the probability of predicting Persistence (Dependent Variable).

Cohorts (Fall 2010 to Spring 2011 and Fall 2011 to Spring 2012)

As exhibited in Table 12, the results for the Fall 2010 to Spring 2011 were significant for the Omnibus Chi-Square test. In both cohorts, for the Hosmer and Lemeshow test the p values were found to be nonsignificant at .470 and .181, respectively. The Cox & Snell and Nagelkerke R Square tests were used to examine the independent variables for the Fall of 2010 to Spring of 2011 accounted for 2.1 and 3.2% of the variance in the dependent variable as presented in Table 13. In the Fall of 2011 to Spring of 2012, the Cox & Snell and Nagelkerke R Square tests accounted for 1.7 and 2.7% of the variance in the dependent variable as presented in Table 13.

Table 12

Tests of Validity (Null Hypothesis Test I)

Test	Fall 2010 to Spring 2011	Fall 2011 to Spring 2012
	<i>p</i>	<i>p</i>
Omnibus Chi-Square	.009	.133
Hosmer & Lemeshow	.470	.181

Table 13

Tests of Validity (Variance Test I)

Test	Fall 2010 to Spring 2011	Fall 2011 to Spring 2012
	<i>R</i> ²	<i>R</i> ²
Cox & Snell	.021	.017
Nagelkerke	.032	.027

In the Fall 2010 to Spring 2011 cohort for those students living on-campus, the odds of persistence were statistically insignificant when compared to those students living off-campus as seen in Table 14. Likewise for the cohort of students from Fall 2011 to Spring 2012 for those living on-campus, the odds of persistence were statistically insignificant when compared to those students living off-campus as exhibited in Table 15. As presented in Table 14, from the Fall of 2010 to Spring 2011, African Americans (1.853) were statistically higher (significant) than White students to persist into the spring semester. As presented in Table 14, students who were enrolled in Developmental Education courses (Remedial) were less likely to persist than students who did not require developmental courses at .613.

Table 14
Regression Coefficients Regarding the Relationship between Gender, Pell, Residence Hall, Ethnicity, Developmental Education Status and Persistence (Cohort I - Spring 2011)

Variable	Fall 2010 to Spring 2011			
	β	<i>S.E.</i>	<i>p</i>	<i>Exp . (β)</i>
Gender	-.085	.172	.622	.919
Pell	-.152	.307	.620	.859
Residence Hall	.098	.165	.553	1.103
Ethnicity = White			.003	
Other	.275	.402	.494	1.316
African-American	.617	.194	.001*	1.853
Hispanic	-.323	.327	.323	.724
Developmental Education	-.490	.181	.007*	.613
Constant	1.282	.180	.000	3.602

*Significant < .05

Table 15
Regression Coefficients Regarding the Relationship between Gender, Pell, Residence Hall, Ethnicity, Developmental Education Status and Persistence (Cohort II - Spring 2012)

Variable	Fall 2011 to Spring 2012			
	β	<i>S.E.</i>	<i>p</i>	<i>Exp . (β)</i>
Gender	-.160	.209	.444	.852
Pell	.206	.206	.319	1.228
Residence Hall	.245	.196	.212	1.277
Ethnicity = White			.126	
Other	-.412	.474	.384	.662
African-American	.236	.237	.319	1.266
Hispanic	-.670	.461	.146	.512
Developmental Education	.086	.211	.683	1.090
Constant	1.000	.226	.000	2.717

*Significant < .05

Cohorts (Fall 2010 to Fall 2011 and Fall 2011 to Fall 2012)

As exhibited in Table 16, the results for the Fall 2010 to Fall 2011 and Fall 2011 to Fall 2012 were significant for the Omnibus Chi-Square test at .006 and .003, respectively. In both cohorts, for the Hosmer and Lemeshow test, the *p* values were found to be nonsignificant at .995 and .137, respectively. The Cox & Snell and Nagelkerke R Square tests were used to examine the independent variables for the Fall of 2010 to Fall of 2011 accounted for 2.2 and 2.9% of the variance in the dependent variable as presented in Table 17. In the Fall of 2011 to Fall of 2012, the Cox & Snell and Nagelkerke R Square tests accounted for 3.3 and 4.6% of the variance in the dependent variable as presented in Table 17.

Table 16

Tests of Validity (Null Hypothesis Test II)

Test	Fall 2010 to Fall 2011	Fall 2011 to Fall 2012
	<i>p</i>	<i>p</i>
Omnibus Chi-Square	.006	.003
Hosmer & Lemeshow	.995	.137

Table 17

Tests of Validity (Variance Test II)

Test	Fall 2010 to Fall 2011	Fall 2011 to Fall 2012
	<i>R</i> ²	<i>R</i> ²
Cox & Snell	.022	.033
Nagelkerke	.029	.046

In the Fall 2010 to Fall 2011 cohort for those students living on-campus, were statistically insignificant when compared to those students living off-campus as seen in Table 18. Likewise for the cohort of students from Fall 2011 to Fall 2012 for those living on-campus, were statistically insignificant when compared to those students living off-campus as exhibited in Table 19. As presented in Table 17 and 18, from the Fall of 2010 to Fall 2011, and Fall 2011 to Fall 2012 students who were enrolled in Developmental Education courses (Remedial) were less likely to persist than students who did not require developmental courses at .682 and .690, respectively. As exhibited in Table 19, African-American students were less likely to persist over their White counterparts at .622.

