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The Relationship Between Undergraduate Hispanic Students' Choice of Living Arrangements and Retention, Academic Achievement and Graduation at a Hispanic-Serving Institution

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THE RELATIONSHIP BETWEEN UNDERGRADUATE HISPANIC STUDENTS' CHOICE OF LIVING ARRANGEMENTS AND RETENTION, ACADEMIC ACHIEVEMENT AND GRADUATION AT A HISPANIC-SERVING INSTITUTION

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by

Lynn Nicole Hendricks

2016

To: Dean Michael R. Heithaus
College of Arts, Sciences and Education

This dissertation, written by Lynn Nicole Hendricks, and entitled The Relationship Between Undergraduate Hispanic Students' Choice of Living Arrangements and Retention, Academic Achievement, and Graduation at a Hispanic-Serving Institution, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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Mido Chang

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Date of Defense: June 30, 2016

The dissertation of Lynn Nicole Hendricks is approved.

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Dean Michael R. Heithaus
College of Arts, Sciences and Education

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Andrés G. Gil
Vice President for Research and Economic Development
and Dean of the University Graduate School

Florida International University, 2016

DEDICATION

I dedicate this dissertation to my mother, Patti Ann Spencer, who always reminded me to smile and enjoy life because life is short. I never met anyone who knew how to enjoy life more than my mom. When I was very young, my mom would tell me that the great equalizer in life is education, and that no one can ever take your education away from you. As an alumnus of both the University of Miami and Columbia University, my mom modeled for me the most important lessons in life – it is nice to be important, but it is more important to be nice; and no one cares what you know, until they know that you care.

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ABSTRACT OF THE DISSERTATION

THE RELATIONSHIP BETWEEN UNDERGRADUATE HISPANIC STUDENTS' CHOICE OF LIVING ARRANGEMENTS AND RETENTION, ACADEMIC ACHIEVEMENT, AND GRADUATION AT A HISPANIC-SERVING INSTITUTION

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Retaining and graduating Hispanic students are paramount to the overall success of colleges and universities. Given the excessive amounts of money spent to recruit students, and the impact on the institution when students depart prematurely, action needs to be taken by institutions to increase Hispanic student retention and counter the negative impacts on institutions including: instability of institutional enrollments, decline in institutional budgets, and public negative perceptions of institutional quality. Despite significant efforts on the part of many colleges and universities to increase Hispanic student retention and graduation rates, these rates have remained relatively low.

A possible solution to disappointing Hispanic student retention and graduation rates is to explore options for Hispanic students to live on-campus. To fully understand the complexities facing Hispanic students, this study examined the linkages among high school GPA, sex, and income (Pell Grant eligibility) to living arrangements and retention,

academic achievement, and graduation rates of Hispanic students at a Hispanic-Serving Institution.

This quantitative study provided a statistical analysis comparing cohorts of full-time Hispanic students who lived on campus to cohorts of full-time Hispanic students who lived off campus to determine if differences existed with regard to the students' living arrangements, retention, academic achievement, and graduation. This was a longitudinal study that examined six years of data (2006-2012) for over 18,500 first-time-in-college Hispanic students (N = 18,533). Data was collected electronically. For the binary outcome variables, retention and graduation, logistic regression analysis was used; with the continuous variable to assess academic achievement, grade point average, the general linear model was used. The findings were surprising, and the researcher had to reject all three hypotheses; the findings supported: Hispanic students who live off-campus during their first year of college are more likely to be retained; Hispanic students who live off-campus have higher cumulative college grade point averages; and, Hispanic students who live off-campus are more likely to graduate college.

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CHAPTER I

INTRODUCTION

In fall 2014, 21 million students attended American colleges and universities, and the number of 18 to 24-year-old Hispanics attending college in the United States hit an all-time high of 12.2 million (Digest for Education Statistics, 2014). For the first time, in U.S. history, the number of Hispanic high school graduates enrolled in college immediately after high school surpassed white students (Lopez & Fry, 2013). Hispanics have become the nation's largest minority population, 50.5 million Hispanics in the United States, comprising 16% of the total population, and they have made great advances in attending colleges and universities. However, Hispanic students continue to be one of the least educated minority groups (Winning the Future, 2011). Facing persistent barriers (e.g., academic under-preparedness, status as first-generation college students in the U.S., and familial obligations) to educational attainment, only 13% of Hispanics have completed at least a bachelor's degree (Winning the Future, 2011). Because the Hispanic population is rapidly increasing, the educational attainment for this community has become vital to America's prosperity (Winning the Future, 2011).

This chapter provides background to the problem, followed by the problem statement, purpose of the study, research questions and hypotheses, and theoretical framework. Next, the significance of the study, definition of terms, assumptions and delimitations, and a summary of the study are provided.

Background to the Problem

Retaining and graduating students are paramount to the overall success of colleges and universities, and less expensive than the recruitment of brand new students

(Swail, 2006). In a 2013 report, Noel-Levitz revealed the median cost to recruit an undergraduate student to a four-year public institution was $457. Thus, for example, public institutions that admit a freshman class of 2,300 students have spent $1 million in recruitment costs. Given the money spent to recruit students, and the impact on institutions when students depart prematurely, action needs to be taken by institutions to increase student retention and counter the negative impacts on institutions including: loss of tuition, fees, and income from student housing and services. Braxton et al. (2014) found

> The importance of student persistence to the attainment of these other markers of student success, coupled with the negative impact of student departure on the stability of institutional enrollments, institutional budgets, and public perceptions of institutional quality, strongly suggest the need for actions by colleges and universities desiring to increase their rates of student retention. (p. 14)

Additionally, universities are funding what they have termed retention and graduation efforts with the expectation that these efforts will assist students in completing degree requirements, and in turn, assist students in graduating with a bachelor's degree. Each college or university "dropout" represents a financial loss to the institution. "Institutions miss out on tuition and fees from that student, income from books and services, housing, and other revenue streams" (Swail, 2006, p. 1). Other negative consequences for the student include: self-esteem issues, a direct impact on employment opportunities, and other financial and social consequences (Schneider & Yin, 2011).

Despite significant efforts on the part of many colleges and universities to increase retention and graduation rates, these rates have remained relatively low. "At public Ph.D. granting institutions in the United States, approximately 22% of first-year college students do not return for their sophomore year (ACT, 2011)" as cited in Morrow and Ackerman, (2015, p. 483). Moreover, the authors stated that "approximately 35 percent of students depart a university because of academic reasons, the other 65 percent leave a university voluntarily for non-academic reasons" (p. 483).

In addition to the impact on the Admissions office and the Business and Finance office, low retention affects most areas of the institution including: the budgets needed to fund faculty, student affairs, campus facilities, and other operating costs. Although, as mentioned previously, many colleges and universities have institutional initiatives and programs in place to improve retention and graduation rates; typically, the information shared publicly regarding these specialized retention programs is limited and unclear regarding program effectiveness (Edison, Nora, Hagedorn, Pascarella, & Terenzini, 1996). Snyder and Dillow (2014) found that the percent of first-time undergraduate students retained from 2011-2012 at all public institutions was 70.3% (Table 326.30).

Retention and low graduation rates are not new problems for college and university administrators. As early as the 1960s, research regarding retention of students was being conducted. A review from Summerskill (1962) of 35 studies of student attrition completed over a 40-year period determined that the median loss rate of students over a four-year period was approximately 50%. Researchers Pyne and Means (2013) stated:

> Although the percentage of Hispanic 25 to 29 year olds that have attained a bachelor's degree or higher has increased from 8% in 1980 to 13% in 2011, Hispanics continue to lag 23 percentage points behind Whites (Aud, Fox, & Kewal, 2012). Many Hispanic students who begin postsecondary education simply do not graduate. (p. 186)

Lenning (1980) observed that over the past 50 years, only 40% of those students who graduated during a four or five-year period did so from their original college or university. In their 1980 national study examining retention rates, Beal and Noel projected similar results, showing that the average graduation rates after five years from the start of college varied from 46% at four-year public colleges to 65% at four-year private, selective colleges, and 77% at private, highly selective colleges. More recently, Snyder and Dillow (2014) reported that first-time, full-time undergraduate students who began seeking a bachelor's degree at a 4-year degree-granting college in fall 2007 had a 6-year graduation rate of 58% at four-year public colleges, 65% at four-year private non-profit institutions, and 32% at private for-profit institutions (table 326.10).

A possible solution to disappointing retention and graduation rates is to explore options for students to live on-campus. The Association of College and University Housing - International (ACUHO-I) reported that 2,521,090 students are living on-campuses, and that living on-campus positively contributes to retention, academic achievement, and graduation rates (2015). Further, a review of the literature revealed that there has been little, if any, formal examination of the relationship of choice of living arrangement with regard to Hispanic students. To understand the complexities facing Hispanic students, and specifically, the relationship of their choice of living arrangement

and retention, academic achievement, and graduation, it is important that a longitudinal study be conducted and that new research be designed that examines the linkages among sex and income variables to more fully understand the Hispanic student experience.

Table 1 shows the relationship between age, educational attainment, gender, race/ethnicity, and income. As shown, for all groups, as educational attainment increases, higher income is achieved. Further, men regardless of race/ethnicity or nativity earn more money than women. Finally, Whites earn more money than Hispanics.

Table 1

Mean Salary/Wage Income (in U.S.$) of Employed Men and Women 25 Years and Older by Race/ethnicity and Nativity

Men

White	Black	Education level	API	Hispanic	U.S. Born	Foreign born
29,369	24,329	Less than high school	25,646	23,688	27,809	23,969
40,388	31,783	High school grad	32,739	31,470	38,933	31,352
49,724	39,131	Some college	42,495	40,515	47,929	41,135
75,960	54,215	College grad	63,745	55,668	73,677	63,230
104,273	77,046	Post-college	98,098	83,197	101,519	98,599

Women

Education level	White	Black	API	Hispanic	U.S. Born	Foreign born
Less than high school	18,361	18,617	19,024	15,397	18,183	15,889
High school grad	26,579	25,688	24,825	23,253	26,454	22,770
Some college	33,334	31,768	34,266	30,025	32,955	31,000
College grad	46,704	45,127	50,187	41,288	46,539	45,702
Post-college	62,356	60,187	71,566	57,701	62,123	65,327

Note. API = Asian/Pacific Islander. Adapted from Educational attainment in the context of social inequality: New Directions for research on education and health, by Walsemann, Gee, & Ro, 2013. *In American Behavioral Scientist* (Vol. 57, p. 1082-1104).

It is important to understand gender differences with regard to Hispanic student retention and graduation. Buchmann and DiPrete (2006) found that men have been enrolling in higher education at lower numbers than women, but dropping out of school in greater numbers. Additionally, institutional support varies by gender because of gender differences in majors and extracurricular activities (Fox, Sonnert, & Nikiforova, 2011). Gender differences also account for differences in income for Hispanic men and women. The gain in pay for Hispanic female college graduates compared to less educated Hispanic females is much greater than the gain in pay for male college graduates compared to males who have less education (Bobbitt-Zeher, 2007). Even though women tend to choose majors that lead to careers with lower wages than men, women's opportunities in the low-education job market are even more bleak (Fox, Sonnert, & Nikiforova, 2011).

Problem Statement

A critical issue facing higher education is the low graduation rate of Hispanic students. Hispanics are immediately entering colleges and universities after high school

graduation, but only 11% are completing bachelor's degrees (Fry & Taylor, 2013). College and University administrators are aware of the problems - poor retention and low graduation rates, but few have a full understanding of the issues to support this growing underserved Hispanic student population.

Purpose of the Study

The purpose of this study was to determine whether undergraduate Hispanic students' living arrangements at a Hispanic-serving institution had a relationship with retention, academic achievement, and graduation. In this study, retention refers to first-to second year persistence.

Research Questions and Hypotheses

The following research questions were addressed in this study: (a) Are Hispanic students who live on-campus from year one to year two more likely to be retained than Hispanic students who live off-campus? (b) Do Hispanic students who live on-campus at any time have a higher cumulative grade point average than Hispanic students who live off-campus? (c) Are Hispanic students who live on-campus for any period of time more likely to graduate than Hispanic students who live off-campus? To explore these research questions three hypotheses were tested:

H_1: Hispanic students who live on-campus during their first year in college are more likely to be retained than Hispanic students who live off-campus during their first year in college.

H_2: Hispanic students who lived on-campus for any period of time will have higher grade point averages than Hispanic students who lived off-campus.

H_3: Hispanic students who lived on-campus for any period of time are more likely to graduate than Hispanic students who lived off-campus.

Theoretical Framework

Two commonly referenced theories in the area of student retention and student success are Tinto's (1993) theory of student departure and Astin's (1993) input-environment-outcomes (I-E-O) model. Astin's (1993) model was simple, but elegant; he suggests that student outcomes (O) are a function of the environments they experience (E) and their input characteristics (I). Astin suggested that to understand why students stay in school, or drop or fail classes, or any other educational outcomes that it was important to look at the student's entering characteristics and what the student has experienced while attending college.

The essence of Tinto's (1993) theory was that when students choose to leave college it was primarily because of a lack of social and academic integration.

> Broadly understood … individual departure from institutions can be viewed as arising out of a longitudinal process of interactions between an individual with given attributes, skills, financial resources, prior educational experiences, and dispositions (intentions and commitments) and other members of the academic and social systems of the institution. The individual's experience in those systems, as indicated by his/her intellectual (academic) and social (personal) integration, continually modifies his or her intentions and commitments. (Tinto, 1993, pp. 114-115)

Tinto (1993) found the decision to persist or leave an institution was not a one-time decision point; rather students were engaged in an on-going process of becoming more or less committed to an institution as a result of the degree to which they felt integrated into the academic and social environment of the institution.

Astin's model (1993) and Tinto's theory (1993) both provided an excellent framework to guide and inform this study. Both theories were useful for developing a focus for enhancing Hispanic student success. For Hispanic students, the critical input (I) comes from the relationship with family; the critical environment (E) is choice of living arrangement; and the critical outcomes (O) were retention, academic achievement, and graduation. Additionally, it was important to consider the socioeconomic status or income of the student's family. Thus, the critical components: Family, Income, and Living Arrangements (FILA) form a model with key factors for Hispanic student success.

Additionally, Tinto's seminal work demonstrated the importance of the university environment (academic and social systems) and student involvement towards retention and graduation. Moreover, Tinto (2006) stated "we now know that for some if not many students the ability to remain connected to their past communities, family, church, or tribe is essential to their persistence" (p. 4). In Figure 1, a hypothesized model for Hispanic Student Success was presented.

Figure 1. Hypothesized FILA Model of Hispanic Student Success

Significance of the Study

Astin's (1993) input-environment-outcome (IEO) and Tinto's (1993) theory of student departure provided the theoretical basis for this study. Astin (1993) asserted,

> Inputs refer to the characteristics of the student at the time of entry to the institution; environment refers to various programs, policies, faculty, peers, and educational experiences to which the student is exposed; and outcomes refer to the student's characteristics after exposure to the environment. (p. 7)

Similarly, Tinto posited that student integration into the social and academic environment of the university was critical to the student's overall success. Further, Tinto (1993) stated the importance of the commitment on the part of the institution towards helping each student graduate, "It is a commitment that springs from the very character of an institution's educational mission" (p. 146).

Significant research showed that persistence to graduation was influenced by both academic and demographic characteristics (Astin, 1993; Bryant, 2001; Crisp & Nora, 2010; Dougherty, 1994; and Wawrzynski & Sedlacek, 2003). Not surprising within the Hispanic community, the literature revealed a strong connection between the collegiate

success of students, and the educational achievement of the student's parents (Arbona & Nora, 2007), and institutional support of students who were enrolled (Cole & Espinoza, 2008).

The present study determined if there was a relationship between undergraduate Hispanic students' choice of living arrangement and retention, academic achievement, and graduation. These findings and recommendations will contribute to the literature and inform college and university administrators on how to better serve undergraduate Hispanic students. Additionally, if the study shows that undergraduate students who live on campus are more likely to be retained, have better grades, and/or are more likely to graduate then college and university administrators will be in a commanding position to gain approval from their highest level administrators and board members to borrow the multi-millions of dollars needed to expand and/or renovate existing student housing facilities.

Conversely, if the study shows that undergraduate Hispanic students who live on campus are not being retained, they do not have better grades, and/or they are not more likely to graduate, then the campus decision makers may use these data to refute allocating and/ or spending resources on university-owned student housing facilities. As a result, the current study will contribute to the professional literature and to university administrators seeking data regarding the impact of undergraduate Hispanic students' choice of living arrangement and its impact on retention, academic achievement, and graduation.

Definition of Terms

Academic success: refers to having a grade point average (GPA) of 2.0 or higher on a 4.0 point scale and achieving senior status (Ellison, 2002).

Cohort groups: refers to the grouping of first-year students admitted to the university during their designated fall semester.

Commuter students: all students who do not live in institution-owned housing (Jacoby, 2000).

Expected Family Contribution (EFC): is a number that is used to determine a student's eligibility for federal student aid. This number results from information the student provides on his or her Free Application for Federal Student Aid (FAFSA). Financial aid administrators will subtract the EFC from the student's cost of attendance (COA) to determine the student's need for aid (The EFC Formula, 2012-2013).

Free Application for Federal Student Aid (FAFSA): is a form completed by prospective college students to determine if they are eligible for government sponsored student aid.

First-Time-in-College (FTIC): a student who has no prior postsecondary experience (except as noted below) attending any institution for the first time at the undergraduate level. This includes students enrolled in academic or occupational programs. It also includes students enrolled in the fall term who attended college for the first time in the prior summer term, and students who entered with advanced standing including college credits earned before graduation from high school (Snyder & Dillow, 2014).

Graduation rate: the number of first-time, full-time freshman who complete a degree, either an Associates' or Bachelors' within 150% of program time (six years for a Bachelor's degree or three years for an Associate's degree (Santiago, 2010).

Hispanic or Latino: refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race (U.S. Census Bureau, 2010).

Hispanic-Serving Institution (HSI): "HSIs are defined in federal law as accredited and degree-granting public or private nonprofit institutions of higher education with 25% or more total undergraduate Hispanic full-time equivalent (FTE) student enrollment. These institutions were first recognized in federal law in 1994 in the creation of the Developing HSIs program" (Latino College Completion, 2012, p. 1).

Living arrangement: defined as the students' place of residence while attending a college or University. In this study, this refers to whether the student lived on-campus, in university owned housing, or if they lived off campus at home with family or in an off-campus apartment.

Living/Learning Community (LLC): refers to a community in a residence hall with a specific area of interest, and typically, has faculty involvement. The faculty may or may not live in the residence hall (Kuh & Hu, 2001).

