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Michele Soliz Martinez

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entitled

The Influence of Institutional Practices and Resources on Latino Baccalaureate Completion Rates

by

Michele Soliz Martinez

Submitted to the Graduate Faculty as partial fulfillment of the requirements for the Doctor of Philosophy Degree in Higher Education

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The University of Toledo

December 2012
An Abstract of

The Influence of Institutional Practices and Resources on Latino Baccalaureate Completion Rates

By

Michele Soliz Martinez

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The University of Toledo

December 2012

Today, Latinos are enrolling in higher education at higher rates than ever before. Access to higher education for Latinos is no longer the greatest issue facing this population. Instead, degree completion is of increasing concern not to only Latinos, but also to higher education researchers and administrators.

The purpose of this study was to examine the influence, if any, of institutional resources and practices at four-year baccalaureate degree-granting institutions on baccalaureate completion rates for Latino students. In addition, the study examined what influence, if any, Latino student involvement with constituents (faculty, staff, alumni and community members) had on the institution’s baccalaureate completion rates for Latino students.

A national survey of chief student affairs officers at four-year baccalaureate-degree granting institutions was conducted about the institutional resources and practices for Latino undergraduate students. This study applied Astin’s Student Involvement theory to understand how to improve the college
environment for Latino students. In addition, Astin’s I-E-O model served as the conceptual framework for the study.

The findings of this study revealed six significant, positive indicators of baccalaureate completion for Latino undergraduate students at four-year baccalaureate degree-granting institutions. This doctoral dissertation offers educators and administrators information on resources and practices to improve Latino baccalaureate completion rates.
To Chris, Nina, Jay and Alec, whose unconditional love sustains me.
Acknowledgements

I wish to acknowledge the many, many people who have accompanied me on this journey.

First, I am eternally grateful for the guidance and knowledge imparted by my advisor, Dr. Ron Opp. Ron, it has been an honor to have worked with you on both my master’s and doctoral degrees. Thanks for everything, Ron; I am truly indebted to you. I would also like to thank the other members of my dissertation committee. To Dr. Penny Poplin Gosetti, my first female mentor in the field, thank you for all the advice over the years. I will never forget you, PPG! To Dr. Mary Ellen Edwards, you are one of the most student-centered faculty members on this campus. You have been in my corner since day one and I am so thankful for you. To Bill McMillen, I appreciate your thoughtful questions and feedback. I have thoroughly enjoyed your friendship and mentorship through the years!

Second, I am grateful to Dr. Kaye Patten Wallace and Dr. Lloyd Jacobs, who have provided me with countless professional opportunities and have encouraged me in the pursuit of this degree. Thank you both!

Finally, the support of my dear friend and sister, Dr. D’Naie Jacobs, has made all the difference. Thank you to my other boot camp buddies- Dr. Sunday Griffith, who assisted me with my data and to Dr. Julie Fischer-Kinney, my dearest and longest friend at UT and to Marcia King Blandford, who has always been there when I needed her. MKB, you’re next!
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Chapter One

The Problem

The purpose of this study was to examine the influence, if any, of institutional resources and practices at four-year baccalaureate degree-granting institutions on baccalaureate completion rates for Latino students. In addition, the study examined what influence, if any, Latino student involvement with constituents (faculty, staff, alumni and community members) had on the institution’s baccalaureate completion rates for Latino students.

This chapter examines the background of the problem, including the educational trends of and social concerns about the low representation of Latino students in higher education. The researcher describes the problem to be addressed, the purpose for this study, the significance of the study, and the research questions. In addition, a definition of terms is provided to explain how the researcher is interpreting terms used in the research study. Delimitations of the study, and the researcher’s assumptions are also discussed in this chapter, along with a short summary that provides a preview of the chapters to follow.

Introduction

Latinos are enrolling in colleges and universities at higher rates than ever before, but their completion rates are below those of other student groups (Fry, 2002b, 2004; Hernandez & Lopez, 2004; Llagas & Snyder, 2003). “About 11 percent of Latinos now have a college education, while the national average for adults is over 25 percent” (Santiago & Brown, 2004, p. 1). A 2004 Pew Hispanic Center report titled Latino Youth
Finishing College: The Role of Selective Pathways calls the inconsistency between Latino and white baccalaureate achievement “the greatest disparity in educational outcomes between the nation’s largest minority group and the white majority” (Fry, 2004, p. v). Many institutions of higher education invest time and institutional resources in programs and services to attract Latino students, as well as to assist them in graduating. However, little research has been conducted to examine what influence, if any, institutional resources and practices have on baccalaureate completion rates for Latino students.

Background of the Problem

Latinos represent the fastest growing minority group in the United States, and this population is projected to continue its growth. According to the 2006 U.S. Census data, the Latino population represented almost 50% of the national population growth between July 1, 2005 and July 1, 2006.