Table 18
Regression Coefficients Regarding the Relationship between Gender, Pell, Residence Hall, Ethnicity, Developmental Education Status and Persistence (Cohort I - Fall 2011)

	Fall 2010 to Fall 2011			
	β	<i>S.E.</i>	<i>p</i>	<i>Exp . (β)</i>
Gender	-.281	.145	.052	.755
Pell	-.154	.269	.567	.857
Residence Hall	.034	.137	.806	1.034
Ethnicity = White			.379	
Other	-.012	.333	.972	.988
African-American	-.271	.159	.088	.763
Hispanic	-.165	.306	.588	.847
Developmental Education	-.383	.147	.009*	.682
Constant	.150	.150	.317	1.162

*Significant < .05

Table 19
Regression Coefficients Regarding the Relationship between Gender, Pell, Residence Hall, Ethnicity, Developmental Education Status and Persistence (Cohort II - Fall 2012)

Variable	Fall 2011 to Fall 2012			
	β	<i>S.E.</i>	<i>p</i>	<i>Exp. (β)</i>
Gender	-.183	.183	.319	.833
Pell	-.088	.175	.613	.915
Residence Hall	.219	.168	.192	1.245
Ethnicity = White			.035	
Other	-.046	.448	.918	.955
African-American	-.475	.201	.018*	.622
Hispanic	.400	.442	.365	1.492
Developmental Education	-.371	.179	.038*	.690
Constant	-.049	.197	.804	.952

*Significant < .05

Cohorts (Fall 2010 to Spring 2012 and Fall 2011 to Spring 2013)

As exhibited in Table 20, the results for the Fall 2010 to Spring 2012 and Fall 2011 to Spring 2013 were significant for the Omnibus Chi-Square test at .000 and .003, respectively. In both cohorts, for the Hosmer and Lemeshow test, the *p* values were found to be nonsignificant at .081 and .066, respectively. The Cox & Snell and Nagelkerke R Square tests were used to examine the independent variables for the Fall of 2010 to Spring of 2012 accounted for 5.2 and 7.2% of the variance in the dependent variable as presented in Table 21. In the Fall of 2011 to Spring of 2013, the Cox & Snell and Nagelkerke R Square tests accounted for 3.4 and 4.8% of the variance in the dependent variable as presented in Table 21.

Table 20

Tests of Validity (Null Hypothesis Test III)

Test	Fall 2010 to Spring 2012	Fall 2011 to Spring 2013
	<i>p</i>	<i>p</i>
Omnibus Chi-Square	.000	.003
Hosmer & Lemeshow	.081	.066

Table 21

Tests of Validity (Variance Test III)

Test	Fall 2010 to Spring 2012	Fall 2011 to Spring 2013
	R^2	R^2
Cox & Snell	.052	.034
Nagelkerke	.072	.048

In the Fall 2010 to Spring 2012 cohort for those students living on-campus, were statistically insignificant when compared to those students living off-campus as seen in Table 22. For the cohort of students from Fall 2011 to Spring 2013 for those living on-campus, were statistically insignificant when compared to those students living off-campus as exhibited in Table 23. As presented in Tables 22 and 23, from the Fall of 2010 to Spring 2012, and Fall 2011 to Spring 2013 students who were enrolled in Developmental Education courses (Remedial) were less likely to persist than students who did not require developmental courses at .510 and .564, respectively. As exhibited in Tables 22 and 23, African-American students were less likely to persist over their White counterparts at .607 and .653.

Table 22

Regression Coefficients Regarding the Relationship between Gender, Pell, Residence Hall, Ethnicity, Developmental Education Status and Persistence (Cohort I - Spring 2012)

Variable	Fall 2010 to Spring 2012			
	β	<i>S.E.</i>	<i>p</i>	<i>Exp . (β)</i>
Gender	-.310	.156	0.047*	.733
Pell	.015	.291	.959	1.015
Residence Hall	-.051	.146	.728	.950
Ethnicity = White			.017	
Other	.106	.341	.756	1.112
African-American	-.499	.168	.003*	.607
Hispanic	-.107	.316	.734	.898
Developmental Education	.673	.156	.000*	.510
Constant	-.001	.155	.996	.999

*Significant < .05

Table 23

Regression Coefficients Regarding the Relationship between Gender, Pell, Residence Hall, Ethnicity, Developmental Education Status and Persistence (Cohort II - Spring 2013)

Variable	Fall 2011 to Spring 2013			
	β	<i>S.E.</i>	<i>p</i>	<i>Exp . (β)</i>
Gender	-.077	.190	.687	.926
Pell	-.047	.182	.798	.954
Residence Hall	.066	.174	.704	1.068
Ethnicity = White			.203	
Other	.014	.457	.976	1.014
African-American	-.427	.206	.039*	.653
Hispanic	-.217	.465	.640	.805
Developmental Education	-.573	.185	.002*	.564
Constant	-.172	.201	.393	.842

*Significant < .05

Summary

This study was designed to create new knowledge for community college administrators, researchers and practitioners by offering empirical evidence concerning the relationship of housing status and persistence at a Large City Community College. The researcher's primary focus was to examine whether living on-campus rather than living off campus attributed to greater odds of persistence at this institution. Many previous studies at four-year universities concluded that living on-campus is closely associated with persistence (Astin, 1977; Astin, 1993; Boyer, 1987; Kinzie & Kuh, 2004; Kuh G. D., 1995; Kuh, Kinzie, Schuh, & Whitt, 2005; Pascarella & Terenzini, 2005; Tinto, 1993). Hence, the results of this study were not statistically overwhelming, but they were troublesome. The researcher expected the odds of persistence for those living on-campus to be much greater than their counterparts.

In the cohorts (Fall 2010 to Spring 2011, Fall 2010 to Fall 2011, Fall 2010 to Spring 2012 and Fall 2011 to Spring 2012, Fall 2011 to Fall 2012 and Fall 2011 to Spring 2013) for those students living on-campus, the odds were statistically insignificant when compared to those students living off-campus. Based on the statistical results, the researcher has concluded that living on-campus at the LCCC does not increase the odds of academic persistence.

Furthermore, the researcher has concluded that African American and Developmental Education students were less likely to persist than their counterparts. In both data sets, African American students from the Fall 2010 and Fall 2011 cohorts were less likely to persist than their White counterparts based on the odds ratios (Tables 21

and 22). Lastly, as presented in Tables 21 and 22, the researcher concluded that in the cohort of first time freshmen from the Fall of 2010 to Spring of 2012 and Fall 2011 to Spring 2013 that students enrolled in Developmental Education were less likely to persist, .510 and .564, respectively. However, students requiring needs based financial aid (Pell) and Hispanic student's attrition was no worse than their counterparts.

Lastly, the researcher has determined that a statistical relationship between living on campus at LCCC for first year freshmen students over a two year period (both cohorts) did not produce statistical evidence that persistence was positively affected. Hence, more detailed research must be designed, completed and assessed in the near future at community colleges that offer residential life. A thorough summary, discussion of the results and recommendations for future research and study is presented in Chapter V.