Involvement with peers: defined as the extent to which a student reports involvement with student peers, as described by Astin (1993).

Non-graduate: refers to a student who did not complete all of the requirements for a degree during the 6-year time limit.

Non Pell-Eligible: refers to a student not receiving a Pell Grant (i.e. the student was not eligible). Eligibility depends on Expected Family Contribution (EFC), year in school, enrollment status, and the cost of attendance at the school student will be attending. The financial aid office will determine how much financial aid a student is eligible to receive. (Federal Pell Grant Program, Retrieved from http://www2.ed.gov/programs/fpg/eligibility.html)

Pell Eligible: Pell Grants are awarded usually only to students who have not earned a bachelor's or a professional degree and who meet federal student aid eligibility, including: demonstrated financial need (for most programs); must be a U.S. citizen or an eligible noncitizen; must have a valid Social Security number; must be registered with Selective Service, if you're a male (you must register between the ages of 18 and 25); must be enrolled or accepted for enrollment as a regular student in an eligible degree or certificate program. The financial aid office will determine how much financial aid a student is eligible to receive. (Federal Pell Grant Program, Retrieved from http://www2.ed.gov/programs/fpg/eligibility.html)

Residential students: students living in residence halls or university apartments located on-campus.

Retention: refers to whether or not the student was persisting towards a degree from freshmen year to sophomore year.

Satisfaction: defined as the extent of happiness with his or her housing, both in terms of the physical appeal of the facility and the level of satisfaction with social environment.

Semester credit hour: unit of measure awarded for successful completion or course towards a degree.

Student-Faculty Interaction: refers to the intentional interactions that faculty have with students outside of the classroom in an effort to build rapport and connect with the students. These interactions contribute to overall student success (Astin, 1993).

Success: defined as whether the student was still enrolled or graduated within six calendar years following admission as an undergraduate student.

Total Family Income: begins with the parents' adjusted gross income (AGI) from their tax return and subtracts allowances based on other payments a household would make in order to earn that income (Samwick & Zhou, 2014).

Traditional residence hall: defined as the most common housing facility that first - year students are assigned; semi-private rooms with community bathrooms.

Unmet need: the difference between the full demonstrated financial need and the student's need based financial aid package (Quick Reference Guide, 2011).

Unweighted GPA: an unweighted GPA is based on a scale of 4.0 with a grade of "A" having an assigned value of 4 points.

Weighted GPA: a weighted GPA is based on a scale of greater than 4.0 and typically is for students in advanced placement courses, dual enrollment courses and honors courses.

Assumptions and Delimitations of the Study

Assumptions

The researcher assumed that the students involved in the study did not change their living arrangements during each academic year. The students living on campus

were required to sign academic year (two semester) agreements. It was also assumed that the total number of students who re-enrolled for continued attendance for the first semester of the second year of study was a valid measure of retention rate. Additionally, it was assumed that grade point average (GPA) was a valid measure of academic achievement.

Delimitations

Although it would have been ideal to study students throughout the country, this study focused on one large, public, urban institution. No other colleges or universities were studied. Additionally, this study was limited to those students who self-identified as Hispanic students at the time the data were collected. Lastly, the researcher strictly took a quantitative approach; so, this study did not allow for direct input from Hispanic students. Students were not able to tell their story or provide any explanations for their educational decisions or outcomes.

Summary

This chapter provided an introduction to the study including a brief overview of two models: Astin's (1993) input-environment-outcomes (I-E-O) model and Tinto's (1993) theory of student departure. The purpose of the study was explained and the research questions and hypotheses were presented. Chapter 2 provides a comprehensive review of the literature. Chapter 3 discusses the research method (research design, site, data collection and analysis procedures). Chapter 4 presents the findings of the study, and Chapter 5 concludes with a summary of the study, discussion of the results, implications for theory, implications for practice, recommendations for future research, and limitations of the study.

CHAPTER II

LITERATURE REVIEW

This chapter describes the Hispanic population, the concept of Familismo, the Hispanic Civil Rights Movement, Minority-Serving Institutions (MSIs), Hispanic-Serving Institutions (HSIs), Hispanic student enrollment, and the Hispanic college student. Next, this chapter discusses the conceptual framework for the study: Tinto's Theory of Student Departure and Astin's Model of Student Involvement. Additionally, living arrangements on campus, Living-Learning Communities (LLCs), living arrangements off campus, and commuter student involvement are discussed. Lastly, Hispanic student retention, Hispanic academic achievement, and Hispanic graduation are discussed, and a chapter summary provided.

Hispanic Population

The term Hispanic refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race (U.S. Census Bureau, 2010). Hispanics represent a large and diverse population of people who are different ages, nationalities, and citizenship. Hispanics: A people in motion (2005) reported, "The Hispanic population is not a racial group, nor does it share a common language or culture. The single overarching trait that all Hispanics share in common is a connection by ancestry to Latin America" (p. 3).

Hispanics account for nearly 16% of the total population in the United States and contribute significantly to the labor force (Winning the Future, 2011). By the year 2050, it is estimated that 30% of the U.S population will be Hispanic (Crisp & Nora, 2010). NCES statistics showed the following: "the Latino population's share of the total

population increased from 6.4% in 1980 to 12.6% in 2000 to 15.4% in 2008" (Aud, Fox, & Kewal, 2011, p. 6).

The impact of the Hispanic population increases will be greater in some states such as California, Florida, New York, and Texas. In 2014, Hispanics surpassed whites as the largest race and ethnic group in California (Lopez, 2014). In 2014, 1.3 million foreign born individuals moved to the U.S., an 11percent increase from the 1.2 million in 2013. India was the leading country of origin for new immigrants, with 145,500 followed by China with 131, 800 and Mexico with 130,000. Mexican immigrants accounted for approximately 28 percent of the 42.4 million foreign born in the U.S., making them the largest immigrant group in the United States (Zong & Batalova, 2014).

Recognizing that the Hispanic population is rapidly increasing, and that Hispanics represent a large and diverse community, it is important to discuss the role of the Hispanic family unit and the family's strong influence on the Hispanic student's academic endeavors.

Familismo

Researchers have developed terms to identify and describe various populations for the purpose of statistical modeling (Smith-Morris, Morales-Campos, Alvarez, & Turner, 2012). In the case of the Hispanic population, the term "*familismo*" is defined as "placing a strong emphasis on an individual's identification and attachment to nuclear and extended family members, which includes attributes of loyalty, reciprocity, and solidarity" (as cited in Villatoro, Morales, & Mays, 2014, p. 354). Indeed, this powerful attachment to family (loyalty and solidarity) has been shown, in some studies, to have a negative impact on a student's academic achievement, if the family is stressed (Suarez-

Orozco & Suarez-Orozco, 1995). In Hispanic culture, the strong influence of family on cultural identification and academic achievement is evident.

Marin (1993) found that Hispanic families interact frequently and expect to be supported by other family members. The expectation is modeled throughout the Hispanic community and is accepted as the norm. As more emphasis is placed on the family unit, individualism is eschewed, which is contrasted by the "individualistic, competitive, achievement-oriented cultures of the non-minority groups in the United States" (Marin & Marin, 1991, p. 11). Moreover, Losada et al., (2010) found that in the familismo culture, family is paramount to the individual.

The influence of the familismo culture is impactful on the Hispanic student's self-esteem, their desire to successfully complete their academic work, and their intent to compensate their parents for the sacrifice of migrating to the United States (Ong, Phinney, & Dennis, 2006; Parra-Cardona, Bulock, Imig, Villaurel, & Gold, 2006). Moreover, Hispanic parents are more likely to emphasize the importance of college than white parents (Immerwahr, 2000). Hispanic parents who immigrated to the United States to provide their families with a better life (i.e., to provide their children with educational and career opportunities) are able to impress upon their children the importance of pursuing a college education and attaining a college degree (Ginorio & Huston, 2001).

Hispanic Civil Rights Movement

Rooted in the civil rights activism of the 1960's, the Hispanic student narrative continued to grow as the Hispanic population increased in stature and numbers. As observed with other minority groups, Hispanic people had to raise awareness as to the plight of their people and their culture. While African Americans were eventually

recognized through constitutional amendments, the Hispanic population found themselves struggling to establish a national identity. Similar to other minority groups, Hispanics sought their remedy through the judicial system.

A 1946 lawsuit challenging racial segregation, *Mendez et al. v. Westminster School District of Orange County*, was considered a milestone in the Hispanic journey to recognition and national attention. Essentially, this case involved five Mexican American families who challenged the school district's policies towards a segregated school model. The trial transcripts revealed the evidence of racism and bigotry on the part of the school board members. The School District Superintendent of Garden Grove, James L. Kent, testified that "he would never allow a Hispanic child to attend an all-White school even if that child met all the qualifications to attend such a school" (as cited in Aguirre, 2005, p. 325). Further, the Santa Ana School District Superintendent, Frank A. Henderson, testified that, "students were assigned to the city's then 14 elementary schools solely on the basis of their last names. Exceptions were sometimes made by the four districts for Hispanic children who 'looked' White or had European names" (Reza, 1996).

Within two weeks, the trial had concluded and Federal Court Judge Paul J. McCormick ordered the policy of segregation stopped. In his order he wrote:

> The equal protection of the laws pertaining to the public school system in California is not provided by furnishing in separate schools the same technical facilities, text books and courses of instruction to children of Mexican ancestry that are available to the other public school children regardless of their ancestry. A paramount requisite in the American

> system of public education is social equality. It must be open to all children by unified school association regardless of lineage. (*Mendez v. Westminster,* 1946, p. 549)

In their appeal of this decision, the school districts argued that the issue of segregation was a local issue and that the Federal Courts lacked standing on this matter because their actions were not state actions, but rather, local actions.

Joining the appeal on behalf of *Mendez et al.* were the ACLU, the National Lawyers Guild, the Japanese American Citizens League, the American Jewish Congress, the NAACP, and the Attorney General of California. Interestingly, the brief filed by the NAACP was authored by future Supreme Court Justice, Thurgood Marshall (Aguirre, 2005). In a 7-0 decision, the Ninth Circuit Court of Appeals agreed with the decision rendered by Judge McCormick and ordered the school districts to dismantle their segregated model. Writing for the majority, Justice Albert L. Stephens stated, "The appellate court found that as no California law required or permitted the school districts to segregate Mexican school children, and that such segregation violated the plaintiff's Fourteenth Amendment right to the equal protection of the laws" (*Westminster v. Mendez,* 1947, p. 780). The school districts chose not to appeal the decision, and the court victory represented a significant milestone for the Hispanic community nationwide.

Minority-Serving Institutions

The United States is a diverse nation with multiple populations represented within higher education. The term Minority-Serving Institution (MSI) has been coined as a way to identify specific underrepresented populations for the purpose of measuring progress and providing programs that offer support and guidance. Minority-Serving Institutions

include: Historically Black Colleges and Universities (HBCU), Tribal Colleges and Universities (TCU), Hispanic-Serving Institutions (HSI), Predominantly Black Institutions (PBI), and Asian American and Native American Pacific Islander-Serving Institutions (AANAPISI).

Historically Black Colleges and Universities (HBCU) have their roots as far back as 1837 and since 1964, no additional HBCU has been established. In 2014, the U.S Department of Education's Integrated Postsecondary Education Data System (IPEDS) noted that there were 100 active institutions designated as Historically Black Colleges or Universities (Fall enrollment, degree conferred, and expenditures in degree granting HBCU, 2014).

In 1968, the first Tribal College opened in Arizona as a way to provide education that was respectful of the American Indian culture and Native American lifestyle. "This institution—originally named Navajo Community College but now called Dine College—served as an impetus for the growth of more tribal colleges across the West" (Gasman, Nguyen, & Conrad, 2014, p. 10). Thirty-six institutions claim the distinction of Tribal College or University; many of which are located on reservations or tribally controlled land.

Predominantly Black Institutions are defined as having at least a 40% undergraduate enrollment of African-American students (20 U.S. Code § 1059e). It is estimated that there are 156 Predominantly Black Institutions in the United States, "primarily public two-year institutions or small private nonprofits concentrated in the Southeast" (Cunningham, Park, & Engle, 2014, p. 6). The Asian American and Native American Pacific Islander Serving Institutions are the newest organizations to earn the

Minority-Serving Institution distinction. To qualify, these institutions must maintain an undergraduate enrollment of at least 10% of Asian American and Pacific Islander students.

> Most AANAPISIs are located in the Far West (52%) and in cities (63%). Two-thirds are four-year institutions, and only slightly more than a third have an open admissions policy. AANAPISIs tend to have significantly lower proportions of Pell grant recipients (29%) and of older students (30%) than other MSIs (44% and 40%, respectively). On average, these institutions have more resources than other MSIs, with higher revenues and expenditures per student, on average, at four-year institutions. (Cunningham, Park, & Engle, 2014, p. 9)

Table 2

*Institutions, Enrollment and Degrees of Minority-Serving Institutions 2011-2012**

	Institutions		Enrollment		Degrees	
	# of Institutions	% of All Institutions	# of Target Population	% of Target Population	# of Target Population	% of Target Population
HBCUs	98	2%	271,433	8%	31,730	8%
HSIs	354	8%	1,885,457	51%	159,369	40%
PBIs	156	3%	407,028	11%	49,846	13%
TCUs	33	1%	22,128	10%	2,092	8%

Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) 12-month enrollment and completions surveys, 2011–12

Note. Enrollment is 12-month headcount enrollment for undergraduates. Undergraduate credentials include bachelor's degrees, associate's degrees, and undergraduate certificates. The sum of HBCUs, HSIs, PBIs, and TCUs (N = 641) is more than the number of MSIs (N = 634) because six MSI institutions are both HBCUs and HSIs and one MSI institution is both an HSI and PBI.

Note. Adapted from *Minority-Serving Institutions: Doing More with Less*

**Asian American and Native American Pacific Islander-Serving Institutions (AANAPISIs) were not included in Table 1.*

Hispanic-Serving Institutions

It was the Higher Education Act of 1965 that provided a platform for the rise of the Hispanic-Serving Institutions (HSIs). The law increased federal funding to post-secondary institutions, created scholarship opportunities, and offered low interest loans to students. Under the leadership of President Lyndon B. Johnson, the Higher Education Act of 1965 stood as a centerpiece to his Great Society agenda. It was not until Title V of the Act ("Developing Institutions") was codified in 1998 that Hispanic-Serving Institutions were introduced and defined.

A Hispanic-Serving Institution is defined as follows:

> HISPANIC-SERVING INSTITUTION- The term `Hispanic-serving institution' means an institution of higher education that--
>
> (A) is an eligible institution;
>
> (B) at the time of application, has an enrollment of undergraduate full-time equivalent students that is at least 25% Hispanic students; and
>
> (C) provides assurances that not less than 50% of the institution's Hispanic students are low-income individuals. (Part I – General Higher Education Act, 1965, Title V, para. 11)

Interestingly, the designation of a Hispanic-Serving Institution is not linked to persistence towards graduation, retention or actual graduation rates; rather the designation is granted on the enrollment criteria mentioned above, and not on the mission or goals of the institution.

The Hispanic Association of Colleges and Universities (HACU) had its origins in 1985 as a way to organize colleges and universities around a common theme—providing access to higher education to Hispanic students. Initially the organization started with 18 schools that were both public and private institutions. By 1991 that number had grown to 112 schools, and by 2003 the number of member schools was 236. Laden (2004) stated:

> The new organization's goal was to draw national attention to the social, economic, and educational needs of Latinos, and their increasing attendance in certain colleges and universities. The specific aims were to improve educational access, raise the quality of college opportunities for Latinos, and draw the attention of national political figures and educational policy makers. (p. 189)

The HACU organization serves the Hispanic student population and maintains a strong lobbying presence in states that have a high Hispanic population as well as in Washington D.C. The organization *Excelencia* in Education (2013) noted the following in their 2012-2013 overview:

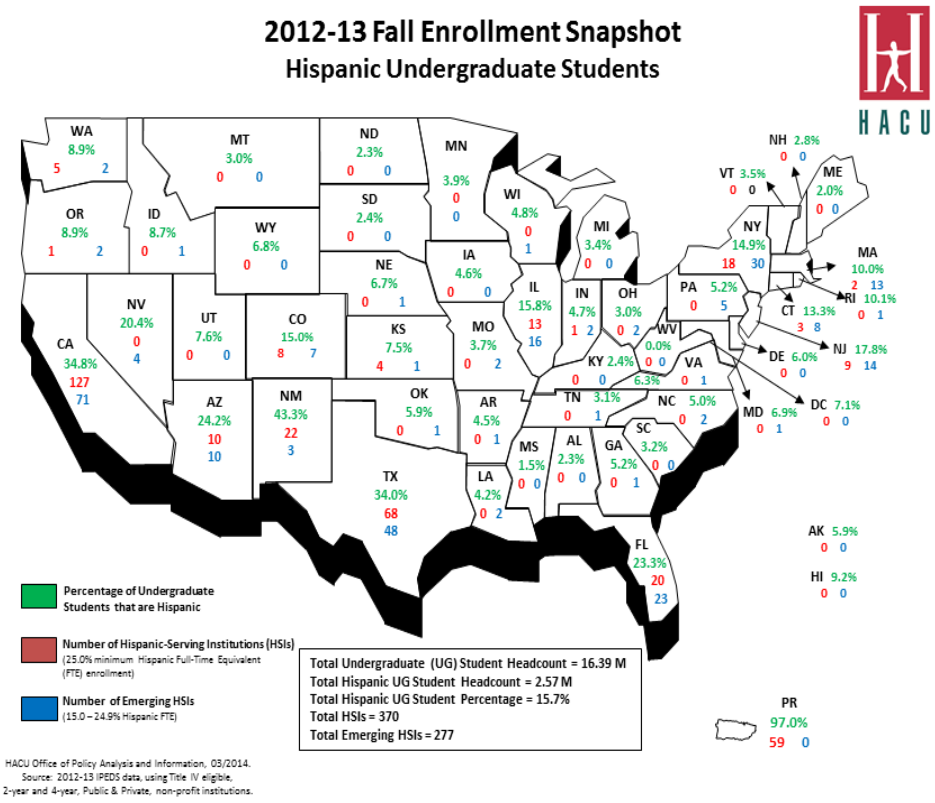
> There were 370 HSIs, representing 11% of all institutions of higher education
>
> HSIs enroll the majority of Latino undergraduates
>
> Over half of Latino undergraduates (59%) were enrolled at HSIs
>
> In 10 years (2003-2013), the number of HSIs grew from 238 to 370

Almost half of FTE students enrolled at HSIs (47%) were Latino

Over half of HSIs (57%) had Latino student FTE enrollments of 2,000 or less, and 15% (57 institutions) had FTE enrollments of over 5,000 Latino students.