The Latino population, already the nation’s largest minority group, will triple in size and will account for most of the nation’s population growth from 2005 through 2050. Hispanics will make up 29% of the U.S. population in 2050, compared with 14% in 2005. (Passel & Cohn, 2008, p. i)

In addition, the median age of Latinos is 27.2, as compared with other groups whose median age is 36.2, which indicates that Latinos are also a much younger population (Passel & Cohn). A projected increase in the population and in the proportion of young Latinos will significantly impact the number of Latinos who are enrolling in our higher education institutions.

Educational attainment has a documented impact on income level, and this attainment also positively impacts upward mobility in this country. Latinos are less
likely than other groups to experience upward occupational, economic, and social mobility, due to their lack of educational attainment. This population has much higher high school dropout rates, and completes college at much lower rates than other racial and ethnic groups. According to the Pew Hispanic Center, the Latino high school dropout rate is 21%, which is twice the national dropout rate for all other populations (Fry, 2004). The national dropout rate for Latinos translates to a small pool of Latino high school graduates, which contributes to Latinos being underrepresented in higher education.

The educational advancement of Latinos also affects our nation’s work force and productivity. “Between the years 2000 and 2025, the white working age population is expected to decline by five million workers, as baby boomers retire from the labor force” (Fry, 2002a, p. 1). Passel & Cohn (2008) report that the nation’s Hispanic work force will significantly increase:

Because immigration plays such a prominent role in future growth of the working-age population, the share of foreign-born residents in this segment will rise to 23% in 2050, compared with 15% in 2005. The Hispanic share of working-age adults, 14% in 2005, will more than double, to 31% in 2050. The non-Hispanic white share, 68% in 2005, will decline to 45% in 2050. (p. 18)

Efforts to increase the numbers of Latino college graduates will not only raise the economic prospects of this fast-growing minority group, but will also positively impact our nation’s economic progress.

In addition to their low representation on college campuses, Latino college students must also struggle with their sense of belonging on those campuses. Hurtado and Carter (1997) write, “We contend that understanding students’ sense of belonging may be key to understanding how particular forms of social and academic experiences
affect these students” (p. 324). Many colleges and universities host cultural events or have ethnic student organizations with which Latino students can identify in an effort to increase their sense of belonging. However, little research has been done to determine what effect these programs have on Latino students and specifically, the baccalaureate completion rates of Latino college students.

One way for students to gain a sense of belonging is for them to get more involved in their college experience. Alexander Astin, who has spent decades studying the college experience of college students, is credited with extensive research on this topic. His student involvement theory suggests that the more students are involved in college, both socially as well as academically, the more likely they are to develop their affective and cognitive talents (Astin, 1993). A closer examination of what institutional resources and practices are available to Latino undergraduate students could help higher education institutions to gain insight about ways to increase the baccalaureate completion rate for this population.

Statement of the Problem

Of the many challenges facing Latinos today, perhaps none is more urgent than increasing the group’s baccalaureate degree attainment. According to Brown et al. (2003), just over 10% of Latinos has a college education, as compared to the national average, which is over 25%. There have been numerous studies about the plight of Latino college students, and the barriers that they face in higher education. Multiple researchers have found that Latinos have experienced various factors that have negatively impacted their baccalaureate degree completion rates, including lack of Latino role models in the academy, lack of a sense of belonging, and insufficient financial aid
(Dayton, Gonzalez-Vasquez, Martinez, & Plum, 2004; Hurtado and Carter, 1997; Lee et al., 2011; Ortiz, 2004).

Many Latino college students have participated in research studies aimed at discovering what their experience has been in the academy. Research has revealed that many characteristics, such as campus climate, income levels, academic preparation, and degrees of student interaction have an influence on the baccalaureate completion rates of Latinos (Astin, 2005; Bordes & Arredondo, 2005; Nora, 2004). However, no national study has been conducted to ask institutions what institutional practices and programs they offer to their Latino students, if any, have an influence on their baccalaureate completion rates.

With college resources being stretched more and more, it is essential for all institutions to spend their resources effectively and efficiently. A critical examination of the influence of institutional resources and practices on the Latino baccalaureate completion rates at four-year baccalaureate degree-granting institutions adds to the literature on this growing population of students.

**Purpose of the Study**

The purpose of this study was to examine the influence, if any, of institutional resources and practices at four-year baccalaureate degree-granting institutions on baccalaureate completion rates for Latino students. In addition, the study examined what influence, if any, Latino student involvement with constituents (faculty, staff, alumni and community members) had on the institution’s baccalaureate completion rates for Latino students.
Chief student affairs officers at four-year baccalaureate degree-granting institutions were surveyed regarding what types of institutional resources were available to Latino college students at their institutions, and what contribution they perceived such resources had on baccalaureate completion rates. With the use of the Integrated Postsecondary Education Data System (IPEDS), maintained by the National Center on Education Statistics (NCES), a regression analysis was conducted and the results will inform theory and practice on Latino college student baccalaureate degree attainment. In addition, this study examined the utility of Astin’s involvement theory as it related to this student population.

**Research Questions**

This study was designed to answer four main research questions:

1. What influence, if any, do demographic characteristics of chief student affairs officers have on the baccalaureate completion rates of Latinos at four-year baccalaureate degree-granting institutions?