CHAPTER V

SUMMARY

To date, there has been only one reported study that utilized national data to investigate whether the empirical relationship of living on-campus and persistence has a significant statistical association at a community college (Yaun, 2013). Hence, the purpose of this research study was to empirically investigate the odds ratio associated with predicting persistence that exists between first-time freshmen students who live in on-campus housing and those who lived off-campus at a large city community college. Specifically, the focus of this study was to determine whether Residence Hall Status, Financial Aid Status (Pell Grant), Ethnicity, Gender and Developmental Education (Remedial) status were predictors of persistence. This study was predicated on the collection of quantitative data from the college's (Banner) student information system from the years 2010 through 2013 at the LCCC.

In Chapter V, the researcher presents a thorough discourse of the five independent variables and their ability to predict the dependent variable (Persistence). Lastly, this chapter contains data interpretation and discussion, conclusions, recommendations, implications to future research, relationship to the study's theoretical framework and a summary of this research study.

Data Interpretation and Discussion

The study's sample (first-time freshmen) for the Fall of 2010 was 900 students or 450 matched pairs. The study's sample (first-time freshmen) for the Fall of 2011 was 632 or 316 matched pairs. Each set of students who lived on-campus was proportionally

matched with a random set of students entering during the Fall semesters of 2010 and 2012 who lived off-campus. The cohort students who entered in the Fall semester of 2010 were tracked until the Spring semester of 2012. Those cohort students who entered in the Fall semester of 2011 were tracked until the Spring semester of 2013.

Residential Status as a Predictor of Persistence

As presented in Chapter IV, a Binary Logistic Regression was performed via SPSS on all five independent variables and the dependent variable. With regard to Residential Status as a predictor of Persistence, for the cohorts (Fall 2010 and Fall 2011) concerning the students that resided on-campus, the odds of persistence were statistically insignificant. Hence, those who lived on-campus fared no worse attrition than those living off-campus. This theme was shared in all six semesters analyzed that included the Fall 2010 cohort (Fall 2010 to Spring 2011, Fall 2010 to Fall 2011), and the Fall 2011 cohort (Fall 2011 to Spring 2012, Fall 2011 to Fall 2012 and Fall 2011 to Spring 2013).

Research studies concerning four-year institutions, students living on-campus and persistence are abundant but empirical data concerning community colleges has been historically non-existent (Moeck, 2005; Yaun, 2013). The majority of research on first-year freshman persistence based on four-year institutions suggests that living on-campus increases the likelihood of persistence (Pascarella & Terenzini, 2005; Schroeder & Mable, 1994; Tinto, 1993). Predicated on the statistical results of this study, the researcher concluded that living on-campus at the LCCC does not increase the odds of academic persistence. These results are surprising based on historical research findings at four year universities.

This study's results are not in alignment with Blimling's (1989) meta-analysis as presented and discussed in Chapter II. Blimling (1989), reported in his research that the majority of the studies analyzed concluded that students who lived on-campus slightly outperformed their counterparts academically. Consequently, Lowther & Langley (2005) concluded that first-time freshmen who lived on campus had a greater rate of persistence when coupled with a strong support network. Although on-campus student's academic persistence is only marginally higher, they appear to be taking advantage of opportunities for greater academic, social, cultural and extracurricular activities. Furthermore, de Araujo & Murray (2010) postulated that on-campus students were found to spend more time studying and utilizing study groups. As further discussed in Chapter II, on-campus students have an increased amount of contact hours and social interaction with faculty and other students which enhances the development of their academic maturation (Schroeder & Mable, 1994). Lastly, post-secondary communal environments often provide improved access to on-campus support services that are often not utilized by off-campus students (Li et al., 2005).

However, the primary concern of the researcher is that living on-campus does not increase the odds of academic survival. As noted in Blimling (1989), themes such as personal motivation and curriculum may serve as more important factors for increasing the odds of persistence for those living on-campus. Many of the students at LCCC are considered academically at-risk when they matriculate. Hence, attributes such as personal motivation, prior academic success and consistent study acumen may play a pivotal role in why the odds of persistence for those living on-campus is not greater. As

discussed in Chapter II, Lopez-Turley & Wodtke (2010) found that the reason that students on-campus do not perform better academically can be attributed to more opportunities for socializing instead of spending valuable time with academic immersion. They concluded that students can be overly involved in activities that do not necessarily correlate to positive academic behaviors. At LCCC there are many opportunities for students who live on-campus to spend time at athletic events and other extracurricular activities, which may be counterproductive to academic success.

Ethnicity as a Predictor of Persistence

An analysis of Ethnicity as a predictor of persistence revealed that in the short term African-American students actually persisted at higher rates but only marginally. From the Fall 2010 cohort and Fall 2011 cohort, African-Americans odds of persisting was marginally better than their White counterparts to the Spring 2011 and Spring 2012 semesters, respectively. However, the odds for African-Americans in the Fall 2010 cohort (Fall 2010 to Fall 2011 and Fall 2010 Spring 2012) and Fall 2011 cohort (Fall 2011 to Fall 2012 and Fall 2011 to Spring 2013) suggested that the odds of persisting were substantially lower. In three of the last four semesters analyzed, African-Americans odds of persistence were (statistically significant) less than White students. However, for Hispanic student's, the odds of persistence were no worse than their White counterparts for all six semesters analyzed.

Wild & Ebbers (2002) posed that in spite of the large percentage of first-time freshmen students at community colleges, there has been a void of useful inquiry pertaining to ethnicity. However, in Chapter II, it was presented that Lopez-Turley &

Wodtke (2010) found that African-American students who lived on-campus had a significant increase in academic performance to their counterparts who lived off-campus. Students in the Lopez-Turley & Wodtke (2010) study were from a small liberal arts (four-year) institution and most likely not at-risk students prior to enrollment. This research study was not designed to specifically compare African-Americans who lived on or off campus and whether there was a difference in academic performance. However, the results of this study clearly suggest that in both cohorts African-American students persisted at lower rates than White students no matter their residential status.

Many of the African-American students at LCCC may be first generation or matriculate academically underprepared. Other factors Shudde (2013) discussed that negatively affected persistence were socio-economic factors and lack of parental education. As Rankin et al., (2010), presented in Chapter II, the American education system must begin to respond to the demographic shifts. Traditional methods of persistence can no longer be relied on.