(Hispanic-Serving Institutions 2012-2013)

Figure 2. 2012-2013 Fall Enrollment Snapshot of Hispanic Undergraduate Students



2012-13 Fall Enrollment Snapshot, 2013

Gasman (2008) noted, “The only institutions expressly established to educate Latino/a students are Hostos Community College (New York), National Hispanic University (California), and Boricua College (New York)— all established, as a result of the Civil Rights Movement in the 1960s and 1970s” (p. 23). It is important to note that some differences existed among Hispanic students who enrolled in Minority-Serving Institutions (MSIs). Li (2007) determined that a higher number of Hispanic students enrolled in MSIs, as compared to those enrolled in non-MSIs. These Hispanic students were at least 24 years old (53% vs. 30%), were likely to be single parents (21% vs. 8%), had waited at least one year after high school to enroll in college (38% vs. 26%), and were employed full-time while enrolled in classes (41% vs. 30%). Moreover, significant research suggests that Hispanic students often commute to class, typically enroll in schools that are close to their place of residence, tend to be financially independent, and often have responsibility for family members (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Laden, 2004; Li, 2007).

Many of the initiatives and programs to enhance academic success at HSIs were funded through the Title V program of the Higher Education Act. In 1998, the Title V program was created to provide funding specifically for HSIs. The program has grown both in participants and funds as shown in Table 3.

Table 3

Title V Funding History of Hispanic-Serving Institutions Fiscal 1995-2004

Fiscal Year	Appropriation	New Awards	Total Awards	Average Yearly Award
1995	$12 M	37	37	$325
1999	$28 M	39	76	$368
2000	$42.5 M	69	108	$394
2001	$68 M	49	157	$433
2002	$86 M	34	191	$450
2003	$92.4 M	29	220	$420
2004	$93.9 M	42	223	$421

Source: Title V Program Website (http://www.ed.gov/hsi)

As shown above, institutions use their HSI designation to gain federal funding, but few maximize their full potential as minority institutions to seize the opportunity to hire Hispanic faculty as role models or introduce vastly different learning techniques to better serve their Hispanic students (Bridges, Cambridge, Kuh, & Leegwater, 2005; Contreras, Malcolm, & Bensimon, 2008; Stage, & Hubbard, 2008).

Hispanic Student Enrollment

The March 2012 U.S. Census Bureau data showed a record seven-in-ten Hispanic high school graduates enrolled in college reaching a record of 69%; meaning, that for the first time, the number of Hispanic high school graduates enrolled in colleges or universities immediately following high school graduation surpassed the number of white students which had 67% enrolled in postsecondary education (Fry & Taylor, 2013). Despite the narrowing of the enrollment gap, Hispanic students continue to lag behind

white students in a number of areas related to higher education. Fry and Taylor (2013) noted, "Hispanic college students are less likely than their white counterparts to enroll in a four-year college, less likely to attend a selective college, less likely to be enrolled in college full time, and less likely to complete a bachelor's degree" (p. 5).

Hispanics and whites attended different types of colleges and had different rates of degree completion. White students were more likely than Hispanic students to attend academically selective institutions (Bozick & Lauff, 2007). A 2010 report of high school graduation rates found that 78% of Hispanics graduated from high school, which was an increase from the 64% high school graduation rate that was reported for 2000 (Murnane, 2013).

Hispanic College Student

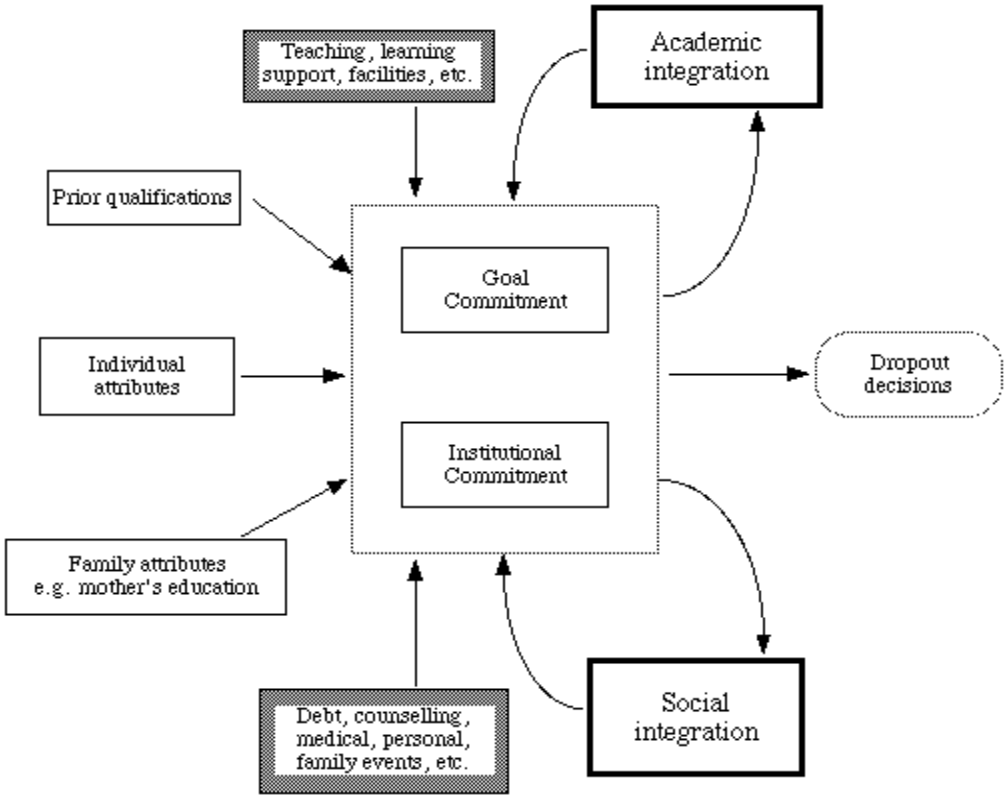
The Hispanic college student is changing the demographics on college campuses. Galdeano, Flores, and Moder (2012) found that Hispanic college students are "currently the largest and fastest growing minority" (p. 157). Educational data from 1990-2012 revealed that the percentage of Hispanic students between the ages of 25-29 who have achieved a bachelor's degree or higher increased from 8% to 15%; compared to Whites (26% to 40%), and Blacks (13% to 23%). Moreover, during that same time period, the gap widened between Hispanics and White students from 18% to 25% (Aud, Fox, & Kewal, 2011). Access to higher education for Hispanic students—while available—continues to be challenging and Hispanic students struggle to navigate the arduous enrollment processes present at colleges and universities. Because many Hispanics lack the economic resources to attend college, the quest for higher education is often stymied during the student's high school years (Schneider, Martinez, & Owens, 2006).

Hispanic students, whose parents or guardians appreciate the value of education, are often encouraged to pursue their educational ambitions; yet sadly, the attainment of bachelor degrees for Hispanic students continues to lag behind other minority groups (Llagas & Snyder, 2003). The lack of support and adequate academic preparation hinders the success of Hispanic students and leads to premature departure from their institution of higher learning. Thus, theoretical guidance is needed to better inform research when examining this research problem. Consequently, to answer this need the researcher utilized Vincent Tinto's theory of student departure, which provided a guide and theoretical framework for this study.

Tinto's Theory of Student Departure

When students choose to leave their colleges or universities without completing their degree programs, Vincent Tinto (1987) argued that their departure from higher education was linked to the meaning that the student attributes to their interaction within the university. Tinto suggested that students enter college with qualities or characteristics which influence their collegiate experience such as their family background, personal characteristics, and their previous academic experiences. Tinto posited that the experiences the student gained during their formative years were carried with them into the higher educational environment; and these experiences actually influenced the departure decisions students made (Braxton, Hirschy, & McClendon, 2011). Tinto (1987) in his book, *Leaving College,* argued that the decision to leave college was personal, "In many respects departure is a highly idiosyncratic event, one that can be fully understood only by referring to the understandings and experiences of each and every person who departs" (p. 39).

Figure 3. Student Persistence Model (Tinto, 1987)



Tinto (1987) identified four characteristics which "appear to influence student departure, four clusters of events or situations stand out as leading to institutional departure. These are best described by the terms *adjustment, difficulty, incongruence* and *isolation"* (p. 47).

The term adjustment is frequently used to describe how much students change as a result of their new collegiate experience (Astin, 1984; Tinto, 1993; Braxton, 2000). Not surprisingly, for [Hispanic] students to experience success they must make constant adjustments to their new academic environment. It is realistic to expect that the transition to college can be difficult which Tinto (1987) equates to "two distinct sources" (p. 48). He also stated, "it may result from the individual's inability to separate themselves from

past norms of association" …or the "difficulty may arise from the individual's need to adjust to the new and often more challenging social and intellectual demands which college imposes upon students" (p. 48). Institutions that have a large Hispanic population have shown a positive impact on the academic adjustment of Hispanic students (Hurtado, Carter, & Spuler, 1996). Thus, Hispanic-Serving Institutions (HSIs) serve an important role in the adjustment of newly enrolled Hispanic students.

Hispanic students, and in particular first generation Hispanic students, are immediately confronted with challenges when attending college for the first time. Many of these challenges surfaced during the high school years. Orfield, Losen, Wald, and Swanson (2004) found that Hispanic students are less likely to graduate from high school and typically have lower grade point averages than non-Hispanic students. McCaslin and Murdock (1991) offered that the language barrier, poor education, and lack of economic resources on the part of the family unit makes it difficult on the Hispanic student entering college. The Hispanic student may find themselves at a disadvantage when attempting to navigate the labyrinth of policies and processes imposed by many institutions. Moreover, Kenny and Stryker (1996) suggested that Hispanic students encounter difficulty as they adjust to life away from their families.

The campus environment may contribute to the difficulty Hispanic students have when attempting to conform to their new environment. Smedley, Myers, and Harrell (1993) developed a model to capture the adjustment process of minority first-time-in college students. One of their findings was that minority students struggle with academic confidence. Even when confronted with outright discrimination, these experiences were not as "debilitating minority status stressors as those that undermined students' academic

confidence and ability to bond with the university. These stresses came from both internal sources as well as from demographic composition and social climate of the campus" (p. 448). Hence, Hispanic students need to feel confident in the classroom and have a strong connection to their university community.

Tinto (1987) when describing the aspect of academic difficulty stated:

> Since [sic] it has been demonstrated that individuals from disadvantaged and/or minority origins are more likely to be found in public schools generally and in lower quality public schools in particular, it follows that they will be less well prepared for college than will other high school students. As a result, they will be more likely to experience academic difficulty in college than other students regardless of measured ability and more likely, therefore, to leave because of academic failure. (p. 52)

Critical to the success of the Hispanic student is access to resources and support so that they are able to experience academic success on a personal level. Self-efficacy is the notion that an individual believes they have the capacity to complete an important task or assignment; which improves self-worth (Sheldon & Kasser, 1998). Improved self-worth has been shown to positively predict academic achievement and academic persistence (Hackett, Betz, Casas, & Rocha-Singh, 1992). Poor academic performance and low self-worth can prod the Hispanic student towards an attitude that they do not belong at the institution, what Tinto (1987) calls "incongruence" (p. 53).

Preventing early college departure is a crucial goal for institutions of higher learning. As was demonstrated earlier in the document, the expectation that students complete their college academic programs has become a major emphasis on state

legislators who are charged with resourcing public higher education. Tinto's (1987) model stated that "incongruence refers in general to the mismatch or lack of fit between the needs, interests, and preferences of the individual and those of the institution" (pp. 53-54).

The importance of fitting in cannot be understated when considering Hispanic students and their quest towards degree completion. If the gap between the Hispanic student's academic progress and the expectations of the institution widen, there is a stronger likelihood that the student will give strong consideration to separating from the institution due to the lack of a perceived match between the student and the institution. Moreover, Gonzalez, Jovel, and Stoner (2004) determined that Hispanics believe there is a culture of intolerance on most college campuses. Taken in total, it is plausible that Hispanic students, when confronted with intolerance, high academic expectations, and their own sense of insecurity, may consider disengaging from the university which would halt their academic progress.

The final aspect of Tinto's student departure theory centers on isolation. Isolation can take on many forms, and the impact is potentially harmful to students. Hernandez and Lopez (2004) determined that cultural isolation may lead to disengagement from the institution. Tinto (1987) stated:

> Departure also arises from individual isolation, specifically from the absence of sufficient contact between the individual and other members of the social and academic communities of the college. Though isolation may be associated with congruence, in that deviants are often isolates as well, it arises independently among persons who are not very different from other

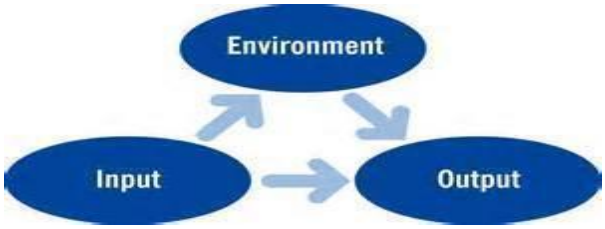
> members of the college. Individuals who might otherwise find membership in college communities are unable to do so. They are unable to establish via continuing interaction with other individuals the personal bonds that are the basis for membership in the communities of the institution. (p. 64)

The absence of membership or the inability to make connections is the purest definition of isolation and poses a danger to the Hispanic student struggling to find a way to fit into the university community. The dilemma faced by college and university administrators is to find ways to engage at-risk Hispanic students so that they feel connected with the university. Similar to Tinto, Alexander Astin (1993) focused his research on persistence and determined that involvement on the part of the student, and opportunities for involvement on the part of the university, created an environment whereby student persistence prevails.

Astin's Model of Student Involvement

Similar to Tinto's theory of student departure, Alexander Astin (1993) created a parallel developmental theory which posited that student's outcomes were influenced by their demographic, family background, and their academic history (Input) through the lens of their collegiate environment.

Figure 4. Astin's Model of Student Involvement



Astin (1999) described his model of student involvement frankly when he wrote:

> First, it is simple: I have not needed to draw a maze consisting of dozens of boxes interconnected by two-headed arrows to explain the basic elements of the theory to others. Second, the theory can explain most of the empirical knowledge about environmental influences on student development that researchers have gained over the years. Third, it is capable of embracing principles from such widely divergent sources as psychoanalysis and classical learning theory. Finally, this theory of student involvement can be used both by researchers to guide their investigation of student development—and by college administrators and faculty—to help them design more effective learning environments. (p. 518)

Thurmond, Wambach, Connors, and Frey (2002) acknowledged the value of this model when they stated, "the use of this conceptual model forces researchers to address not only the outcomes but also the inputs and environmental variables" (p. 170). Astin's simple, but elegant model is comprised of three elements: Input-Environment-Output (I-E-O).

When a student enters college for the first time, they come with attributes or characteristics which "influence their views about college" (Ishler & Upcraft, 2005, p. 30). Pistilli, Willis, and Campbell (2014), when writing about learning analytics stated, "With regard to inputs, Astin (1993) identified 146 characteristics in several different groupings, including demographic, past academic achievement, previous experiences, and self-perception. Institutions may look at these characteristics as potential data elements for their analytic efforts" (p. 83). Other groupings include: high school

academic achievement (standardized test scores, GPA, grades in specific courses) and previous experiences and self-perception (reasons for attending college, expectations, and perceived ability). Once students begin their collegiate career, their experiences within the academic environment become their dominant influence.

Environment, within Astin's model, includes all of the programs, activities, policies, and interactions with faculty that students experience during their time in college. In addition, where students live, participation in clubs and organizations, personal relationships and their academic progress are all part of the environment. Mercado (2012) found that, "the type of environment a student experiences, such as administrative red tape through policies, or positive relationships with faculty, can directly affect a student's academic persistence and college satisfaction" (p. 27). This critical finding accentuates the importance for colleges and universities to develop and create sustainable programs that support first-time in college students as they acclimate to the college environment.

Table 4

Astin's (1993) Five Basic Postulates Regarding Involvement Theory

1. Involvement refers to the investment of physical and psychological energy in various objects. The objects may be highly generalized (the student experience) or highly specific (preparing for a chemistry examination).
2. Regardless of its object, involvement occurs along a continuum; that is, different students manifest different degrees of involvement in a given object, and the same student manifests different degrees of involvement in different objects at different times.
3. Involvement has both quantitative and qualitative features. The extent of a student's involvement in academic work, for instance, can be measured quantitatively (how many hours the student spends studying) and qualitatively (whether the student reviews and comprehends reading assignments or simply stares at the textbook and day-dreams).
4. The amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program.
5. The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement.

Tinto (1982, 1993) alluded to the fact that as students move into college, the changes and new experiences can be impactful to them. Hispanic students represent a critical minority group that must be carefully supported as they navigate their first year in college, in particular, the first-generation Hispanic college students. Input and environment are the first two components which Astin (1993) confirmed lead to outcomes; that is, "academic and life-skill development—as well as an awakened sense of civic responsibility" (Thurmond, Wambach, Connors, & Frey, 2002, p. 171).

Living Arrangements: On-Campus

Astin (1984) stated the single most important factor influencing a student's academic success is living on campus in a residence hall. These findings became the stimulus for the immense body of research to examine the relationship between choice of living arrangement and a variety of student outcomes including: retention, academic achievement, and graduation. Many researchers had examined where students lived and proclaimed that students who lived in university-owned residence halls were retained at a higher rate than students who lived in off campus housing (Bolyard & Martin, 1973; Chickering, 1974). However, past researchers largely ignored the possibility that minority students had different outcomes depending on their living environments (Lopez Turley, & Wodtke, 2010).

Even though Blimling (1989) does not address the number of hours students worked, he concluded that after controlling for academic ability, students who were living in residence halls did not achieve higher grade point averages (GPAs) than students living at home with parents. Additionally, the research for students who were living in off-campus apartments was limited. Further, Blimling suggested that there was little or no difference between students living off campus in privately owned apartments and students living in campus owned residence halls in terms of academic performance (GPA).

A possible explanation for why students living in residence halls may not have performed better academically than students living off campus was the exposure to this unique social setting; students were immersed in student-only communities whereby virtually everyone was of similar age, and for the first time, students were living away

from their parents and family members, and were responsible for making decisions regarding their personal well-being (sleep, diet, studying, etc.). Although, the social interactions and social engagement were important to the overall college experience, these social activities were not improving academic achievement (GPA). In response to the concern for the social atmosphere in the residence halls, over the years, a variety of intellectual initiatives and activities that promoted academic performance were added to residence hall programs including living-learning communities (Sax, Bryant, & Harper, 2005).