Developmental Education as a Predictor of Persistence

An analysis of the students who were enrolled in Developmental Education (Remedial) courses suggested that the odds of persistence are statistically (significant) lower. For students from the Fall 2010 and Fall 2011 cohorts who were enrolled in Developmental Education courses the odds of persisting were lower in five of the six semesters analyzed.

According to Barbatis (2010), one-third of community college students must enroll in Developmental Education courses and often matriculate into community

colleges woefully underprepared to succeed academically. Barbatis's (2010) qualitative study focused on those students who enrolled in college but intellectually behind. Furthermore, students who enroll in Developmental courses and do not take part in other interventions had lower persistence rates. In his research study, four common themes were identified among students who academically thrived despite being enrolled in Developmental Education. The themes were as follows: pre-college characteristics, external college/community support, social involvement and academic integration. In reference to academic integration, students enrolled in Developmental Education at LCCC may not be developing those key elements for success. These key elements include having a positive interaction with their faculty members and developing proper study habits. This may relate to the entire emphasis at LCCC of being enrolled in these remedial courses without a proper academic foundation being laid simultaneously by the faculty and practitioners. As was noted in Chapter II, Windham et al., (2014) discussed that, for at risk students, it should be mandatory to participate in a first-time freshmen skills development course. Potential participants must be identified early in the enrollment process and the benefits must be fully explained as to why the course is essential in building a strong academic foundation for underprepared students.

Needs Based Financial Aid as a Predictor of Persistence

An analysis of whether receiving Needs Based Financial Aid (Pell) predicted persistence revealed that in both the Fall 2010 and Fall 2011 cohorts that the odds were statistically insignificant. Hence, student's on (Pell) attrition rates were no worse than those students not qualifying for needs based financial aid. Fike & Fike (2008)

concluded that those students who receive financial aid correlated positively to persistence. Furthermore, Yaun (2013) postulated that living on-campus and receiving financial aid did correlate to increased persistence. However, in this study, the results of students who lived on and off campus were virtually inconclusive whether receiving Needs Based Financial Aid (Pell) predicated Persistence.

Gender as a Predictor of Persistence

An analysis of Gender as a predictor of Persistence revealed that the odds for both Female students Male students were statistically insignificant. (Fike & Fike, 2008; Yaun, 2013) posed that Females were consistently the larger group at community colleges. Furthermore, (Fike & Fike, 2008; Schudde, 2013) found Gender was not a significant predictor of persistence according to their odds ratios, respectively. Hence, the results found in this study are not surprising. Based on the results of this study, the researcher has concluded that neither the Males nor Females who lived on or off campus matriculate to the LCCC more academically prepared than their counterparts.

Conclusions

The researcher has concluded based on the data analysis of this research study that the results are statistically insignificant for those living on-campus when compared to those students living off-campus. The majority of research on first-year freshman persistence based on four-year institutions suggests that living on-campus increases the likelihood of persistence (Blimling, 1989; de Araujo & Murray, 2010; Lowther & Langley, 2005; Pascarella & Terenzini, 2005; Schroeder & Mable, 1994; Tinto, 1993). The findings in this study were in alignment with Yaun (2013), who found that students

who attended a community college with on-campus housing academic persistence were lower than those students at institutions that offer no on-campus housing. The results of this independent variable as a predictor was a surprise based on previous studies at Universities. However, the odds of persistence among on-campus students at the LCCC were statistically insignificant and this was disconcerting for several reasons. As previously mentioned in Chapter I, demographic shifts in the United States underscore the fact that America will be less White over the next thirty years (Swail et al., 2003). Nationally, in the fall of 2012, community college enrollment of African-Americans and Hispanics consisted of 48 and 56%, respectively, among those attending all two-year post-secondary institutions and future growth is expected (AACC, American Association of Community Colleges, 2014). If the odds of persistence for those living on-campus showed promise that may provide a worthwhile intervention for students of color, but that was not the case in this study.

An analysis of Ethnicity as a predictor of persistence revealed that in the short-term African-American students persisted at marginally higher rates than their counterparts. However, in three of the last four semesters analyzed, African-Americans persisted at significantly lower rates than White students. The results of this study were based on African-American students who both lived on and off campus. Lopez-Turley & Wodtke (2010) found that African-American students who lived on-campus at a small liberal arts institution had a significant increase in academic performance over their counterparts who lived off-campus. They further posed that for African-American students who lived off-campus may have increased family responsibility and fewer

financial resources thus negatively affecting persistence. However, Schudde (2013) found that students of color from low socioeconomic families tended to persist at lower rates. Hence, the results of this study are not surprising given the large number of minority students in this study. However, Hispanic students persisted at rates comparable to their White counterparts.

An analysis of the students who were enrolled in Developmental Education (Remedial) courses suggested that the odds are statistically lower concerning persistence. For students from the Fall 2010 and Fall 2011 cohorts who were enrolled in Developmental Education courses the odds of persisting were lower in five of the six semesters analyzed. Barbatis (2010) authored a qualitative study that focused on students who enrolled in college but entered the institution academically underprepared. In his research study, four common themes were identified among students who academically thrived despite being enrolled in Developmental Education. In reference to the theme (academic integration), students enrolled in Developmental Education at LCCC may not be developing those key elements for success that were paramount for academic success. Due to the sheer number of students at LCCC taking Developmental Education, the ability to spend quality time with their Professors and other critical academic services may be diluted. Barbatis (2010) posed that key elements must include having a positive interaction with their faculty members and developing proper study habits. Windham et al., (2014) strongly suggested that at-risk students should be forced to participate in a first-time freshmen skills development course. Furthermore, students who enroll in Developmental Education courses and do not take part in multiple

interventions had lower persistence rates (Barbatis, 2010). In the future, students matriculating at the LCCC that are considered at-risk must be identified early in the enrollment process. Practitioners must fully explain the rationale why participating in such courses or interventions are essential in building a strong academic foundation for underprepared students.

Implications

The first implication should center on educating the administrators and practitioners at the LCCC that living on-campus does not increase a student's odds of academic survival. As (Murrell et al., 1998) posed, residence halls possess a significant opportunity to positively affect the learning and academic advancement of community college students. For this reason, senior leaders that are responsible for Residential Life, including key policy and decision makers should immediately begin to synthesize the results of this study. A dialogue should be orchestrated with both the leaders of the academic programs and support services at the institution. A thorough review of the residential life current programs and interventions should take place concerning their finite strengths, weaknesses, opportunities and threats. The main concern for administrators is that additional students of color will continue to enroll at community colleges because of the demographic shifts in America (Swail et al., 2003). Unless well-planned and effective interventions can be implemented, persistence and graduation rates may spiral downward unless community colleges can learn to better serve these students. Hence, lower persistence and enrollment are a key concern to policymakers and they both can eventually lead to financial doom. As previously discussed in Chapter II,

Moeck (2005) and Yaun (2013) posed that there are virtually no reported studies in this area of research. Hence, there is ample opportunity for further study in this area for community colleges.

Likewise, the second implication should focus on the lack of academic persistence for African-American students who both live on and off campus. Wild and Ebbers (2002) posed that in spite of the large percentage of first-time freshmen students at community colleges, there has been a void of useful inquiry pertaining to ethnicity. Hence, based on the results of this study and a recommendation from Wild and Ebbers (2002), further research concerning students of color must be designed and completed so academic persistence can be improved. The rates of persistence for community college students are slightly over 50% in contrast to 67% of university students (Wild & Ebbers, 2002). On a consistent basis, over half of all students who enter the nation's community colleges fail to persist to their second year of enrollment (ACT, 2013; Goldrick-Rab, 2010; NCES, 2013; Nealy, 2005; Windham, Rehfuss, Williams, Pugh, & Tincher-Ladner, 2014). Hence, there is vast room for improvement. Lastly, key college administrators and policymakers should be alerted to this serious situation and a plan of action should be designed and implemented at the institution.

Lastly, the third implication should focus on the lack of academic persistence for Developmental Education students who live on and off campus. According to Barbatis (2010), over 30% of first-time freshmen students entering higher education require some fashion of Developmental Education. Predicated on the literature provided and the results of this study, the researcher concluded that additional inquiry is warranted

concerning students who enter academically underprepared. Once again, key college administrators and policymakers should be alerted to this serious situation and a plan of action should be designed and implemented at the institution. Hence, a thorough review of the early identification system for at-risk students should be evaluated by those responsible for that area in student affairs. Lastly, the entire Developmental Education curriculum and pedagogy should be examined for potential gaps.

Recommendations for Future Research

The results of this study compelled the researcher to determine that there are many opportunities for new research questions and differing methods should be introduced. First, this study should be replicated for more recent data from the same institution. Essentially, this would be considered a longitudinal study concerning the LCCC. Analyzing the data over a longer period of time may lead to more useful information thus either reinforcing the results from this study or not. Furthermore, running a Binary Logistic Regression on specific ethnicities and whether living on-campus aids in persistence would be valuable. This would be easy to accomplish since the Binary Logistic Regression model has been developed. Lastly, this model should be replicated at another community college that has a substantial non-athlete student population elsewhere in state and the United States to see if it is generalizable at other similar institutions.

Secondly, this Binary Logistic Regression Model can be modified to add other potential independent variables to include variables such as college GPA, high school GPA, pre-college testing, family socioeconomic status, family educational levels, family

support levels, job status, age, distance from home and whether their residence is urban or rural. Potentially, some of these independent variables may provide accurate predictors concerning future academic success for students of color and those who matriculate academically underprepared.

Another potential study, a mixed-methods inquiry, should be designed and implemented by development of a Likert scale survey and interview techniques that would help the researcher better understand the reasons for early departure. The results of this research study did not focus on the finite reasons why students actually departed the institution. Some students may have departed to complete the transfer function or left for other reasons not considered in this study. Some areas of study to consider should be the student's attitudes, perceptions, personal educational goals, integration in to the college's social culture, student satisfaction, faculty interaction, study habits, interventions and their personal growth and development.

Another potential quantitative study based of archival data from the LCCC's Banner system would be to track the academic success of all students in residence life, including students that were purposely not included in this study. Students from groups that are not forced to live on-campus, like the band and other groups, should be studied to see if their residential status predicts persistence. Furthermore, as a follow up study, qualitative methods inquiry could be utilized to better understand their attitudes, perceptions, personal educational goals, integration in to the college's social culture, student satisfaction, faculty interaction, study habits, interventions and their personal growth and development.

Finally, a mixed methods study, based on a survey and interview techniques, should be designed and implemented specifically to study African-American and Developmental Education students at the institution that reside both on and off campus. Lastly, a qualitative inquiry should be designed to examine student attitudes, perceptions, personal educational goals, integration in to the college's social culture, student satisfaction, faculty interaction, study habits, interventions and their personal growth and development.

Relationship to Theory

It was introduced in Chapter II that fresh and competing paradigms must be considered that will better clarify research results, which cannot be supported by past theoretical frameworks (Evans et al., 2010). New conceptual models that are used to thoroughly expound student success and identify valuable strategies to reduce academic deficiencies across socioeconomic status, class and racial/ethnic groups must be designed and implemented. New theoretical frameworks must inform scholars about the development, implementation and evaluation of policy and practice (Perna & Thomas, 2008). Hence, the conceptual framework and research questions in this study were developed with the Perna and Thomas model in mind. Their conceptual model was developed to create a clear understanding of student success across diverse groups. Unlike other models, this framework was conceived to guide researchers into designing studies that would identify reasons for poor persistence rates across all socioeconomic, gender and ethnic groups (Perna & Thomas, 2008).

Predicated on this study's results, the researcher concluded that the existing policies, processes and interventions at the LCCC have had an imperfect effect on persistence for those who live on or off campus, African-American and Developmental Education students. This study was developed to derive data that would aid the administrators, practitioners and faculty at the LCCC to better understand the internal and external forces that stimulate a positive academic persistence. As Perna and Thomas (2008) postulated, persistence is influenced by a multitude of variables and interactions far more than were the scope of this research study. Furthermore, they pose that student success is a longitudinal and complex process. Perna and Thomas (2008) argued that student success is honed and explained by multiple layers of independent variables. This researcher has concluded that the results of this study are multifaceted and interlaced between the School Context, Internal Context, Student Attitudes and Behaviors described in the model (Perna & Thomas, 2008). It is imperative that this research study be synthesized holistically and used to create strategies that will promote vast improvement in the academic persistence of those typically disenfranchised groups and those who matriculate academically underprepared.