Living-Learning Communities

Understanding the need to increase student's academic performance and increase retention and graduation rates, residence hall administrators began to create communities that encouraged and supported more academic engagement. During the 1960s and 1970s, student housing was being transformed from dormitories (places where students slept) to residence halls (places where students lived and learned). Student affairs administrators and campus housing professionals were deliberately merging the residential and academic environments to better facilitate the academic integration for residential students. Diverse staffs with counseling and higher education degrees were being hired to work in the residence halls to help connect students to the faculty, and to provide a holistic, supportive approach to the college experience; as a result of integrating the academic and social components, living-learning communities emerged (Boyer Commission, 1998).

In addition to engaging students with faculty, residential life staff recognized the importance of building a strong sense of community and belonging in the residence halls,

thus typically each floor or community had a Resident Assistant (RA). Resident Assistants were full-time, undergraduate students who were hired to develop a positive community, offer programs and activities, be available to enforce policies, and provide support to residents. Essentially, RAs helped residents transition to both the residence halls and to the university community. Effective RAs were available, approachable, and visible to their residents. The RAs connected with residents, assisted with roommate conflicts, encouraged participation in university-wide events, and served as a resource for the residents of their community. Moreover, Blimling (2003) proposed that RAs needed to serve as role models by following hall policies and displaying positive behaviors in the community. Resident Assistants positions were demanding; meeting all of the roles and expectations for the RA position while striving to balance their own personal and academic needs was challenging and rewarding for the RA (Boyer, 1987).

The transformation to living-learning communities had a significant impact on the purpose of student housing and on the specific roles of the residential life staff. The staff were now being asked to serve as partners in the education of the student, and to focus on helping students to transition and build relationships both in the residence halls and throughout the campus community. While several departments had opportunities to impact the college student's experience, few had the potential to have the significant impact that existed within the student housing community (Winston & Anchors, 1993).

Additionally, as universities transformed their dormitories into living learning communities (LLCs) many academic features were added to enhance the residence halls: classrooms, advising offices, study rooms, specialized programs, and academically-focused activities; the transformation occurred to create a culture of academic success.

Research on LLCs indicated that these types of learning communities indirectly improved academic success by engaging students with faculty, residence hall staff, and their academic colleges (Zheng, Saunders, Shelley, & Whalen, 2002). Students who felt socially connected with faculty, peers, and staffs were more likely to succeed academically (Astin 1984; Chickering, 1974; Tinto, 1993). Likewise, "racial minorities who live on campus may benefit more from the campus living environment because they tend to be more concerned about being academically integrated, interact with faculty more frequently, and are generally more involved in institutional activities" (Lopez Turley, & Wodtke, 2010, p. 527). Moreover, Pascarella and Terenzini (2005) found that students who lived on campus were more likely to be retained and to graduate:

> Our earlier review pointed to the remarkably consistent evidence that students living on campus are more likely to persist and graduate than students who commute. The relationship remains positive and statistically significant even when a wide array of precollege characteristics related to persistence and educational attainment are taken into account, including precollege academic performance, socioeconomic status, educational aspirations, age, and employment status. (p. 421)

Living Arrangements: Off-Campus

In this study, Hispanic students who lived off campus were referred to as commuter students. Jacoby (2000) defined commuter students as "all students who do not live in institution owned housing on campus" (p. 4). It was estimated that during the academic years of 2003-2004 and 2007-2008, 85.8% of all students who were enrolled in a college or university lived off campus (Snyder & Dillow, 2011). Clark (2006) argued

that the commuter student definition should be expanded to differentiate between students who live at home versus students who live alone or with others who are not their parent or guardian.

Much of the literature on commuter students combines this large grouping of off campus students and compares them to the on campus residential students (Chickering 1974; Knefelkamp & Stewart, 1983; Pascarella & Terenzini, 1991). In his book *Commuting versus Resident Students*, researcher Arthur Chickering (1974) stated that "residents are the haves and the commuters, the have nots" (p. 49). Commuter students— within the research of student involvement and student satisfaction—were largely ignored. Residential students became the focus for researchers who studied the impact of the college student experience. Pascarella (1984) measured four outcomes that could impact residential students: educational aspirations, satisfaction with college, rate of progress through college, and intentions to persist after two years. Pascarella's research determined that students living on campus (when compared to commuter students) were not influenced by any of these measures. There appeared to be an indirect link between residential students and their interaction with faculty and peers.

More recently, Newbold, Mehta, and Forbus (2011) opined, "Understanding group differences between commuters and non-commuters is critical as the commuter population nationwide continues to increase and universities are forced to compete for the patronage of these commuter students" (p. 142).

Commuter Student Involvement

Involvement and engagements are important indicators of student retention and student satisfaction. Engaging the commuter student presents a challenge to the college

or university in which they are enrolled. Evans, Forney and Guido-DiBrito (1998) wrote about the marginalization of students and concluded that if a student feels that they do not belong to a particular group or otherwise feel engaged, they manifest characteristics such as "self-consciousness, irritability, and depression" (p. 27). These feelings of self-doubt and isolation have negative consequences on the student's persistence to graduation.

Astin (1977) in his ground-breaking work on college students noted that student involvement in the academic and social life of the institution was a strong predictor of student success. Although much of his work was dedicated to the residential student, Astin inferred the need to weave the commuter student into the fabric of the institution. More than a decade later, Abrahamowicz (1988) measured the satisfaction of students who had been involved in student activities against those students who had little to no involvement in student activities. His research showed that involving the commuter student in campus activities positively impacted the student's overall satisfaction. Thus, the university environment allowed for the commuter student to find a place with which to connect.

The connection with the university community was important in part because it provided the commuter student with an identity. "Place attachment is important because it generates identification with place and fosters social and political involvement in the preservation of the physical and social features that characterize a neighborhood" (Mesch & Manor, 1998, p. 505). As important as attachment was to the success of the commuter student, student persistence was equally important.

Tinto (1998), when reflecting on the research about student persistence noted:

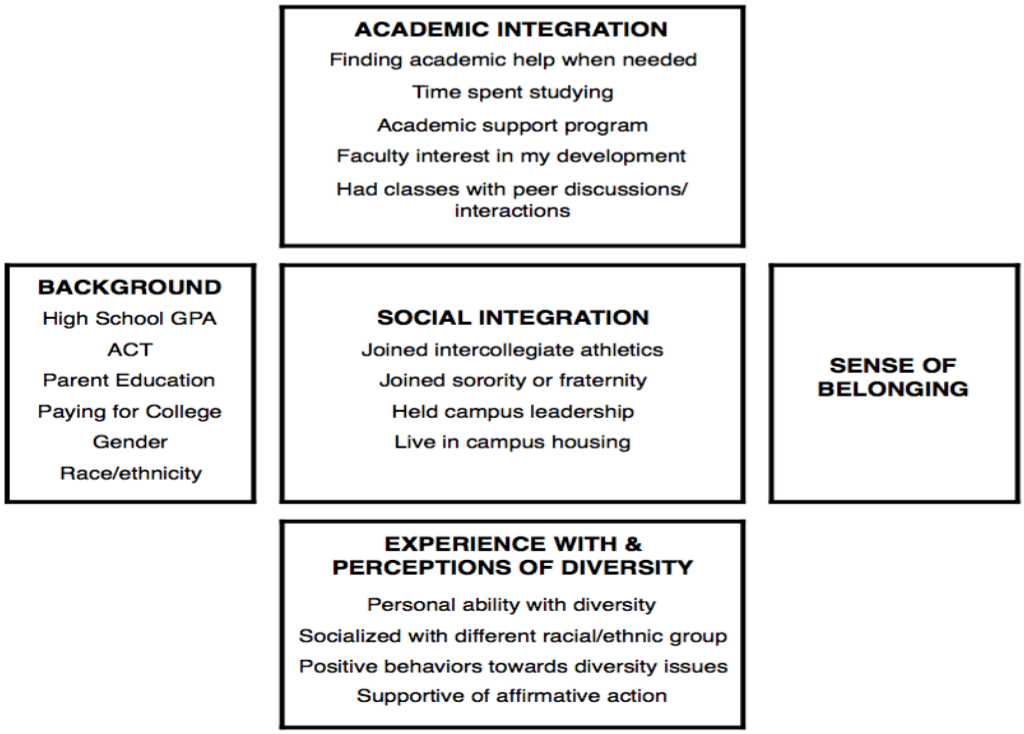
> One thing we know about persistence is that involvement matters. The more academically and socially involved individuals are--that is, the more they interact with other students and faculty--the more likely they are to persist (e.g. Astin, 1984; Mallette & Cabrera, 1991; Nora, 1987; Pascarella & Terenzini, 1980; Terenzini & Pascarella, 1977). And the more they see those interactions as positive and themselves as integrated into the institution and as valued members of it (i.e., validated), the more likely it is that they will persist (Rendon, 1994). (p. 167)

It was Tinto's work (1975, 1993, 1998) on student persistence that influenced higher education administrators by introducing his theory of student departure. His findings and strong emphasis on the integration into the social and academic components of colleges and universities has continued to inform administrators and provide a framework for retention programs and services.

College students must, as stated by Tinto, engage in the university community or they are likely to drop their classes and cease the pursuit of their college degrees. It is important to note that this research applies to all students, including, but not limited to Hispanic commuter students. Fischer (2007) found that minority students who had a negative perception of the campus racial climate were less satisfied with their college experience and were more likely to leave college. Hence, the obvious challenge for university administrators was to create a caring and sensitive campus climate to connect commuter students to the university through academic and social integration and improve the likelihood that these students would persist and graduate from their institutions.

An example of social integration on a college campus would include intramural or recreational sports. Elkins, Forrester and Noel-Elkins (2011) work focused on the impact of recreational sports as it related to the campus community. In their study of 330 undergraduate students, they concluded that involvement in recreational sports was a strong predictor of campus community. Thus, campuses are continuously challenged to create environments, offer programs, provide services, and expand opportunities to support and engage the commuter student.

Figure 5. Conceptual Framework



Factors Impacting Sense of Belonging at a Hispanic-Serving Institution
Maestas, Vaquera, & Munoz Zehr, 2007

Hispanic Student Retention

Poor Hispanic student retention impacts both the student and the university. If minority students choose to leave college before graduation, they often leave behind the possibilities of attaining high paying and highly skilled jobs (Aronson, Fried, & Good, 2002). The student's decision to leave the university early is also detrimental to the institution. Garippa (2006) suggested:

> Another aspect of retention is attrition or those students who leave the university before graduation. The impacts of attrition most observed on a university are that the university loses potential graduates to the extent that the attrition certainly could adversely affect an institution's reputation. The institution also loses because the time and effort spent on orientation, counseling, academic advising, financial counseling, and retention did not make a difference for that particular student. Furthermore, the university may develop a reputation for poor institutional effectiveness, for lack of credibility, and for a lack of concern as to how students can fit into the campus environment. (p. 91)

Recruiting students to attend colleges and universities is expensive. Colleges' and university's admissions staff focus on recruiting the best and the brightest students; spending significant resources on this vital process. The admissions office, at most campuses, is staffed with recruiters who call prospective students, arrange for on-site admissions programs, and provide concierge services when students visit their campuses. All of these efforts are directed towards convincing students, and their families, to choose their particular institution for their college experience.

Table 5

Median Cost of Recruiting a Single Undergraduate Student in 2013

Percentile	Four-year private	Four-year public	Two-year public *
25th	$1,602	$268	$52
Median	$2,433	$457	$123
75th	$3,116	$750	$205

At $2,433 per new student, the median cost of recruiting was substantially higher for four-year private institutions than the comparable median cost of $457 per student for four-year public institutions and $123 per student at two-year public institutions.
*Two-year public institutions—please note: The benchmarks for two-year public institutions in this report are based on a finite number of observations, due to a limited two-year sample size. Although the sample proved to be too small to ensure statistical significance, we judged these benchmarks to be helpful but ultimately leave that judgment up to the reader. (Noel-Levitz, 2013)

Fundamentally, institutions of higher learning strive to retain and graduate as many students as possible. Students who leave before completing their degree represent a financial loss to the institution. “Institutions miss out on tuition and fees from that student, income from books and services, housing, and other revenue streams” (Swail, 2006). Moreover, the loss of a student impacts the graduation rate for the institution; a prime indicator of an institution's success. Indeed, as more students leave an institution without completing degrees, key constituents may question the quality of the educational experience being offered by the institution which could impact fundraising, university budgets, and future enrollment.

Snyder and Dillow (2012) found:

> The 2012 graduation rate for first-time, full-time undergraduate students who began their pursuit of a bachelor’s degree at a 4-year degree-granting

> institution in fall 2006 was 59 percent. That is, 59 percent of first-time, full-time students who began seeking a bachelor's degree at a 4-year institution in fall 2006 completed the degree at that institution within 6 years. (para. 1)

Beyond the reputational and financial implications for the institutions, Braxton, Hirschy and McClendon (2011) suggested that in the past, students dropping out of college were considered to be totally responsible for their actions because of their academic abilities or lack thereof. That paradigm has shifted as college and university administrators now look at student success as a full partnership. "Within a talent development model, which has become more prevalent on college campuses, it is believed that all students can succeed with proper support" (p. 1). Understanding this partnership and commitment to the student, it is vital for institutions of higher education to make concerted efforts to retain their students in order to remain viable in the higher education market.

Additionally, many publicly funded institutions are being held to higher standards as a result of state funding cutbacks. Consider the State University System of Florida, the governing agency for higher education in Florida which introduced the Performance Funding Model in early 2014. The model incentivizes each university to improve performance on the basis of 10 metrics that are common to each state institution in Florida.

Table 6

Common Metrics for State Institutions in Florida

1. Percent of Bachelor's Graduates Employed and/or Continuing their Education Further	6. Bachelor's Degrees Awarded in Areas of Strategic Emphasis (includes STEM)
2. Average Wages of Employed Baccalaureate Graduates	7. University Access Rate (Percent of Undergraduates with a Pell-grant)
3. Cost per Undergraduate Degree	8a. Graduate Degrees Awarded in Areas of Strategic Emphasis (includes STEM) (NCF Excluded) 8b. Freshman in Top 10% of Graduating High School Class (NCF Alternative Metric)
4. Six Year Graduation Rate (Full-time and Part-time FTIC)	9. Board of Governors Choice
5. Academic Progress Rate (2nd Year Retention with GPA Above 2.0)	10. Board of Trustees Choice

State of Florida Board of Governors Performance Funding Metrics 2014

The model was developed in part because of low graduation rates which translated into legislators proclaiming a lagging economy in Florida, and creating a metrics system to determine state budget allocations to the universities. When prompted, the chairman of the Florida Board of Governors, Mori Hosseini stated:

> Our Board will no longer accept low graduation rates, high excess hours, or degrees that don't create jobs or address workforce needs. Our Board will continue to demonstrate its ability to lead the System as we advance into the 21st century. We will continue to improve. Not only do I want our System to be the best System in the country, I want our System to be one of the best Systems in the world. (Mitchell, 2014)

In contrast to this ambitious agenda is the fact that since 1987, The Chronicle of Higher Education found that state universities in Florida have seen a 21.6% decrease in

state support (2014). These reductions in state allocations have forced the Florida universities to create revenue streams to maintain their institution's budgets. The natural consequence is that paying for higher education becomes more difficult, especially for low income, and often minority students, including the Hispanic students.

Typically, the only way for a low income student to attend college is through the Pell Grant program and/or student loans. Cunningham and Santiago (2008) noted that Hispanic students were less willing to assume student loan debt than their white or black peers. When reflecting on the lower enrollment data of Hispanic students, Jackson and Reynolds (2013) stated, "Based on the finding that loans boost persistence and completion, reluctance or inability to fund higher education with loans may contribute to Hispanic students' lower rate of college completion" (p. 358). Not surprising, a greater number of Hispanic students are working while attending college and these students experience greater financial stress than white students (Quintana, Vogel, & Ybarra, 1991). Suro and Fry (2005) note that a higher number of Hispanics work full-time compared to Caucasians, African Americans, and Asians. Hernandez (2000) stated that the Hispanic student's stress of financing their own education is a major contributing factor to dropping out of college.

The overrepresentation of Hispanics in lower socioeconomic groups affects the schooling these students receive, which negatively influences their retention, persistence, and academic success in college (Kao &Thompson, 2003). Additionally, students from low socioeconomic backgrounds lack the social and cultural support needed to assist them throughout college, and thus, they choose to leave and do not complete their degrees (St. John, Paulsen, & Carter, 2005).

Baker and Robnett (2012) found that first-year cumulative GPA was a significant predictor for Hispanic students who stayed enrolled at their institutions. In fact, they reported that the odds of students staying enrolled increased more than 16 times for every 1-point increase in GPA. They also reported that participation in a student club was a positive predictor of student persistence citing that the odds of Hispanic students staying enrolled were almost 6 times greater for Hispanic students who participated in a student club, compared with those who did not participate in a club.

Hispanic Academic Achievement

For decades, college admissions officers have been determining a student's readiness for college by examining their high school grade point averages (GPAs) and standardized tests including the Scholastic Aptitude Test (SAT) and American College Testing (ACT) program. Zwick and Sklar (2005) noted that it was more than 100 years ago that leaders of 12 top northeastern universities formed the College Entrance Examination Board, and they developed the Scholastic Aptitude Test (SAT). The first SAT was administered in 1926 to approximately 8,000 students (Zwick & Sklar, 2005). In 1947 the Educational Testing Service (ETS) was founded in Princeton, New Jersey, and in 1959, the American College Testing Program (ACT) was founded in Iowa City (Zwick & Sklar, 2005). In 2005, ACT, Inc. reported that 1,186, 251 students took the ACT, and the College Board reported 1,475,623 students took the SAT.

Clearly, students are taking these standardized tests, and most colleges and universities in the U.S. are requiring students to report scores from either the SAT or ACT, but different institutions are placing a different emphasis on these standardized tests. Some colleges give more weight to GPA, class rank, or extracurricular

involvements including sports and community service than to the standardized test scores. Fleming and Garcia (1998) found that the standardized test scores and grades differed in the ability to predict retention among non-white students. Spitzer (2000) found that a student's high school GPA positively predicted success in college. Similarly, Ishanti and Dejardins (2002) found that students who had higher high school GPAs were less likely to leave school.

Sax, Bryant, and Harper (2005) conducted a study with minority college freshmen that showed that these freshmen were entering colleges with strong records of academic achievement, but once enrolled in the college courses, minority students had less commitment to completing their homework assignments and minority students were spending less time studying for their course exams than white students.