Lastly, at most community colleges there is no clear and consistent understanding that defines student success (Andreu 2002; Perna & Thomas, 2008). Concluding that living on-campus only slightly increases the odds of persistence and that African-American and Developmental Education students fail to persist should highlight the need for a rational discourse. This discussion should target early identification of at-risk students, institutional policies and academic programming efforts. It is clear that

there is much work to complete in order to understand the lack of persistence by virtually all the students represented in this study at this institution.

Closing Thoughts

As previously discussed in Chapter I, no matter the ethnicity, gender or socioeconomic status of a college student in the United States, they possess the opportunity to acquire academic acumen to complete their personal higher education goals. From a public and cultural perspective, graduating from a community college or university is widely considered the great economic equalizer in today's society. United States citizens value educational attainment of its population and a growing world economy demands it to remain competitive globally (Seidman, 2005).

Despite a large volume of research on student persistence over the last forty years, there have been few reported studies that primarily focus on community colleges (Derby & Smith, 2004; Wild & Ebbers, 2002). Researchers in the field of persistence have predominately concentrated on students who exclusively attend four-year institutions. This gap, created by the researchers, has developed empirical data that is of little or no use to community college practitioners and leaders. Hence, (Wild & Ebbers, 2002) called for investigators to direct their attention to studies that are finite, timely and significant concerning two-year institutions.

It has been well documented in this research study that the persistence rates at community colleges in the United States are dismal at best (ACT, 2013; Goldrick-Rab, 2010; NCES, 2013; Nealy, 2005; Windham, Rehfuss, Williams, Pugh, & Tincher-Ladner, 2014). Predicated that studies concerning the academic effects of on-campus

living are reportedly scarce, a paradigm shift concerning general discourse in this area should be undertaken (Yaun, 2013). It was previously discussed that identifying variables at community colleges concerning persistence was an issue (Andreu, 2002). Hence, there should be complex models designed based on additional variables in order to better understand the relationship between residential status and persistence (Yaun, 2013).

Community colleges often lack and are in serious need of persistence data that have a strong empirical foundation concerning their own institution and from others that lead the effort (Yaun, 2013). Other variables that may affect the persistence of first-time freshmen may be the lack of college readiness upon enrollment, the lack of effective orientation programs, learning communities and on-campus services, faculty involvement and facilities, etc. Hence, additional research in this area should be undertaken based on the massive student expansion and ethnic diversity at American community colleges. Goldrick-Rab (2010) posed that the past and present strides of offering a democratizing academic experience for a diverse group of college students has been marred by the insufficient rates of academic progress and success. Hence, it is extremely urgent for community college administrators, policymakers, researchers and practitioners to agree that improving the persistence rates at America's community colleges should be an urgent priority. If not, the results could be fatal to both the academic mission and the usefulness of the institution long term.

As previously presented, according to the American Association of Community Colleges (AACC, American Association of Community Colleges, 2014), in the United

States there are 1,132 community colleges that serve 12.8 million students in both credit and non-credit programs. This accounts for 45 percent of all undergraduates who attend institutions of higher learning in the United States. Nationally, in the fall of 2012, community college enrollment of African-Americans and Hispanics consisted of 48% and 56%, respectively, among those attending all two-year post-secondary institutions (AACC, American Association of Community Colleges, 2014). Based on the burgeoning and diverse enrollment growth of community colleges across the United States and with first year persistence rates just over 50% nationally, two-year institutions that have on-campus housing must develop purposeful initiatives and policies that will quickly reverse the trend of less than acceptable persistence rates.

REFERENCES

- AACC. (2014). *2014 Fact Sheet*. Retrieved 03 15, 2014, from American Association of Community Colleges:
http://www.aacc.nche.edu/AboutCC/Documents/Facts14_Data_R2.pdf
- Abusabha, R., & Woelfel, M. L. (2003). Qualitative vs quantitative methods: two opposites that make a perfect match. *Journal of the American Diabetic Association*, 103, 566-569.
- ACT. (2013). *National Collegiate retention and Persistence to Degree Rates*. Retrieved 03 15, 2014, from ACT:
https://www.noellewitz.com/documents/shared/Papers_and_Research/2013/ACT_persistence_2013.pdf
- Andreu, M. L. (2002). Developing and implementing local-level retention studies: a challenge for community college institutional researchers. *Community College Journal of Research and Practice*, 26, 333-344.
- Astin, A. (1993). *What college matters?: Four critical years revisited*. San Francisco: Jossey-Bass.
- Astin, A. (1977). *Four critical years: effects of college on beliefs, attitudes, and knowledge*. San Francisco: Jossey-Bass.
- Baird, L. L. (2000). College climate and the Tinto model. In J. M. Braxton, *Reworking the student departure puzzle*. Nashville, TN: Vanderbilt University Press.

- Baker, S. D. (2006). *The integration into college/residence hall activities and persistence in residence hall enrollment of a community college student*. Ann Arbor, MI: Proquest Dissertations UMI3326216.
- Barbatis, P. (2010). Underprepared, ethnically diverse community college students: Factors contributing to persistence. *Journal of Developmental Education*, 33(3), 14-22, 24.
- Bean, J. P. (1980). Dropouts and turnover: the synthesis and test of a casual model of student attrition. *Research in Higher Education*, 12, 155-187.
- Bean, J. P., & Eaton, S. B. (2000). A psychological model of college student retention. In J. M. Braxton, *Reworking the student departure puzzle*. Nashville, TN: Vanderbilt University Press.
- Becker, G. (1967). *Human capital and the personal distribution of income: an analytical approach*. Ann Arbor: University of Michigan Press.
- Blimling, G. S. (1989). A meta-analysis of the influence of college residence halls on academic performance. *Journal of College Student Development*, 30, 298-308.
- Bourdieu, P. (1973). *Outline of a theory of practice*. Cambridge: Cambridge University Press.
- Boyer, E. L. (1987). *College: the undergraduate experience in America*. New York: Harper and Row.