Hispanic Graduation

U.S. Census Bureau (2010) data showed that 22% of white 22-to-24-year-old students had attained at least a bachelor's degree; the Hispanic students in this same age group were half as likely to have completed a four-year degree (11%). Thus, even though Hispanic students have made great strides in both high school graduation and enrollment in colleges and universities, they have not completed bachelor's degrees at a comparable rate to white students.

Table 7

Equity Gap in College Graduation Rates

United States 2007 - 2008	Hispanics	Whites	Equity Gap
Graduation Rates	35.6	49.3	13.7
Completions per 100 FTE Students	14.8	18.5	3.7
Completion Rate to the Population in Need	14.9	40.9	26

Note. Santiago (2011) adapted from Ensuring American's Future: Benchmarking Latino College Completion to meet National Goals: 2010 to 2020. A study by Santiago, Co-founder and Vice President of Policy and Research for Excelencia in Education, with data and analysis provided by the National Center for Public Policy and Higher Education.

Interestingly, Arbona and Nora (2007) conducted a study and found, "college experiences are more important than precollege characteristics for predicting the degree attainment of Latino students who begin college at a 4-year institution" (p. 326). Moreover, Hispanic students thrive in college environments that foster a strong sense of belonging and these students are negatively impacted by a lack of under representation of Hispanic students and Hispanic faculty on campuses (Hagedorn, Winny, Cepeda, & McLain, 2007). Nevarez (2001) explained "reaching proportional racial/ethnic representation and creating an environment that nurtures a sense of belonging and social integration should be a goal for all higher education institutions" (p. 77). Thus, college administrators should strive to enroll more minority students of all backgrounds and implement policies that reflect an awareness of different cultural values. Recognizing the importance of graduating a diverse student body and offering programs and services to help minority students complete their graduation requirements will ultimately benefit the entire university community.

Graduation rates have a direct impact on financial success and career opportunities. Specifically, white students have a higher college graduation rate than minority students; so, the majority of the higher paying and higher skilled positions are being awarded to the white students (Aronson, Fried, & Good, 2002). Fry (2004) stated "At all institutional levels and college-qualification levels, White students are more likely to obtain a bachelor's degree than Hispanic students" (p. 1). Thus, it is important to identify, and when possible, for university administrators to eliminate graduation barriers for Hispanic students.

Federal Pell Grant Program

Given that Hispanic students and their families are often living below the poverty line, access to loans, grants and other state and federal financial aid programs are vital to the success of these students. Hispanic students in need of federal financial aid may be eligible under Title IV of the 1965 Higher Education Act. Essentially, the Act provides loans, grants and work student opportunities funded through government programs. In 1972, The Basic Educational Opportunity Grant program was established to provide educational funds to students who have a demonstrated need. The program was later named after Claiborne Pell, the Senator from Rhode Island who was considered a strong advocate for educational funding for low income students (Gladieux & Corrigan, 2005).

The premise behind the Federal Pell Grant Program was simple: by providing financial resources to low income students, the burden of paying for college would be reduced and the likelihood of students from low socio-economic means attending college would be increased (Perna, Rowan-Kenyon, Bell, & Thomas, 2008). According to the Department of Education, to be eligible for these federal educational funds, including the

Pell Grant, certain criteria must be met: (a) attain a High School Diploma or earn a GED certificate, (b) enroll in a degree granting institution, (c) register with Selective Service, (d) have a valid Social Security number, (e) attest you are not in default on other student loans, and (f) be an American citizen or prove immigration status (Federal Pell Grant Program, 2015).

Summary

This chapter provided a comprehensive review of the literature related to the Hispanic population in the U.S., Hispanic community, and Hispanic students. Literature that focused on living arrangements, student retention, academic achievement, graduation, and the Federal Pell Grant Program were also examined and discussed. Chapter 3 discusses the research method (research design, site, data collection and analysis procedures). Chapter 4 presents the findings of the study, and Chapter 5 concludes with a summary of the study, discussion of the results, implications for theory, implications for practice, recommendations for future research, and limitations of the study.

CHAPTER III

METHODOLOGY

This chapter restates the purpose of the study, the research questions and the hypotheses. The research methodology, the research design, the site, the participants, the data collection, the variables in the study, and the statistical analyses are explained. This chapter concludes with a summary of relevant points.

Purpose of the Study

The purpose of this study was to determine if undergraduate Hispanic students' choice of living arrangement contributed to the retention, academic achievement, and graduation rates by comparing groups of Hispanic students over a 6-year period: Hispanic students who resided on-campus and those Hispanic students who commuted to campus from 2006 - 2012. This study showed if differences existed when the retention rates, academic achievement, and graduation rates of first-time-in-college freshmen were compared with respect to their choice of living arrangement.

Specifically, the researcher investigated whether retention, academic achievement, and graduation rates for Hispanic students differed significantly by living arrangement and the following important demographic variables identified in the literature: sex and income, and for the purpose of this study, income was a dichotomous variable: eligible for a Pell Grant (yes) or not eligible for a Pell Grant (no). Academic achievement was determined by comparing the cumulative grade point averages of undergraduate Hispanic students who lived on-campus to the cumulative grade point averages for the undergraduate Hispanic students who lived off-campus.

Research Questions and Hypotheses

The following research questions were addressed in this study: (a) Are Hispanic students who live on-campus from year one to year two more likely to be retained than Hispanic students who live off-campus? (b) Do Hispanic students who live on-campus at any time have a higher cumulative grade point average than Hispanic students who live off-campus? (c) Are Hispanic students who live on-campus for any period of time more likely to graduate than Hispanic students who live off-campus? To explore these research questions three hypotheses were tested:

H_1: Hispanic students who live on-campus during their first year in college are more likely to be retained than Hispanic students who live off-campus during their first year in college.

H_2: Hispanic students who live on-campus for any period of time will have higher grade point averages than Hispanic students who live off-campus.

H_3: Hispanic students who live on-campus for any period of time are more likely to graduate than Hispanic students who live off-campus.

Research Methodology

This study focused on a statistical analysis to compare cohorts of full-time undergraduate Hispanic students that lived on campus to cohorts of full-time undergraduate Hispanic students who lived off campus to determine if differences existed with regard to the students' living arrangement, retention, academic achievement, and graduation. Students were placed in groups based on whether they lived on campus or off campus, and based on their demographic characteristics of sex and income to create comparable groups. The analysis controlled for the students' prior academic

achievements including high school grade point averages (unweighted and weighted), their demographic characteristics of sex (male and female) and income (Pell eligible and not Pell eligible). These groups were retrospective cohorts because the groups were formed after the data had been collected.

Similar to Umbricht (2012) who studied time-to-degree of first-generation students, a time span of six years was utilized to provide a longitudinal study of the secondary data. In the United States, six years is the national benchmark for on-time graduation as determined by the U.S. Department of Education (Albright, 2010). Six years is within 150% of the typical time required for undergraduate students to complete programs. Colleges and universities are required under the Student Right-to-Know Act of 1990 to disclose the rate that students typically complete academic programs.

After receiving Institutional Review Board approval (Appendix A) the data for the study was requested through the Office of Analysis and Information Management **(**Appendix B).

Research Design

For this quantitative study, institutional data from a single university was analyzed to address the three research questions. The independent variable was "living arrangement" with two options: on campus or off campus. The dependent variables were academic achievement, which was measured by comparing the cumulative grade point averages (GPAs), the retention rate for each sample group (whether the student returned to the institution for their sophomore year), graduation rates (did the student graduate on time). The sample groups were compared to determine if there were any significant differences.

Site

A large southeastern university was the site for the study. It is the unique nature of this dynamic campus with a broad range of races and ethnicities which makes this university a seamless fit for this research. The university is designated as a Hispanic-Serving Institution (HSI) and is a member of the Hispanic Association of Colleges and Universities. In fall 2015, the university enrolled more than 50,000 students and led the nation in awarding bachelor's and master's degrees to Hispanic students. During the 2012-2013 academic year, the university enrolled 19,209 undergraduate Hispanic students which represented 65.2% of the total undergraduate population (Latino College Completion, 2012). The university is an urban, public, multi-campus, research university.

Participants

The sample groups were selected from the overall first-time-in-college (FTIC), full-time enrolled student population during academic years 2006 – 2012. The term "FTIC" refers to students who have not previously attended any other institution of higher education as a full time student before matriculating. The on-campus sample group was comprised of 2,260 Hispanic students and the off-campus group was comprised of 16,293 Hispanic students for a total sample population of 18,553 undergraduate Hispanic students. For the students selected, the researcher tracked if these students were retained, their academic achievement (cumulative GPA) and if these students graduated. For those students who graduated, the researcher tracked how many years it took the students to graduate (on time graduation was defined as 6 years). As

described below, steps were taken to prepare the data for analysis which resulted in a usable dataset of 18,553 undergraduate Hispanic students.

Data Collection

The data selected for analysis were participant-level data. The variables included: sex, Pell Grant eligibility (income), and initial academic area of interest (to categorize majors). This study used secondary data extracted from the site institution's database including: data collected from the Department of Housing and Residential Life and data collected from the Office of Retention and Graduation Success. The data were from academic years 2006 – 2012.

The secondary data extracted were downloaded from the site institution's database and converted into an Excel document. The Excel document was formatted and copied to a Statistical Package for the Social Sciences (SPSS) version 20.0 for analysis. The data was stored on a zip drive under the control of the researcher. Student ID numbers were used by the researcher who gathered the information into a single dataset, and replaced the student ID numbers with random numbers to protect the identity of each individual student. A description of the data collected was provided below.

Variables in the Study

Baker and Robnett (2012) examined many variables as precollege predictors for minority student retention and graduation [high school GPA, sex, and family income]. For the purpose of this research, the following variables were studied: precollege characteristics: high school GPA, sex, and eligibility for a Pell Grant (family income); college characteristics: place of residence (living on or off campus), initial academic area

of interest (i.e. business, engineering, hospitality), retention (first year to second year), cumulative GPA, and graduation.

Students' sex (male or female) were coded as dummy variables. Sex was dummy coded so that males served as the reference category (male = 1, female = 2).

Financial variables have a significant impact on student retention and persistence. In accordance, data was obtained regarding each student's reported eligibility for a Pell Grant. The data was provided to the institution by students and their parents/guardians via the Free Application for Federal Student Aid (FAFSA) form.

Choice of Living Arrangement

Living on-campus has been strongly linked to retention, academic achievement, and graduation (Lopez Turley, & Wodtke, 2010). Mills (2011) stated, "In both the overall graduation rate and in the semester to semester enrollment, the students who lived in campus housing persisted at a higher rate than the students who did not live in campus housing" (p. 30). Thus, it is important to identify where students lived during their collegiate experience. The address information obtained from the university records was used to create a dummy code variable which indicated if a student lived on-campus during each semester (on-campus = 1, off-campus = 0). The address information did not indicate whether a student not living on-campus was living at home, in an apartment with other students, in Greek housing, or another type of living arrangement.

The initial academic area of interest that students selected may have a relationship as to whether students were retained, did well academically, and/or graduated. According to Vosilla (2009), several disciplines including, business, education, and computer science need to contemplate why their majors do not support persistence by

minority students. The data revealed that incoming students were enrolled in over 150 academic programs in 10 colleges and schools; to complete the data analysis, the researcher made a decision to combine and limit the number of groups for the initial academic interest areas. Each category was listed and was dummy-coded for the analysis (e.g., College of Engineering = 1, not in College of Engineering = 0).

Retention

Data was obtained from the Office of Analysis and Information Management to determine whether each First Time in College student was enrolled the fall semester after his or her initial matriculation at the institution (retention is defined as returning for a second year). This variable was dummy coded (yes/ retained = 1, no/ not retained = 0) and served as the dependent variable for answering the first research question: (a) Are Hispanic students who live on-campus from year one to year two more likely to be retained than Hispanic students who live off-campus?

Academic Achievement

Academic achievement information (i.e., cumulative GPA) for each student was obtained from the Office of Analysis and Information Management. This continuous dependent variable answered the second research question: Do Hispanic students who live on-campus at any time have a higher cumulative grade point average than Hispanic students who live off-campus?

Graduation

Data regarding whether each student graduated was obtained from the Office of Analysis and Information Management. This variable was dummy coded (1 = yes/ graduated, 0 = no/ not graduated and served as the dependent variable for answering the

third research question: Are Hispanic students who live on-campus for any period of time more likely to graduate than Hispanic students who live off-campus?

Data Analysis

All statistical computations were executed using the computer program, Statistical Package for Social Sciences (SPSS), 20.0 edition for Windows. Data were collected electronically and individual responses for the student participants were compiled, recorded, and analyzed. For the binary outcome variables, retention and graduation, logistic regression analysis was used since these dichotomous dependent variables both have yes or no responses. With the continuous variable, grade point average (GPA), the general linear model was used.

General Linear Model

General linear modeling was used to explain the possible effects of the independent variable (living arrangement) on academic achievement (GPA) after controlling for Pell Grant eligibility (income), high school GPA, and sex. The general linear model provided data on the statistical significance of a potential difference between the two housing groups – on campus and off campus.

Logistic Regression

Logistic regression was used to explain the effect that each of the independent variables (i.e., living arrangement, Pell Grant eligibility (income), unweighted high school GPA, and sex) had on first-year to second-year retention and on graduation. Because the outcome variables (1 = retained, 0 = not retained and 1= graduated, 0 = not graduated) are dichotomous, logistic regression was an appropriate technique for this analysis (Dey & Astin, 1993).

Research Questions and Hypotheses

Research question one is asking, if after controlling for input and environmental characteristics, are Hispanic students who live on-campus from year one to year two more likely to be retained than Hispanic students who live off-campus? The dependent variable used to address this question was the retention rate for the site institution's students. Logistic regression was conducted to determine if students who live on campus have a higher retention rate than students who live off campus (after taking into account the control variables: sex, Pell Grant eligibility (income), and initial academic area of interest- i.e. first college or school).

To explore the research question this hypothesis was tested:

H_1: Hispanic students who live on-campus during their first year in college are more likely to be retained than Hispanic students who live off-campus during their first year in college.

To test H_1, logistic regression was conducted to test the relationship between the control variables (sex, Pell Grant eligibility (income), and initial academic area of interest) and the dependent variable retention. The analysis determined whether or not there was a significant relationship between the primary control variable, living arrangement and retention. The odds ratios produced by the analysis indicated how much, if at all, the control variables contributed to retention.

Research question two is asking, if after controlling for input and environmental characteristics, do Hispanic students who live on-campus at any time have a higher cumulative grade point average than Hispanic students who live off-campus?

To explore the research question this hypothesis was tested:

H_2: Hispanic students who live on-campus for any period of time will have higher grade point averages than Hispanic students who live off-campus.

To test H_2, General Linear Modeling was conducted with sex, Pell Grant eligibility (income), and initial area of academic interest as independent variables, and cumulative grade point average as the dependent variable. The analysis included a test of the main effect of Housing (i.e., living on-campus, living off-campus) on grade point average (GPA). GPA was predicted to be significantly higher for the group living on-campus than for the group living off-campus.

Research question three is asking, if after accounting for input and environmental characteristics, are Hispanic students who live on-campus for any period of time more likely to graduate than Hispanic students who live off-campus?

To explore the research question this hypothesis was tested:

H_3: Hispanic students who live on-campus for any period of time are more likely to graduate than Hispanic students who live off-campus.

To test H_3, logistic regression was conducted to test the relationship between the control variables (sex, Pell Grant eligibility (income), and initial area of academic interest) and the dependent variable graduation. The analysis determined whether or not there was a significant relationship between the primary control variable, living on campus, and graduation. The odds ratios produced by the analysis also indicated how much, if at all, the control variables contributed to graduation.

Summary

This chapter re-stated the purpose of the study, re-stated the research questions and hypotheses, described the research methodology, explained the research design,

identified the site, described the participants, identified the procedures used for data collection, and explained the analysis for the study. Chapter 4 presented the detailed findings of the study, and Chapter 5 concludes with a summary of the study, discussion of the results, implications for theory, implications for practice, recommendations for future research, and limitations of the study.

CHAPTER IV

RESULTS

This chapter presents the results of the statistical analyses performed on the data and it is organized into three main sections: demographics and background of the data, results and analysis of the three hypotheses, and a summary of the chapter. Once again, the purpose of this study was to determine whether undergraduate Hispanic students' living arrangements at a Hispanic-serving institution have a relationship with retention, academic achievement, and graduation by comparing groups of Hispanic students over a 6-year period: Hispanic students who resided on-campus and Hispanic students who commuted to campus from 2006 - 2012. The site of the study was a large southeastern university with a total student enrollment of more than 54,000 students.

The research questions and hypotheses which guided this study were: (a) Are Hispanic students who live on-campus from year one to year two more likely to be retained than Hispanic students who live off-campus? (b) Do Hispanic students who live on-campus at any time have a higher cumulative grade point average than Hispanic students who live off-campus? (c) Are Hispanic students who live on-campus for any period of time more likely to graduate than Hispanic students who live off-campus? To explore these research questions three hypotheses were tested:

H_1: Hispanic students who live on-campus during their first year in college are more likely to be retained than Hispanic students who live off-campus during their first year in college.

H_2: Hispanic students who live on-campus for any period of time will have higher grade point averages than Hispanic students who live off-campus.

H_3: Hispanic students who live on-campus for any period of time are more likely to graduate than Hispanic students who live off-campus.

Demographics and Background of the Data

To analyze the data, the researcher used the Statistical Package for Social Sciences (SPSS), version 20.0. Descriptive and inferential statistics were used to analyze the data collected from the university's database. Demographic and background characteristics were analyzed using descriptive statistics, such as frequencies, means, percentages, and standard deviations. To answer the research questions and to further examine the relationships between the research variables, logistic regression, and the general linear model were utilized.

Participants and Living Arrangements

As shown in Table 8, based on self-reported data to the institution, only Hispanic students were considered; students with other ethnicities were not part of this study. The participants, Hispanic students who first enrolled as freshmen during the fall semesters of 2006 – 2012, were all included in the dataset (N = 18,553). The data were prepared for analysis which resulted in a usable dataset. Table 8 also shows that within this dataset 12.2 % of the Hispanic students had lived on campus (n = 2,260) and 87.8 % of the Hispanic students had lived off-campus (n = 16,293).

Table 8

Living Arrangements for Hispanic Student Participants

Living Arrangements	Hispanic Student Participants	Percent
Off-campus	16293	87.8
On-campus	2260	12.2
Total	18553	100.0

Ethnicity and Sex

As shown in Table 9, females made up 54% of the sample (n = 10,016) compared to males who were 45.9% of the sample (n = 8,518). Also, 0.1% of the students in the study (n = 19) did not indicate their sex as female or male.

Table 9

Sex of the Hispanic Student Participants

	Sex	Hispanic Student Participants	Percent
	Male	8518	45.9
	Female	10016	54.0
	Total	18534	99.9
	Missing	19	00.1
Grand Total		18553	100.0

Cohorts

Participants in the study were assigned to a cohort based on the year that they first enrolled in classes as degree-seeking undergraduates. This study examined data for First Time in College (FTIC) students in cohorts 2006 - 2012.

Table 10 shows the number of students who lived off-campus and the number of students who lived on-campus for each of the seven cohorts for 2006 - 2012. In 2007, the largest percentage of Hispanic FTIC students lived on-campus (13.7%); the largest percentage of Hispanic FTIC students lived off-campus in 2011 (90.3%).

Table 10

Cohorts for First Time in College (FTIC) by Living Arrangement

	Off-Campus		On-Campus			
Cohorts	Count	%	Count	%	Count	Total %
2006 FTIC	2500	87.5%	357	12.5%	2857	100%
2007 FTIC	2096	86.3%	332	13.7%	2428	100%
2008 FTIC	2011	88.0%	275	12.0%	2286	100%
2009 FTIC	1864	86.5%	290	13.5%	2154	100%
2010 FTIC	2369	86.8%	360	13.2%	2729	100%
2011 FTIC	2798	90.3%	300	9.7%	3098	100%
2012 FTIC	2655	88.5%	346	11.5%	3001	100%
Total	16293	87.8%	2260	12.3%	18553	100%

Number of Years Lived on Campus

Table 11 provides the number of years the participants lived on-campus. The largest number of participants, 16,332 or 88%, never lived on campus. Of the 2,221

Hispanic students who chose to live on-campus, 1,354 or 7.3% lived on campus for one year, 490 or 2.6% lived on campus for two years, 223 or 1.2% lived on campus for three years, and 131 or 0.7% lived on campus for four years. Fewer than 20 Hispanic students lived on campus for five years, and from the cohorts 2006 -2012, only five Hispanic students lived on campus for six years.

Table 11

Number of Years Lived On Campus for Participants in Cohorts 2006 - 2012

Number of Years Lived On-Campus	Count	Percent
.00	16332	88.0%
1.00	1354	7.3%
2.00	490	2.6%
3.00	223	1.2%
4.00	131	0.7%
5.00	18	0.1%
6.00	5	0.0%
Total	18553	100.0%

High School GPA – Unweighted and Weighted

Table 12 provides the unweighted high school GPA and the weighted high school GPA for the two housing groups (off-campus and on-campus). Unweighted GPA was defined as a GPA based on a scale of 4.0 with a grade of "A" having an assigned value of 4 points.

The Weighted GPA was defined as a GPA based on a scale of greater than 4.0 to account for the extra GPA points earned by students in advanced placement courses, dual enrollment courses, and honors courses. As shown in Table 12, the weighted high school GPA for off-campus participants (3.65) is slightly higher than the weighted high school GPA for the on-campus students (3.57). However, the unweighted high school GPA for off-campus students (3.16) is exactly the same as the unweighted high school GPA for the on-campus students.

Table 12

High School GPA – Unweighted and Weighted by Living Arrangement

Living Arrangements	Count	%	Unweighted HS GPA	Weighted HS GPA
Off-campus	16293	87.82%	3.16	3.65
On-campus	2260	12.18%	3.16	3.57
Total	18553	100.00%		

Federal Pell Grant Program Eligibility

Pell Grants are typically awarded to students who have not earned a bachelor's or a professional degree and who meet federal student aid eligibility, including: students who have a demonstrated financial need; they are U.S. citizens or eligible noncitizens; with valid Social Security numbers; these students are registered with Selective Service, if a male (needed to register between the ages of 18 and 25); and, they are enrolled or accepted for enrollment as regular students in eligible degree or certificate programs. These prospective college students submit the Free Application for Federal Student Aid (FAFSA) which is a form to determine if a student is eligible for government sponsored

student aid. The financial aid office reviews the FAFSA form and determines how much financial aid a student is eligible to receive (Federal Pell Grant Program).

Table 13 provides the Federal Pell Grant Program eligibility (Pell eligible, not Pell eligible, or no FAFSA form was submitted) for all of the participants during their first year of study by living arrangement: off-campus or on-campus. Of the participants living off-campus – 78.8% were Pell eligible; the researcher noted that a higher percent of on-campus students were Pell eligible (80.8%), and that a lower percentage of on-campus students (6.9%) compared to off-campus students (10.7%) were not Pell eligible. Additionally, 12.4% of on-campus students compared to 10.5% off-campus, did not submit the FAFA forms.

Table 13

Pell Eligibility for Participants in their First Year by Living Arrangement

	Pell Eligible		Not Pell Eligible		No FAFSA		
Housing	Count	%	Count	%	Count	%	Total Count
Off-campus	12840	78.8	1745	10.7	1708	10.5	16293
On-campus	1825	80.8	155	6.9	280	12.4	2260
Total	14665	79.0	1900	10.2	1988	10.7	18553

Table 14 provides the Pell eligibility for the 2006 – 2012 cohorts (always Pell eligible, sometimes Pell eligible, and never Pell eligible or no FAFSA) for all participants by living arrangement: students living off-campus and students living on-campus. As shown, there was very little difference in the Pell eligibility between the two groups (off-campus students and on-campus students). Specifically, 39.2% of off-campus students

were always Pell eligible, compared to 38.2% of on-campus students. There was even less of a discrepancy between the groups whom were never Pell eligible; 31.3% of off-campus students were never Pell eligible compared to 31% of on-campus students.

Table 14

Pell Eligibility for Cohorts 2006 – 2012 by Living Arrangement

	Always		Sometimes		Never		No FAFSA		
Housing	Count	%	Count	%	Count	%	Count	%	Total Count
Off-campus	6392	39.2	3088	19.0	5105	31.3	1708	10.5	16293
On-campus	863	38.2	417	18.5	700	31.0	280	12.4	2260
Total	7255	39.1	3505	18.9	5805	31.3	1988	10.7	18553

Academic Interest Area

Prior to enrollment, the participants self-identified their initial academic interest areas. Table 15 shows: the 10 colleges or schools, the number of Hispanic students per college, and the percent of the students in a particular college or school. Arts and Sciences had the largest number of Hispanic students – 7,318 or 39.4%; followed by the College of Business with 3,294 students or 17.8%; and, the College of Engineering and Computing Sciences with 2,397 students or 12.9%. Table 15 further shows the Academic Interest Areas by separating the Hispanic students by living arrangements: students living on-campus and students living off-campus.

Table 15

Initial Academic Interest Area / College or School by Living Arrangement

	Initial Academic Interest Area / College or School					
	On-campus		Off-campus		Total	
Interest Area/College	Count	%	Count	%	Count	Total %
Architecture & Arts	162	7.2%	959	5.9%	1121	6.0%
Arts & Sciences	860	38.1%	6458	39.6%	7318	39.4%
Business	449	19.9%	2845	17.5%	3294	17.8%
Education	96	4.3%	520	3.2%	616	3.3%
Engineering	211	9.3%	2186	13.4%	2397	12.9%
Hospitality	58	2.6%	311	1.9%	369	2.0%
Journal. & Mass Com.	135	6.0%	800	4.9%	935	5.0%
Nursing & Health	148	6.6%	1281	7.9%	1429	7.7%
Pub Hlth & Soc Work	14	0.6%	140	0.9%	154	0.8%
Undergrad Education	127	5.6%	793	4.9%	920	5.0%
Total	2260	100.0	16293	100.0	18553	100.0

As seen in Table 16, Hispanic students who lived off-campus had a greater one-year retention rate compared to Hispanic students living on-campus in all academic interest areas except Arts and Architecture whereby 86% of on-campus students were retained as compared to 83% of the off-campus students. As seen in Table 15, Architecture and the Arts had 162 or 7.2% of Hispanic students living on-campus while 959 or 5.9% lived off-campus. These findings are consistent with the literature reviewed

that found a statistically significant relationship between living on-campus and retention (Allen & Haniff, 1991; Astin, 1993; Pascarella, 1984; Schuddle, 2011).

Table 16

Participants Retained/Not Retained by Academic Interest & Living Arrangement

Academic Interest	Retained	Not Retained	Total
Arts & Architecture	83%	17%	100%
On-campus	86%	14%	100%
Off-campus	83%	17%	100%
Arts & Sciences	86%	14%	100%
On-campus	81%	19%	100%
Off-campus	87%	13%	100%
Business	86%	14%	100%
On-campus	82%	18%	100%
Off-campus	87%	13%	100%
Education	86%	14%	100%
On-campus	77%	23%	100%
Off-campus	87%	13%	100%
Engineering	84%	16%	100%
On-campus	78%	22%	100%
Off-campus	84%	16%	100%
Hospitality	89%	11%	100%
On-campus	86%	14%	100%
Off-campus	90%	10%	100%
Journalism	88%	12%	100%
On-campus	87%	13%	100%
Off-campus	88%	12%	100%
Nursing & Health	82%	18%	100%
On-campus	79%	21%	100%
Off-campus	82%	18%	100%
Public Health	82%	18%	100%
On-campus	71%	29%	100%
Off-campus	84%	16%	100%
Undergrad Education	55%	45%	100%
On-campus	41%	59%	100%
Off-campus	57%	43%	100%
Total	84%	16%	100%

Logistic Regression Analysis

Logistic regression analysis was performed to determine the extent to which the predictor variables successfully predicted the probability of the dependent variable in research questions one (retention) and three (graduation). According to Field (2000), logistic regression analysis is ideal for analyzing dichotomous, mutually exclusive dependent variables, such as retention (0 = not retained, 1 = retained) and graduation (0 = did not graduate, 1 = did graduate). Logistic regression is primarily used to provide explanations and predictions (Huck, 2004). Additionally, logistic regression is used to determine relationships between the independent variables, as well as assess the probability of the dependent variable occurring (Sweet & Grace-Martin, 2003). This research study sought to gain an understanding of the variables that explain student retention and graduation in relation to Hispanic students' choice of living arrangements.

Prior to reviewing the results of the logistic regression related to research questions one and three, it is important to understand the terms that are used in relation to logistic regression. As explained by Sweet and Grace-Martin (2003), the purpose of logistic regression is to predict the possibilities of occurrences, which are measured by probabilities, odds, and log-odds. When using logistic regression, it is important to differentiate between odds and probability. Sweet and Grace-Martin define probability as, "the ratio of the number of occurrences to the total number of possibilities" and odds as the "ratio of the number of occurrences to non-occurrences" (p. 159).

Logistic regression coefficient produces an Odds Ratio of 0 – 1 associated for each predictor value and indicates a more precise estimate when the confidence interval is narrower (Garson, 2012; Peng, Lee, & Ingersoll, 2002). The change in odds is known

as Exp (β), or odds ratio, which "is an indicator of the change in odds resulting from a unit change in the predictor" (Field, 2000, p. 182). To determine how much better the odds are for being retained and for completing graduation between the two groups (students living on campus and students living off campus), the researcher used the Chi-Square statistic, which measures the difference between the two groups. Additionally, the Wald statistic was used to determine if a predictor variable was making a statistically significant contribution to the prediction of student retention and graduation (Field, 2000).

Results for Hypothesis One (Retention)

Hypothesis one: Hispanic students who live on-campus during their first year in college are more likely to be retained than Hispanic students who live off-campus during their first year in college.

Logistic regression was used to explain the effect that each of the control variables (living arrangement, sex, Pell Grant eligibility (income), and unweighted high school GPA) had on first-year to second-year retention. Because the outcome variable (1 = retained, 0 = not retained) is dichotomous, logistic regression was an appropriate technique for this analysis (Dey & Astin, 1993).

As seen in Table 17, Hispanic students who lived off-campus had an 84.5% one-year retention rate, compared to a 78.3% retention rate for Hispanic students living on-campus. A Pearson Chi-Square significance test was performed to test if the difference was statistically significant, which it was, $\chi 2\ (1) = 50.125$, $p < .000$. This finding is not consistent with the literature reviewed that found a statistically significant relationship between living on-campus and retention (Allen & Haniff, 1991; Astin, 1993; Pascarella,

1984; Schuddle, 2011). The significance level indicates a probability of less than one in a 1000 that the relationship between living on-campus and retention was due to chance. Hence, the Hispanic students who lived off-campus were more likely to be retained than the Hispanic students who lived on-campus.

The Wald statistic can also be used to determine if a predictor variable is making a statistically significant contribution to the prediction of retention. This statistic has a chi-square distribution and indicates whether the regression coefficient is significantly different from zero (Field, 2000). If the regression coefficient is in fact significantly different from zero, then the researcher can posit that the predictor variable is making a statistically significant contribution to the prediction of retention.

Table 17

Year One Retention by Living Arrangement

Living Arrangement		Year One Retention		
		Not Retained	Retained	Total
Off Campus	Count	2562	13916	16478
	%	15.5%	84.5%	100.0%
On Campus	Count	445	1610	2055
	%	21.7%	78.3%	100.0%
	Count	3007	15526	18533
	%	16.2%	83.8%	100.0%

The logistic regression coefficients, standard errors, Wald statistics, significance, and odds ratios for living on-campus and retention are shown in Table 18, and all of the predictor variables are statistically significant, which contributes to the prediction of retention. The residence hall variable was statistically significant, indicating that on-campus Hispanic students had a lower retention rate than off campus students (B = - .043, Exp (B) = .668, p < .000).

Table 18

Logistic Regression Predicting Retention from Predictor Variables

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 1[a]	ResHallYr1	-.403	.059	46.828	1	.000	.668
	Sex (1=male)	.076	.042	3.259	1	.071	1.079
	Pell Eligible			136.447	2	.000	
	Pell Eligible (No FAFSA)	-.402	.059	47.189	1	.000	.669
	Pell Eligible (Not Pell Elig.)	.767	.088	75.390	1	.000	2.153
	HSOV Unweighted	1.008	.056	326.980	1	.000	2.741
	Constant	-1.481	.169	76.682	1	.000	.227

As seen in Table 19, Hispanic students who lived off-campus and did not submit a FAFSA form had a 75.1% one-year retention rate, compared to a 79.8% retention rate for Hispanic students living on-campus. This finding is consistent with the literature reviewed that found a statistically significant relationship between living on-campus and retention (Allen & Haniff, 1991; Astin, 1993; Pascarella, 1984; Schuddle, 2011). However, Hispanic students who lived off-campus and were not Pell Eligible had a 91.7% one-year retention rate, compared to a 89.2% retention rate for Hispanic students living on-campus. Likewise, Hispanic students who lived off-campus and were Pell

Eligible had a 84.7% one-year retention rate, compared to a 77.2% retention rate for Hispanic students living on-campus. These findings are not consistent with the literature reviewed that found a statistically significant relationship between living on-campus and retention (Allen & Haniff, 1991; Astin, 1993; Pascarella, 1984; Schuddle, 2011).

Table 19

Year One Retention by Living Arrangement and Pell Eligibility

				Not Retained	Retained	
No	Pell Eligibility	No FAFSA	Count	431	1300	1731
			%	24.9%	75.1%	100.0%
		Not Pell Eligible	Count	146	1615	1761
			%	8.3%	91.7%	100.0%
		Pell Eligible	Count	1985	11001	12986
			%	15.3%	84.7%	100.0%
	Total		Count	2562	13916	16478
			%	15.5%	84.5%	100.0%
Yes	Pell Eligibility	No FAFSA	Count	52	205	257
			%	20.2%	79.8%	100.0%
		Not Pell Eligible	Count	15	124	139
			%	10.8%	89.2%	100.0%
		Pell Eligible	Count	378	1281	1659
			%	22.8%	77.2%	100.0%
	Total		Count	445	1610	2055
			%	21.7%	78.3%	100.0%
Total	Pell Eligibility	No FAFSA	Count	483	1505	1988
			%	24.3%	75.7%	100.0%
		Not Pell Eligible	Count	161	1739	1900
			%	8.5%	91.5%	100.0%
		Pell Eligible	Count	2363	12282	14645
			%	16.1%	83.9%	100.0%
	Total		Count	3007	15526	18533
			%	16.2%	83.8%	100.0%

The researcher concluded that in predicting student retention from first year to second year it was statistically significantly better for Hispanic students to live off-campus than it was for these students to live on-campus. As a result of the findings, H_1: Hispanic students living on-campus during their first year in college are more likely to be retained than Hispanic students living off-campus during their first year in college, the researcher rejected the hypothesis. Once more, this finding is not consistent with the majority of the literature reviewed that found a statistically significant relationship between living on-campus and retention (Allen & Haniff, 1991; Astin, 1993; Pascarella, 1984; Schuddle, 2011). Thus, further research is needed to explore the predictive value of living on-campus on college retention, from year one to year two, for Hispanic students.

Results for Hypothesis Two (Academic Achievement)

Hypotheses two: Hispanic students who live on-campus for any period of time will have higher grade point averages than Hispanic students who live off-campus. The General Linear Model (GLM) was used to explain the possible effects of the independent variable (living arrangement) on academic achievement (GPA), after controlling for Pell Grant eligibility (income), high school GPA, and sex. The GLM provided data on the statistical significance of a potential difference in GPA between the two housing groups – on campus and off campus.

Table 20 shows the cumulative mean college GPA for Hispanic students of 2.80 compared to a mean high school overall unweighted GPA of 3.16 and a mean high school overall weighted GPA of 3.64.

Table 20

College and High School Overall Unweighted and Weighted GPA for Participants Who Graduated

	N	Minimum	Maximum	Mean	Std. Dev.
College GPA	18553	0.00	4.00	2.80	.86443
HSOV Unweighted	18307	1.69	9.80	3.16	.47402
HSOV Weighted	18392	1.56	9.80	3.64	.52872

Table 21 shows the cumulative mean GPA for Hispanic students by living arrangement. Hispanic students who lived off-campus had a mean GPA of 2.81 compared to a mean GPA of 2.68 for Hispanic students living on-campus. This finding is inconsistent with the literature reviewed that found a statistically significant relationship between living on-campus and academic achievement (GPA).