- Braxton, J. M. (2000). *Reworking the student departure puzzle*. Nashville, TN: Vanderbilt University Press.
- Braxton, J. M., Doyle, W. R., Hartley III, H. V., Hirschy, A. S., Jones, W. A., & McLendon, M. K. (2014). *Rethinking college student retention*. San Francisco: Jossey-Bass.
- Braxton, J. M., Sullivan, A. S., & Johnson, R. M. (1997). Appraising, Tinto's theory of college student departure. *Handbook of Theory and Research*, 107-164.
- Bruce, J., Melissa, S., Fletcher, C., & Smith, D. (2011). *With great challenges come great opportunities*. Round Rock, TX: Texas Guaranteed Student Loan Corporation.
- Calabrese, R. L. (2006). *The elements of an effective dissertation & thesis: a step by step guide to getting it right the first time*. Lanham, MD: Rowman & Littlefield Education.
- Catt, S. R. (1998). *Adjustment problems of freshmen attending a distant, non-residential community college*. Ann Arbor, MI: ProQuest Dissertations UMI 9837568.
- Chickering, A. W., & Reisser, L. (1993). *Education and identity (2nd ed)*. San Francisco: Jossey Bass.
- Cohen, A. M., & Brawer, F. B. (2008). *The American community college*. San Francisco: Jossey-Bass.

Community College Review. (2014). *Texas Community Colleges*. Retrieved 03 16, 2014,
from Community College Review:

http://www.communitycollegereview.com/community_college/stateid/TX

Creswell, J. W. (2014). *Research design: qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.

de Araujo, P., & Murray, J. (2010). Channels for improved performance from living on campus. *American Journal of Business Education*, 3, 57-64.

Derby, D. C., & Smith, T. (2004). An orientation course and community college retention. *Community College Journal of Research and Practice*, 763-773.

Esters, L. &. (2007). Disappearing acts: the vanishing Black male on community college campuses. *Diverse Issues in Higher Education*, 24(12), 45.

Evans, N. J., Forney, D. S., Guido, Florence, M., Patton, L. D., & Renn, K. A. (2010). *Student development in college: Theory, research and practice (2nd ed)*. San Francisco: Jossey Bass.

Fike, D. S., & Fike, R. (2008). Predictors of first-year student retention in the community college. *Community College Review*, 36, 68-88.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: an introduction (8th ed.)*. Boston: Pearson Education, Inc.

- Goldrick-Rab, S. (2010). Challenges and opportunities for improving community college student success. *Review of Educational Research*, 80(3), 437-469.
- Haverman, R., & Wilson, K. (2006). Access, matriculation and graduation. In S. & Dickert-Colin, *Economic inequality and higher education: Access, persistence and success*. New York: Russell Sage Foundation.
- Johnson, R. M. (2000). Investigating the processes of persistence: Refining discourse analysis as a tool for generating new departure theory. In (Braxton J. M., *Reworking the student departure puzzle* (pp. 157-169). Nashville, TN: Vanderbilt University Press.
- Kinzie, J., & Kuh, G. D. (2004, Nov/Dec). Going deep: Learning from campuses that share responsibility for student success. *About Campus*, 9(5), 2-8.
- Kuh, G. D. (1995, Nov/Dec). The other curriculum: Out-of-class experiences associated with student learning and personal development. *Journal of Higher Education*, 66 (2), 123-155.
- Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. (2005). *Student success in college: Creating conditions that matter*. San Francisco: Jossey-Bass.
- Kuh, G. D., & Love, P. (2000). A cultural perspective on student departure. In J. M. Braxton, *Reworking the student departure puzzle* (pp. 196-212). Nashville, TN: Vanderbilt University Press.

- Li, Y., Sheely II, M. C., & Whalen, D. F. (2005). Contributors to residence hall student retention: Why do students choose to leave or stay? *Journal of College and University Student Housing*, 33(2), 28-36.
- Lodico, M., Spaulding, D. T., & Voegtle, K. H. (2010). *Methods in educational research: from theory to practice*. San Francisco: Jossey-Bass.
- Lopez-Turley, R. N., & Wodtke, G. (2010). College residence and academic performance: Who benefits from living on campus? *Urban Education*, 45(4), 506-531.
- Lowther, S., & Langley, J. (2005). *First year retention: Is it housing or affiliation that matters?* Auburn, AL: Auburn University.
- Manski, C. F., & Wise, D. (1983). *College choice in America*. Cambridge: Harvard University Press.
- McIntosh, M. F., & Rouse, C. E. (2009). *The other college: retention and completion rates among two-year college students*. Washington D. C.: Center for American progress.
- Melguizo, T. (2011). A review of the theories developed to describe the process of college persistence and attainment. In J. C. Smart, *Higher Education: Handbook of Theory and Research* (26) (pp. 395-420). New York, NY: Springer Science+Business Theory.

- Mertler, C. A., & Vannatta, R. A. (2010). *Advanced and multivariate statistical methods (4th ed.)*. Glendale: Pyrczak Publishing.
- Metzner, B., & Bean, J. (1987). The estimation of a conceptual model of non-traditional undergraduate student attrition. *Research in Higher Education*, 27(1), 15-38.
- Meyers, L. S., Gamst, G. J., & Guarino, A. (2013). *Applied multivariate research; Design and interpretation (2nd Edition)*. Thousand Oaks, CA: Sage Publications, Inc.
- Moeck, P. G. (2005). *An analysis of on-campus housing at public rural community colleges in the United States*. Denton, TX: University of North Texas.
- Moeck, P. G., Hardy, D., & Katsinas, D. (2006). *On-campus housing: a boon to rural community colleges*. Tuscaloosa, AL: Education Policy Center.
- Moeck, P., Hardy, D. E., Katsinas, S. G., & Leech, J. M. (2007). On-campus housing at rural community colleges. *Community College Journal of Research and Practice*, 31(4), 327-337.
- Morgan, S. L. (2005). *On the edge of commitment: Educational attainment and race in the United States*. Stanford, CA: Stanford University Press.
- Mullin, C. M. (2012). *Why access matters: the community college student body*. Washington D. C.: American Association of Community Colleges.

Murrell, S. P., Denzine, G., & Murrell, P. H. (1998). Community college residence halls: a hidden treasure. *Community College Journal of Research and Practice*, 22(2), 663-674.