Table 21

College Cumulative GPA by Living Arrangement

	Living Arrangement	*N*	Mean	Std. Deviation	Std. Error Mean
Cum GPA	Off-Campus	16293	2.81	.86487	.00678
	On-Campus	2260	2.68	.85323	.01795

The GLM results in Table 22 show the relationships between the variables and cumulative GPA, as such: on-campus students had significantly lower GPAs than off-

campus students, t (1) = 3.4, $p < .001$; students who did not file a FAFSA had lower GPAs than those who were not Pell eligible, t (2) = - 2.205, $p < .028$; and males had lower GPAs than females, t (1) = - 4.627, $p < .000$. High school overall GPA was also a significant predictor of cumulative GPA, t (1) = 7.892, $p < .000$. Finally, the more years students lived on-campus, the higher their cumulative GPA, t (1) = 2.506, $p < .012$.

Table 22

GLM Results for Cumulative GPA

Parameter	*B*	Std. Error	*t*	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	1.107	.276	4.006	.000	.564	1.650
[Housing=.00]	.575	.169	3.400	.001	.243	.907
[Housing=1.00]	0	.	.	.	.	.
[Pell Eligible]	-.131	.143	-.918	.359	-.412	.150
[No FAFSA]	-.230	.104	-2.205	.028	-.435	-.025
[Not Pell Eligible]	0	.	.	.	.	.
[Sex=1= Male]	-.338	.073	-4.627	.000	-.482	-.195
[Sex=2= Female]	0	.	.	.	.	.
HSOV Unweighted	.489	.062	7.892	.000	.368	.611
Years In Housing	.237	.095	2.506	.012	.051	.423

As seen in Table 23, the Hispanic students who did not submit a FAFSA form and lived off-campus had the exact same mean total GPA of 2.55 as Hispanic students living on-campus who did not submit a FAFSA form. Hispanic students who lived off-campus and were Pell Eligible had a 2.82 mean total GPA, compared to a 2.69 mean total GPA for Hispanic students living on-campus who were also Pell eligible. Hispanic students who lived off-campus and were not Pell eligible had a 2.97 mean total GPA, compared to a 2.88 mean total GPA for the non-Pell eligible Hispanic students living on-campus.

Table 23

College Cumulative GPA by Living Arrangement, Pell Eligibility, and Sex

Living Arrangement	Pell Eligible (Income)	Sex	Mean	Std. Deviation	*N*
Off-campus	No FAFSA	Male	2.38	.98251	992
		Female	2.79	.85941	693
		Total	2.55	.95479	1685
	Pell Eligible	Male	2.67	.88450	5647
		Female	2.94	.81769	7047
		Total	2.82	.85876	12694
	Not Pell Eligible	Male	2.88	.77612	831
		Female	3.06	.69957	862
		Total	2.97	.74331	1693
	Total	Male	2.65	.89558	7470
		Female	2.94	.81205	8602
		Total	2.81	.86374	16072
On-campus	No FAFSA	Male	2.34	1.00783	139
		Female	2.77	.92858	135
		Total	2.55	.99147	274
	Pell Eligible	Male	2.49	.85881	732
		Female	2.82	.79242	1059
		Total	2.69	.83544	1791
	Not Pell Eligible	Male	2.78	.75820	76
		Female	2.97	.63474	75
		Total	2.88	.70367	151
	Total	Male	2.49	.87985	947
		Female	2.82	.80017	1269
		Total	2.68	.85066	2216

These findings are not consistent with the majority of the literature reviewed that found a statistically significant relationship between living on-campus and academic achievement.

Overall, the results suggest that hypothesis two was not supported. The researcher concluded that in predicting academic achievement (GPA), it was statistically significantly better for Hispanic students to live off-campus than it was for these students to live on-campus. As a result of the findings, H_2: Hispanic students who live on-campus for any period of time will have higher grade point averages than Hispanic students who live off-campus, the researcher rejected the hypothesis. Once more, this finding is not consistent with the majority of the literature reviewed that found a statistically significant relationship between living on-campus and academic achievement. Thus, further research is needed to explore the predictive value of living on-campus on college academic achievement (GPA), for Hispanic students.

Results for Hypothesis Three (Graduation)

Hypothesis three: Hispanic students who live on-campus for any period of time are more likely to graduate than Hispanic students who live off-campus. Logistic regression was used to explain the effect that each of the control variables (i.e., sex, living arrangement, Pell Grant eligibility, and unweighted high school GPA) had on graduation. Because the outcome variable (1 = graduated, 0 = not graduated) was dichotomous, logistic regression was an appropriate technique for this analysis (Dey & Astin, 1993).

Table 24 shows that of the 2,260 Hispanic students who lived on-campus, 831 or 37% of these students are still actively enrolled at the university; 209 dropped out and

214 were dismissed; so, almost 18% left the university, and 1,006 or 45% graduated. By comparison, of the 16,293 Hispanic students who lived off-campus, 6,453 or 40% of these students are still actively enrolled at the university; 945 dropped out and 1,126 were dismissed; so, almost 13% left the university, and 8,775 or 47% graduated.

Table 24

Students Retained, Dropped Out, Dismissed or Graduated in Cohorts 2006 - 2012 by Living Arrangement

	On-campus		Off-campus			
Status	Count	%	Count	%	Total Count	Total %
Active	831	36.77%	6453	39.61%	7284	39.26%
Dropped Out	209	9.25%	945	5.80%	1154	6.22%
Dismissed	214	9.47%	1126	6.91%	1340	7.22%
Graduated	1006	44.51%	7769	47.68%	8775	47.30%
Grand Total	2260	100.00%	16293	100.00%	18553	100.00%

As seen in Table 25, Hispanic students in cohorts 2006 – 2009 who lived off-campus had a 61% graduation rate, compared to a 57% graduation rate for Hispanic students living on-campus. Hispanic students in cohorts 2010 – 2012 are not included because they have not reached their 6-year graduation limit.

Table 25

Hispanic Students who Graduated in Cohorts 2006 – 2009 by Living Arrangement

	Graduated				
	No		Yes		
Living Arrangement	Count	%	Count	%	Count
Off Campus	3298	39%	5173	61%	8471
On Campus	538	43%	716	57%	1254

As seen in Table 26, 18.19% of students living on-campus graduated in 4 years which is a higher percentage than the 17.68% of off-campus students; however, a higher percentage of off-campus students graduated in 5 years (16.78% compared to 15.04%) and a higher percentage of off-campus students graduated in 6 years (6.56% compared to 5.93%). Nationally, colleges and universities only track 6-year graduation rates, but it is useful to see that 661 or 3.56% of total Hispanic students did graduate after 6-years.

Table 26

Number of Years to Graduate by Living Arrangement

	On campus		Off campus		Total Count	Total %
Years to Graduate	Count	%	Count	%		
1		0.00%	9	0.06%	9	0.05%
2	3	0.13%	55	0.34%	58	0.31%
3	49	2.17%	430	2.64%	479	2.58%
4	411	18.19%	2880	17.68%	3291	17.74%
5	340	15.04%	2734	16.78%	3074	16.57%
6	134	5.93%	1069	6.56%	1203	6.48%
7	48	2.12%	373	2.29%	421	2.27%
8	14	0.62%	139	0.85%	153	0.82%
9	6	0.27%	72	0.44%	78	0.42%
10	1	0.04%	8	0.05%	9	0.05%
Not Grad.	1254	55.49%	8524	52.32%	9778	52.70%
Total	2260	100.00%	16293	100.00%	18553	100.00%

As shown in Table 27, a Pearson Chi-Square significance test was performed to test if the difference between the two groups (on-campus and off-campus) was statistically significant, which it was, $\chi 2\ (1) = 7.207$, $p < .005$. This finding is not consistent with the majority of the literature reviewed that found a statistically significant relationship between living on-campus and graduation.

Table 27

Chi-Square Analysis of Graduation by Living Arrangement

	Value	*df*	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.207	1	.005		
Continuity Correction[b]	6.873	1	.005		
Likelihood Ratio	7.017	1	.005		
Fisher's Exact Test				.005	.003
Linear-by-Linear Association	6.999	1	.005		
N of Valid Cases	18553				

Table 28 shows where the Hispanic students in the study were last enrolled; previously, in Table 15, information was provided for the initial academic interest areas. The colleges or schools with the largest initial enrollments of Hispanic students were Arts and Sciences, Business, and Engineering. Arts and Sciences experienced an increase: initially 7,318 or 39.4% of Hispanic students were first enrolled in Arts and Sciences compared to 8,119 or 44% who were last enrolled in this college. On the contrary, 3,294 or 17.8% were first enrolled in Business compared to 3,087 or 16.6%. Similarly, Hispanic student enrollment dropped in Engineering; initially, 2,397 or 12.9% compared to 1,970 or 10.6%.

Table 28

Participants in Last College or School

	On-campus		Off-campus		Total	
Last College or School	Count	%	Count	%	Count	Total %
Architecture & Arts	121	5.35%	785	4.82%	906	4.88%
Arts & Sciences	995	44.03%	7124	43.72%	8119	43.76%
Business	362	16.0%	2725	16.72%	3087	16.64%
Education	142	6.28%	765	4.70%	907	4.89%
Engineering	162	7.17%	1808	11.10%	1970	10.62%
Hospitality	128	5.66%	585	3.59%	713	3.84%
Journal & Mass Com	136	6.02%	815	5.00%	951	5.13%
Nursing & Health	78	3.45%	823	5.05%	901	4.86%
Public Health & Social Work	20	0.88%	174	1.07%	194	1.05%
Undergrad Education	116	5.13%	689	4.23%	805	4.34%
Total	2260	100%	16293	100%	18553	100.0%

The logistic regression coefficients, standard errors, Wald statistics, degrees of freedom, significance and odds ratios for graduation are presented in Table 29. As shown in Table 29, when compared to the students who live off-campus, the students who live on-campus are .49 times less likely to graduate. Sex is not significant, but high school

overall unweighted GPA is significant. For each 1-point increase of high school unweighted GPA, students are 4.9 times more likely to graduate from college.

Table 29

Logistic Regression Results Using Graduation as Dependent Variable

	B	S.E.	Wald	*df*	Sig.	Exp(B)
Housing(1=living in housing)	-.715	.285	6.293	1	.012	.489
Sex(1=males)	.151	.258	.341	1	.559	1.163
HSOV unweighted	1.599	.364	19.315	1	.000	4.946
Constant	-3.065	1.058	8.401	1	.004	.047

The logistic regression coefficients, standard errors, Wald statistics, degrees of freedom, significance and odds ratios for graduation are also presented in Table 30. As shown in Table 30, living arrangement was significant. Compared to the students who live off-campus, the students who live on-campus are .68 times less likely to graduate. Additionally, the high school overall unweighted GPA is significant. For each 1-point increase of high school unweighted GPA, students are 2.69 times more likely to graduate from college. The base college was Education; thus, compared to Education, there was a significant relationship between the following colleges and graduation: Arts & Sciences, Engineering, Hospitality, and Public Health & Social Work. Those from Public Health & Social Work were less likely to graduate, while students from the other three colleges were more likely to graduate.

Table 30

Logistic Regression Predicting Graduation from Predictor Variables and Initial Academic Interest/College

	B	S.E.	Wald	*df*	Sig.	Exp(B)
Housing(1=lived in housing)	-.392	.058	45.085	1	.000	.676
Sex(1=male)	.074	.045	2.736	1	.098	1.077
HSOV Unweighted	.989	.056	308.151	1	.000	2.690
First College (Education)			457.603	9	.000	
Arts & Architecture	.153	.088	3.033	1	.082	1.166
Arts & Sciences	.217	.096	5.093	1	.024	1.242
Business	.065	.100	.422	1	.516	1.067
Engineering	.567	.189	8.997	1	.003	1.764
Hospitality	.359	.130	7.604	1	.006	1.433
Journalism & Mass Communications	-.165	.108	2.342	1	.126	.848
Nursing & Health	-.196	.230	.723	1	.395	.822
Public Health	-1.334	.106	159.102	1	.000	.263
Undergrad Educ.	.183	.142	1.655	1	.198	1.201
Constant	-1.433	.186	59.667	1	.000	.239

The logistic regression coefficients, standard errors, Wald statistics, degrees of freedom, significance and odds ratios for graduation are also presented in Table 31. As shown in Table 31, when controlling for the variables sex, high school overall GPA, last college (base Education) and Pell eligibility, students living on-campus are .89 times less likely to graduate than students living off-campus. Additionally, the high school overall unweighted GPA is significant. For each 1-point increase of high school unweighted GPA, students are 2.8 times more likely to graduate. The base college was Education; thus, compared to Education, there was a significant relationship, and Hispanic students were more likely to graduate if they were in the following colleges: Arts & Architecture,

Arts & Sciences, Engineering, and Hospitality. On the other hand, Hispanic students were less likely to graduate from Journalism & Mass Communication and Public Health & Social Work. Additionally, Pell eligibility was significant; Hispanic students who are Pell eligible are 1.2 times more likely to graduate and Hispanic students who are not Pell eligible are 3.7 times more likely to graduate.

Table 31

Logistic Regression Predicting Graduation from Predictor Variables and Last Academic Interest/College

	B	S.E.	Wald	*df*	Sig.	Exp(B)
Housing (1)	-.120	.049	6.057	1	.014	.887
Sex (1)	.327	.034	89.994	1	.000	1.387
HSOV Unweighted	1.043	.044	569.679	1	.000	2.838
Last College (Education)			344.112	9	.000	
Arts & Architecture	.542	.075	51.665	1	.000	1.720
Arts & Sciences	.598	.081	53.920	1	.000	1.818
Business	-.034	.088	.144	1	.704	.967
Engineering	.523	.106	24.157	1	.000	1.687
Hospitality	.366	.099	13.821	1	.000	1.442
Journalism & Mass Communications	-.336	.103	10.705	1	.001	.714
Nursing & Health	.328	.168	3.812	1	.051	1.388
Public Health	-5.441	.712	58.368	1	.000	.004
Undergrad Educ.	.365	.100	13.313	1	.000	1.440
Pell Elig			420.061	2	.000	
Pell Elig (1)	.196	.053	13.584	1	.000	1.216
Not Pell Elig (2)	1.317	.074	320.160	1	.000	3.733
Constant	-4.182	.158	699.445	1	.000	.015

To sum, hypothesis three was not supported and the researcher concluded that in predicting student graduation it was not statistically significantly better for Hispanic students to live on-campus than it was for these students to live off-campus. As a result of the findings, H_3: Hispanic students who live on-campus for any period of time are more likely to graduate than Hispanic students who live off-campus, the researcher rejects the hypothesis. This finding is not consistent with the majority of the literature reviewed that found a statistically significant relationship between living on-campus and graduation. Thus, further research is needed to explore the predictive value of living on-campus on college graduation for Hispanic students.

Summary

In chapter 4 demographic and background characteristics were analyzed using descriptive statistics, such as frequencies, means, percentages, and standard deviations. To answer the research questions and to further examine the relationships between the research variables the researcher used general linear modeling (GLM) to examine if living on campus helped students to achieve a higher grade point average and logistic regression to determine if living on campus increased the odds of retention and graduation. The results were as follows: Hispanic students who lived off-campus had a 84.5% one-year retention rate, compared to a 78.3% retention rate for Hispanic students living on-campus; the cumulative mean GPA for Hispanic students who lived off-campus was 2.81 compared to a mean GPA of 2.68 for Hispanic students living on-campus; and for the Hispanic students in cohorts 2006 – 2009 who lived off-campus they had a 61% graduation rate, compared to a 57% graduation rate for Hispanic students who lived on-campus.

Chapter 5 concludes with a summary of the study, discussion of the results, implications for theory, implications for practice, recommendations for future research, and limitations of the study.

CHAPTER V

DISCUSSION

Chapter 5 provides a summary of the study, followed by a discussion of the results. Implications for theory, practice, future research, and the limitations of the study were provided.

Summary of the Study

The purpose of the study was to determine whether undergraduate Hispanic students' living arrangements at a Hispanic-serving institution have a relationship with retention, academic achievement, and graduation. Astin's (1993) input-environment-output model and Tinto's (1993) theory of student departure provided the primary theoretical framework for making meaning of the data through analysis and interpretation. Astin suggested that to understand why students stay in school, or drop or fail classes, or any other educational outcomes that it is important to look at the student's entering characteristics and what the student has experienced while attending college. The essence of Tinto's (1993) theory is that when students choose to leave college it is primarily due to a lack of social and academic integration.

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

> modifies his or her intentions and commitments. (Tinto, 1993, pp. 114-115)

Tinto (1993) found the decision to persist or leave an institution is not a one-time decision point; rather students are engaged in an on-going process of becoming more or less committed to an institution as a result of the degree to which they feel integrated into the academic and social environment of the institution. High school academic preparation and achievement are strong indicators of collegiate success for Hispanic students along with their course sequence. Having experience with the academic rigors of a university setting are essential and necessary for the Hispanic student to be successful after high school. The parental influence on the student has been shown to be impactful and creating the same formula for students as they transition from high school to college is important.

Astin's model (1993) and Tinto's theory (1993) both provided an excellent framework to guide and inform the study. Both theories were useful for developing a focus for enhancing Hispanic student success. For Hispanic students, the critical input (I) comes from the relationship with family; the critical environment (E) is choice of living arrangement; and the critical outcomes (O) are retention, academic achievement, and graduation. Additionally, it is important to consider the socioeconomic status or income of the student's family. Thus, the critical components: Family, Income, and Living Arrangements (FILA) form a model with key factors for Hispanic student success.

Additionally, Tinto's seminal work demonstrated the importance of the university environment (academic and social systems) and student involvement towards retention and graduation. Moreover, Tinto (2006) stated "we now know that for some if not many

students the ability to remain connected to their past communities, family, church, or tribe is essential to their persistence" (p. 4). In Figure 1, a hypothesized model for Hispanic Student Success was presented.

Figure 1. Hypothesized FILA Model of Hispanic Student Success

The study included Hispanic student data from all classifications (freshman-senior) as well as their sex, high school grade point averages, and places of residence (living arrangements). The Hispanic population continues to grow and more Hispanic students are pursuing college degrees. However, Hispanic students continue to be one of the least educated minority groups (Winning the Future, 2011). Facing persistent barriers (e.g., academic under-preparedness, status as first-generation college students in the U.S., and familial obligations) to educational attainment, only 13% of Hispanics have completed at least a bachelor's degree (Winning the Future, 2011). Because the Hispanic population is rapidly increasing, the educational attainment for this community has become vital to America's prosperity (Winning the Future, 2011). As with other student populations, providing services and programs that support academic success are critical to ensure that more Hispanic students complete their degrees.

Specifically, this study sought to answer three questions: (a) Are Hispanic students who live on-campus from year one to year two more likely to be retained than

Hispanic students who live off-campus? (b) Do Hispanic students who live on-campus at any time have a higher cumulative grade point average than Hispanic students who live off-campus? (c) Are Hispanic students who live on-campus for any period of time more likely to graduate than Hispanic students who live off-campus? To explore these research questions three hypotheses were examined:

H_1: Hispanic students who live on-campus during their first year in college are more likely to be retained than Hispanic students who live off-campus during their first year in college.

H_2: Hispanic students who live on-campus for any period of time will have higher grade point averages than Hispanic students who live off-campus.

H_3: Hispanic students who live on-campus for any period of time are more likely to graduate than Hispanic students who live off-campus.

This study was significant because it analyzed data for more than 18,500 Hispanic students and demonstrated that Hispanic students do not perform better academically if they live on campus; in fact, Hispanic students tend to be retained and achieve higher grade point averages if they live off campus. Similarly, Hispanic students are more likely to graduate if they live off campus.

Institutional data of undergraduate Hispanic students from 2006 – 2012 were reviewed and analyzed. Existing literature was used to provide a foundation for the study and to guide the research. Logistic regression and general linear modeling were used to examine the hypotheses.

Discussion of the Results

Guided by theory and research, the following section discusses the results of each hypothesis examined. Results of the study suggested that there were statistically significant and meaningful relationships among all of the variables of interest. First, Hypothesis 1 was examined followed by Hypothesis 2 and Hypothesis 3.

Hypothesis 1

The first hypothesis stated that Hispanic students living on-campus would be more likely to be retained than Hispanic students living off-campus. Results from the logistic regression analysis indicated that there was no significant relationship between living on-campus and retention. The findings show no support for H_1, and thus, the hypothesis was rejected.

Retention

The researcher identified three variables by which to measure retention; the variables identified for this study were the students living arrangement, their Pell eligibility, and their sex (Lopez Turley, & Woodtke, 2010).

Hispanic students who lived off-campus had an 84.5% one-year retention rate, compared to a 78.3% retention rate for Hispanic students living on-campus. A Pearson Chi-Square significance test was performed to test if the difference was statistically significant, which it was, $\chi 2\ (1) = 50.125$, $p < .000$. This finding is not consistent with the literature reviewed that found a statistically significant relationship between living on-campus and retention (Allen & Haniff, 1991; Astin, 1993; Pascarella, 1984; Schuddle, 2011). However, when considering the Hispanic student population, the statistical significance of data affirms that Hispanic students retain at a higher rate when living off-

campus. In the case of Hispanic students, the term familismo is defined as "placing strong emphasis on an individual's identification and attachment to nuclear and extended family members which include attributes of loyalty, reciprocity, and solidarity" (as cited in Villatoro, Morales, & Mays, 2014, p. 354). Of note was Table 19 which determined Hispanic students who lived off-campus and did not submit a FAFSA form had a 75.1% one-year retention rate, compared to a 79.8% retention rate for Hispanic students living on-campus; suggesting that other factors may influence retention rates, such as financial considerations. Schneider, Martinez and Owens (2006) noted that "Hispanic students have the lowest college completion rates of any other racial/ethnic group—even after surmounting the obstacles on the path to college, further barriers, such as low financial resources and inadequate career guidance, remain" (p. 215).

In this study, Hispanic students living off-campus who did not submit their FAFSA forms, and thus did not receive federal financial assistance, may have had to work longer hours to afford the cost of tuition, fees, and living expenses. From Table 19 it appears that the Hispanic students living on-campus may have had the financial means to afford on-campus housing as well as avoid having to seek outside employment while attending classes which may have resulted in a higher retention rate.

Hypothesis 2

The second hypothesis stated that Hispanic students living on-campus for any period of time would have higher grade point averages than Hispanic students living off-campus. Results from the general linear model indicated that there was no significant relationship between living on-campus and higher grade point averages. The findings show no support for H_2, and thus, the hypothesis was rejected. Notable in this section

was Table 22 which revealed that Hispanic students who lived off-campus and were Pell Eligible had a 2.82 mean total GPA, compared to a 2.69 mean total GPA for Hispanic students living on-campus who were also Pell eligible. Additionally, Hispanic students who lived off-campus and were not Pell eligible had a 2.97 mean total GPA, compared to a 2.88 mean total GPA for the non-Pell eligible Hispanic students living on-campus. These findings suggest the importance of federal financial aid programs for underserved populations, such as Hispanic students. Low and moderate income students have been shown to have increases in college enrollment and completion as a result of federal and state need based financial assistance (Fiscal Year 2017 Budget Request: Student Financial Assistance).

Academic Achievement

After examining the cumulative mean GPA for Hispanic students by living arrangement, Hispanic students who lived off-campus had a mean GPA of 2.81 compared to a mean GPA of 2.68 for Hispanic students living on-campus. This finding is inconsistent with the literature reviewed that found a statistically significant relationship between living on-campus and academic achievement (Anderson & Carta-Falsa, 2002). As previously established, there is a powerful bond between the Hispanic student and their family. The influence of the familismo culture is impactful on the Hispanic student's self-esteem, their desire to successfully complete their academic work, and their intent to compensate their parents for the sacrifice of migrating to the United States (Ong, Phinney & Dennis, 2006; Parra-Cardona, Bulock, Imig, Villarruel & Gold, 2006).

Hypothesis 3

The third hypothesis stated that Hispanic students living on-campus would be more likely to graduate than Hispanic students living off-campus. Results from the logistic regression analysis indicated that there was no significant relationship between living on-campus and graduation. The findings show no support for H_3, and thus, the hypothesis was rejected.

Graduation

McCaslin and Murdock (1991) offered that the language barrier, poor education and lack of economic resources on the part of the family unit make it difficult on the Hispanic student entering college. These barriers are present throughout the Hispanic student's collegiate experience and must be overcome in order to successfully complete a college degree. Indeed, Kenny and Stryker (1996) suggested that Hispanic students encounter difficulties as they adjust to life away from their family. Many of these factors are mitigated by the student choosing to live off-campus, at home, or in close proximity to their family. Interestingly, Arbona and Nora (2007) conducted a study and found, "college experiences are more important than precollege characteristics for predicting the degree attainment of Latino students who begin college at a 4-year institution" (p. 326).

Moreover, Hispanic students thrive in college environments that foster a strong sense of belonging, and these students are negatively impacted by a lack of under representation of Hispanic students and Hispanic faculty on campuses (Hagedorn, Winny, Cepeda, & McLain, 2007). Nevarez (2001) explained "reaching proportional racial/ethnic representation and creating an environment that nurtures a sense of belonging and social integration should be a goal for all higher education institutions" (p.

77). Thus, college administrators should strive to enroll more minority students of all backgrounds and implement policies that reflect an awareness of different cultural values. Recognizing the importance of graduating a diverse student body and offering programs and services to help minority students complete their graduation requirements will ultimately benefit the entire university community.

Implications for Theory

Tinto's (1993) theory of student departure and Astin's (1993) input-environment-outcomes (I-E-O) model formed the basis of this study. The findings from this study challenge the assumption that living on-campus has a positive relationship with retention, academic achievement, and graduation for Hispanic students. Interestingly, neither Tinto nor Astin make the specific claim that Hispanic students will perform better academically as a result of the on-campus experience. However, even a cursory review of the literature would suggest that these theories have been generalized to apply to all students. Though prior research has been conducted on minority students' experience of college (Flores & Park, 2013; Rendon, Jalomo & Nora, 2000) this study more broadly confirms that living on-campus does not necessarily increase the likelihood for retention, academic achievement, and/or graduation for Hispanic students. In addition, the results reinforce earlier work (Fry, 2011) that minority students may benefit from different living arrangements than their non-minority peers.

The living arrangement experiences that have been empirically studied as best practices should theoretically benefit all students; however, this researcher's findings suggest that the effects of best practices may not have a universal benefit for Hispanic students. Living on-campus was found to negatively affect retention, GPA, and

graduation rates. Further, this study determined that Hispanic students have different needs and possible conflicts with living on-campus. Hispanic students are more likely to live at home with their families and to have multiple responsibilities including work and familial obligations. Prior research indicates the importance of living on-campus (Pascarella and Terenzini, 1991), however, these findings challenge the assertions that Hispanic students who live on-campus will be retained at a higher rate, will have higher GPAs, and/or are more likely to graduate.

Given that many Hispanic students have lower incomes and are struggling to pay for tuition, books, and other college expenses; living at home with family members is likely to be more practical and affordable. In other words, Hispanic students living on-campus may be overwhelmed by the costs associated with living on-campus and the added financial stressors may contribute to Hispanic students leaving campus after the first year (not being retained), or the Hispanic students may have lower GPAs as a result of having to work an additional job to pay for housing, and/or the Hispanic students may not graduate because they have a job opportunity or do not see the value in continuing to pay for their educational expenses (including housing).

Although Hispanic students should be encouraged to live on-campus for as many years as possible, the onus for providing the live-on experience to minority populations rests with the university administrators. As explained previously, Hispanic students enter college with fewer resources and lack prior knowledge of the college experience.

Implications for Practice

Several variables were not analyzed that may have contributed to the results of this study including: the number of hours the Hispanic students worked, familial and

peer obligations, choice of roommate (roommate relationships and/or family members) and a perceived lack of understanding of the Hispanic culture. Santiago (2010) found that Latino students often made decisions to attend colleges or universities based on proximity to work and home. Because of their low socio-economic status, many Hispanic students must work in order to pay their university tuition and fees. These work hours often conflict with a traditional academic schedule and Hispanic students must make difficult choices between work and school.

Family and peer expectations also influence the academic progress of many Hispanic students. It has been previously established that in the Latino culture everyone is expected to work and contribute financially to support their families. Hispanic students who are struggling to pay their tuition and fees, as well as meet family expectations, may be disadvantaged. Additionally, non-cognitive variables related to adjustment, motivation, and student perceptions were not explored in this study.

Administrators and student affairs practitioners must be aware of these contributing factors and create processes to remove or reduce barriers to learning for Hispanic students. With projections of escalating first-generation enrollment numbers (Strayhorn, 2006), administrators need to create pathways for Hispanic students to gain access and complete degree programs. Moreover, identifying better financial aid packages for these students would improve the likelihood that students could focus on their educational endeavors while spending less time working to pay for school expenses. Raising awareness about higher education financing options for families may be an effective strategy to recruit and retain Hispanic students.

Recommendations for Future Research

This study focused on Hispanic students at a large, public, southeastern, Hispanic-serving Institution. And while the findings from the study are intriguing, future research should be conducted with additional minority populations on college and university campuses as it relates to retention, academic achievement and persistence to graduation. Hispanic students are the fastest growing population and understanding how this population navigates their college experience is crucial to providing services and programs to enhance the Hispanic student success rate.

As a result of this study, multiple opportunities for future research emerged for consideration and action. Broadening the scope of the research, to include other comparison populations, would serve to expand the overall understanding of the data and provide researchers a deeper understanding for the various groups as they migrate through their collegiate experience. It is important to explore how different groups of students respond to their university experience to make meaningful adjustments to how education is delivered.

This study examined the relationship that living on and off campus had to retention, academic achievement, and graduation. Many colleges and universities are continuing to build and renovate their student housing facilities, and articulate the argument that students living on-campus perform better academically and are more likely to graduate on time. The results of this study challenge those assumptions as they relate to Hispanic students. However, further research related to other ethnic groups should be explored to understand the importance of student housing as it relates to retention, academic achievement, and graduation. Understanding the phenomenon of the collegiate

experience through the lens of multiple groups will provide guidance and direction to higher education professionals who make decisions about additional student housing buildings and programs. Moreover, Student Affairs professionals should use the findings from future research to modify or substantially change the way they deliver programs and services to diverse student populations.

Although the literature on Hispanic college students provided a general basis for understanding these students, Hispanic students are often defined as a group by the one thing they share – their ethnicity. When researchers and administrators view Hispanic students with a singular perspective, stereotyping and myths may influence the way we understand and serve this growing student population. Instead, future research needs to study Hispanic student subgroups which will allow for a better understanding of the diversity which exists with the Hispanic students. For example, a subgroup of first generation males who are working more than 20 hours a week; another subgroup could be first generation females who are living at home with 3 or more siblings and studying engineering. Studying Hispanic students upon their entry into their new institution would provide an opportunity for researchers to study a group of students who are committed to completing a college degree.

Consideration for additional research around the topic of mentorship and the impact of having Hispanic role models could also be explored. With such an emphasis on family and the importance of being part of a culture, research that centers on the role of Hispanic faculty or staff members play in the overall success of Hispanic students has merit.

Finally, the role of financial aid and its impact on the success of students (in particular Hispanic students) should be explored. This study revealed that Hispanic students who were Pell eligible or who received federal financial aid tended to have higher GPAs, retained at a greater percentage, and graduated on time. Tracking financial aid recipients and measuring their academic success would serve to inform legislators of the importance of investing in higher education for these students.

Limitations of the Study

Limitations of the study were related to the ability to generalize the results of this study to other institutions; note the data was collected at one university and the demographics of the university selected were distinctive (e.g., Hispanic-Serving Institution, fourth largest university in the U.S., largely commuter school, etc.)

An additional limitation of the study was related to the variables that were analyzed. Certain variables were not available to be included in the study (e.g., support from family members, interactions with faculty, involvement in clubs and organizations, or whether or not the student was working while attending school).

In addition, because performing an experiment was not possible, the researcher used correlations to identify relationships between variables to investigate linkages among the research variables. Further, as this was a secondary dataset, the variables were not under the control of the researcher. Therefore, this research design cannot prove that changes to one variable lead to changes to another variable (Creswell, 2003).

Conclusions

A review of the literature revealed that Hispanic students tend to struggle

academically during their high school years and enter college at a disadvantage compared to other populations (Arellano & Padilla, 1996; Moncada-Davidson, 1996). Thus, Hispanic role models, mentors, and academic support programs are vital to the success of Hispanic students who are attending a college or university. Additionally, it was evident that the strong connection to family plays an important role in the academic success of Hispanic students.

Interestingly, the results of this study showed that Hispanic students who live off-campus are retained at a higher percentage than Hispanic students who live on-campus. Moreover, the Hispanic students who lived off- campus had higher GPAs than Hispanic students who lived on-campus. Finally, the findings demonstrated that Hispanic students who lived off-campus graduate at a higher percentage than Hispanic students who live on-campus.

The results of this study were compelling and suggest that additional research is needed to develop a deeper understanding of the broad range of barriers to educational opportunities for Hispanic students. Living arrangement, sex, income and high school GPAs were significant factors that contributed to retention, academic achievement and graduation in this research. However, there are many other factors that need to be examined including: parental education, English proficiency in the home, hours worked per week, access to computers, and other learning tools. Overall, to support this growing underserved student population, and to increase retention, academic achievement, and graduation rates, Hispanic students will need to feel more engaged and less alienated in our campus communities.

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APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL

FLORIDA INTERNATIONAL UNIVERSITY

Office of Research Integrity
Research Compliance, MARC 414

To:	Dr. Thomas Reio
CC:	File
From:	Maria Melendez-Vargas, MIBA, IRB Coordinator
Date:	February 1, 2016
Protocol Title:	"The Relationship Between Hispanic Students' Living Arrangements and Retention, Academic Achievement, and Graduation at a Hispanic-Serving Institution"

The Social and Behavioral Institutional Review Board of Florida International University has approved your study for the use of human subjects via the **Expedited Review** process. Your study was found to be in compliance with this institution's Federal Wide Assurance (00000060).

IRB Protocol Approval #:	IRB-16-0026	**IRB Approval Date:**	01/21/16
TOPAZ Reference #:	104365	**IRB Expiration Date:**	01/21/17

As a requirement of IRB Approval you are required to:

1) Submit an IRB Amendment Form for all proposed additions or changes in the procedures involving human subjects. All additions and changes must be reviewed and approved by the IRB prior to implementation.
2) Promptly submit an IRB Event Report Form for every serious or unusual or unanticipated adverse event, problems with the rights or welfare of the human subjects, and/or deviations from the approved protocol.
3) Utilize copies of the date stamped consent document(s) for obtaining consent from subjects (unless waived by the IRB). Signed consent documents must be retained for at least three years after the completion of the study.
4) **Receive annual review and re-approval of your study prior to your IRB expiration date**. Submit the IRB Renewal Form at least 30 days in advance of the study's expiration date.
5) Submit an IRB Project Completion Report Form when the study is finished or discontinued.

Special Conditions: N/A

For further information, you may visit the IRB website at http://research.fiu.edu/irb.

MMV/em

APPENDIX B

REQUEST FOR INSTITUTIONAL DATA

MEMORANDUM

Date: February 2, 2016

To: Dr. Consuelo Boronat, PhD
Director, Analysis and Information Management
President, Florida Association for Institutional Research

From: Lynn N. Hendricks
Doctoral Candidate

Subject: **Request for Institutional Data**

I am a doctoral candidate in the Adult Education and Human Resource Development program. For my dissertation, I am examining: The Relationship between Hispanic Students' Living Arrangement and Retention, Academic Achievement, and Graduation at a Hispanic-Serving Institution.

Specifically, I am attempting to address the following research questions: (a) Are Hispanic students living on-campus more likely to be retained than Hispanic students who live off-campus? (b) Do Hispanic students who live on-campus have a higher grade point average than Hispanic students who live off-campus? (c) Are Hispanic students who live on-campus more likely to graduate than Hispanic students who live off-campus?

As such, I am writing to request the University data from 2006 -2012 from Analysis and Information Management (AIM). Please find attached the Institutional Review Board (IRB) approval letter and a copy of the Dissertation Proposal which was provided to the Office of Graduate Studies.

If you have any questions about this study, please feel free to contact me at: (305) 348-3661 or lnhendri@fiu.edu.

Thank you for your consideration.

VITA

LYNN NICOLE HENDRICKS

Place of Birth	Chappaqua, New York
1990	Bachelor of Arts in Business Major: Human Resources Management Michigan State University East Lansing, Michigan
1990-1992	Graduate Resident Director Michigan State University, East Lansing, Michigan
1992	Master of Arts in Education Major: College and University Administration Michigan State University East Lansing, Michigan
1992-1995	Resident Director Chapman University, Orange, California
1995	Master of Science in Business Major: Human Resources Management Chapman University, Orange, California
1995-1997	Residence Life Coordinator Florida International University, Miami, Florida
1997-2000	Assistant Director of Residence Life University of North Florida, Jacksonville, Florida
2000-2009	Director of Residence Life University of North Florida, Jacksonville, Florida
2009-2010	Director of Enrollment Services University of North Florida, Jacksonville, Florida
2010-Present	Director of Residential Life Florida International University, Miami, Florida
2016	Doctorate of Education Major: Adult Education & Human Resource Development Florida International University Miami, Florida