National Center for Education Statistics. (2013, 05 23). Retrieved 03 13, 2014, from National center for education statistics:
<http://nces.ed.gov/datalab/tableslibrary/viewtable.aspx?tableid=9137>

Nealy, M. (2008). *New study looks at retention in community colleges*. Retrieved 03 16, 2014, from Diverse Issues in Higher Education:
<http://diverseeducation.com/article/10891/>

Offenstein, J., & Shulock, N. (2010). *Taking the next step: the promise of intermediate measures for meeting postsecondary achievement goals*. Washington D. C.: Achieving the Dream.

Palmer, R. T. (2010). a nation at risk: increasing college participation and persistence among African-American males to stimulate U. S. global competitiveness. *Journal of African-American Males in Education*, 1 (2), 105-124.

Pampel, F. C. (2000). *Logistic regression: a primer*. Thousand Oaks, CA: Sage Publications.

Pascarella, E. T., & Terenzini, P. T. (1978). The relation of students' pre-college characteristics and freshman year experience to voluntary attrition. *Research in Higher Education*, 9(4), 347-366.

- Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research (1st ed)*. San Francisco: Jossey-Bass.
- Pascarella, E., & Terenzini, P. (2005). *How college affects students (Vol 2): a third decade of research*. San Francisco: Jossey-Bass.
- Perna, L. W., & Thomas, S. L. (2006). *A framework for reducing the college success gap and promoting success for all*. National Postsecondary Education Cooperative.
- Perna, L. W., & Thomas, S. L. (2008). *Theoretical perspectives on student success: understanding the contributions of the disciplines*. San Francisco: Jossey-Bass.
- Pike, G. R., Schroeder, C. C., & Berry, T. R. (1997). Enhancing the educational impact of residence halls: The relationship between residential learning communities and first year college experiences and persistence. *Journal of College Student Development*, 38, 609-621.
- Purdie, J. R. (2007). *Examining the academic performance and retention of first-year students in living-learning communities, freshmen interest groups and first year experience courses*. Ann Arbor, MI: ProQuest Dissertations UMI 3322736.
- Rankin, K. R., Katsinas, S. G., & Hardy, D. E. (2010). Community college retention and access issues: a view from the field. *Journal of College Student Retention*, 12(2), 211-223.

- Reason, R. D. (2009). An examination of persistence research through the lens of a comprehensive conceptual framework. *Journal of College Student Development*, 50(6), 659-682.
- Rudolph, F. (1990). *The American college and university: a history*. Athens, GA: University of Georgia Press.
- Schroeder, C. C., & Mable, P. (1994). *Realizing the educational potential of residence halls*. San Francisco: Jossey Bass.
- Schudde, L. T. (2013). *Heterogenous treatment effects in higher education: Exploring variation in the effects of college experiences on student success*. Ann Arbor, MI: ProQuest Dissertations UMI 3565938.
- Schwartz, M. B. (2010). *Improving community college persistence: an investigation of promising practices*. Available from ProQuest Dissertations and Theses database (UMI No. 3433184).
- Seidman, A. (2005). *College student retention: formula for student success*. Westport, CT: Praeger Publishers.
- Sellers, W. H., & Hauser, R. M. (1975). *Education, occupation and earnings, Achievement in the early career*. New York: Academic Press Inc.
- Spady, W. (1970). Dropouts from higher education: an interdisciplinary review and synthesis. *Interchange*, 1, 64-85.

Steinmetz, R. R. (2009). *Pre-college demographic and socioeconomic characteristics as predictors of student persistence at Tennessee community colleges*. Tuscaloosa, AL: University of Alabama.

Swail, W. S., Redd, K. E., & Perna, L. W. (2003). *Retaining minority students in higher education: a framework for success*. Hoboken, NJ: Wiley.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics (5th Edition)*. Boston: Pearson Education Inc.

Texas Higher Education Coordinating Board. (2014, 02 01). *Enrollment at Texas Public Community Colleges*. Retrieved 03 12, 2014, from Texas Association of Community Colleges:
http://www.tacc.org/uploads/tinymce/data%20and%20info/data_info/data%20overview%20021914.pdf

Thomas, J. R. (2011, 03 16). *Report: community college graduation rate lags*. Retrieved 03 16, 2014, from The CT Mirror: <http://ctmirror.org/report-community-college-graduation-rate-lags/>

Thompson, K., Murphy-Chadwick, N., Sasse, R., & Huss, B. (2010, 10 06). *Benefits of on campus housing*. Retrieved 03 28, 2014, from The South West Association of College and University Housing Officers:
http://swacuho.org/index.php?option=com_docman&task=doc_view&gid=120&tmpl=component&format=raw&Itemid=48

- Tinto, V. (1975). Dropout from higher education: a theoretical synthesis of recent research. *Review of higher education*, 95, 89-125.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago: University of Chicago Press.
- Tinto, V. (2000). Linking, learning and leaving: Exploring the role of college classroom in student departure. In J. M. Braxton, *Reworking the student departure puzzle* (pp. 81-94). Nashville, TN: Vanderbilt University Press.
- Tinto, V. (2007). Research and practice of student retention: what's next? *Journal of College Student Retention*, 8(1), 1-19.
- Townsend, B. K., & Twombly, S. B. (2001). *Community Colleges: Policy in the future context*. Westport, CT: Ablex.
- Van Gennep, A. (1960). *The rites of passage*. Chicago, IL: University of Chicago Press.
- Wild, L., & Ebbers, L. (2002). Rethinking student retention in community colleges. *Community College Journal of Research and Practice*, 26(6), 503-519.
- Windham, M. H., Rehfuss, M. C., Williams, C. R., Pugh, J. V., & Tincher-Ladner, L. (2014). Retention of first year community college students. *Community College Journal of Research and Practice*, 28, 466-477.

Yaun, J. F. (2013). *A study to determine whether a relationship exists between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students*. Ann Arbor, MI: Proquest Dissertations UMI 3558798.

Zheng, L. J., Saunders, K. P., Shelley II, M. C., & Whalen, D. F. (2002). Predictors of academic success for freshmen residence hall students. *Journal of College Student Development*, 43, 267-283.