2. What influence, if any, do institutional characteristics have on the baccalaureate degree completion rates of Latinos at four-year baccalaureate degree-granting institutions?

3. What influence, if any, do various institutional resources and practices have on the baccalaureate degree completion rates of Latinos at baccalaureate degree-granting institutions?

4. What influence, if any, does Latino student involvement with constituents (faculty, staff, alumni, and community members) have on the baccalaureate
degree completion rates of Latinos at four-year baccalaureate degree-granting institutions?

**Significance of the Study**

The significance of expanding what is known about which institutional resources and practices have the greatest impact on the baccalaureate completion rates of Latinos comes at a critical time when Latinos are enrolling at record numbers in our institutions, but unfortunately, are not graduating at rates proportional to their white counterparts. One significant outcome of this study is its contribution to the literature on what programs and services contribute to Latino students graduating from college. The nation’s fastest growing ethnic group’s success in improving its baccalaureate completion rates will do much to increase its occupational, economical, and social mobility in today’s society. Finally, the results of this study confirm the relevance of Astin’s involvement theory for this unique subpopulation of students.

**Theoretical Framework**

Astin has surveyed college students over the past 45 years about their college experiences. According to Astin (1985), the key to student success is involvement. He stated that students must be involved in the academic and social aspects of campus life and that colleges and universities must provide opportunities for such student involvement.

Astin (1984) stated,

Student involvement refers to the quantity and quality of the physical and psychological energy that students invest in the college experience. Such involvement takes many forms, such as absorption in academic work, participation in extracurricular activities, and interaction with faculty and other institutional personnel. (p. 528)
In his work, he has surveyed how often and to what extent students get involved in their academics, as well as in their social life. He has found that the greater the involvement, the more that personal development and student learning occur.

Astin's student involvement theory suggests that the more a student gets involved in college, the better s/he will do academically. This study examined the variety of involvement opportunities that are offered to Latino college students at select institutions and the relationship between those opportunities and their baccalaureate completion rates.

**Assumptions**

Several assumptions were inherent in this study. First, the researcher assumed that the survey respondents would complete the survey candidly and completely. Second, the researcher believed that the chief student affairs officers were the persons at the institution who were best able to answer the survey questions. In most cases, this person is most familiar with institutional resources and practices that are available to under-represented student populations. Next, the researcher assumed that institutions offer Latino-based programs and services. Last, the greatest assumption in the study is that the Latino college students have availed themselves of the programs and services that were being provided by the institution. In addition to assumptions, there were also some delimitations to this study.

**Delimitations**

The researcher recognized several delimitations inherent in this study. First, this study was delimited only to six-year graduation rates for full-time, first-time undergraduates who enrolled in 2004. Second, this study did not examine the completion
rates of either part-time or transfer students, or students who graduated in less than six years or enrolled before or after Fall 2004. Third, the scope of this study was delimited to four-year baccalaureate degree-granting institutions. By delimiting the study in this way, its results cannot be generalized to all postsecondary institutions. Last, this researcher only considered the completion rates of Latino students. Given that this population has some unique characteristics, the results found from this study cannot be generalized to students who belong to other ethnic groups.

**Definition of Terms**

The following terms used in this research study were defined as indicated below:

*Baccalaureate completion rate.* Based on a six-year time frame of Latino students who enrolled in 2004 and graduated in 2010.

*Latino.* Persons who are from Mexico, Central American, South America, Spain, Portugal, and the islands of Cuba, Puerto Rico and the Dominican Republic.

*Hispanic.* The term “hispanic” is defined as,

Persons of Hispanic origin were identified by a question that asked for self-identification of the person's origin or descent. Respondents were asked to select their origin (and the origin of other household members) from a "flash card" listing ethnic origins. Persons of Hispanic origin, in particular, were those who indicated that their origin was Mexican, Puerto Rican, Cuban, Central or South American, or some other Hispanic origin. It should be noted that persons of Hispanic origin may be of any race. (U.S. Census Bureau, 1994)

Because the term *Hispanic* is widely used in the literature to describe this population, this study will use *Hispanic* interchangeably with *Latino*.
Summary

This chapter has provided an overview of the problem, including the educational trends and social concerns related to the low baccalaureate degree attainment of Latino college students. The research questions, purpose, and significance of the study were provided. In addition, assumptions, as well as limitations and delimitations of the study, were discussed.

In Chapter Two, the researcher examines in detail the empirical research conducted about the state of Latinos in higher education; the theoretical and conceptual framework; the college environment; campus climate, and sense of belonging; and institutional resources and practices. Chapter Three explains the methodology of the study, while Chapter Four reports the study’s results. Finally, Chapter Five presents the conclusions drawn from the findings of the study and discusses the implications of those findings for theory and for policy and practice and some ideas for further research.
Chapter Two

Review of the Literature

The purpose of this study was to examine the influence, if any, of institutional resources and practices at four-year baccalaureate degree-granting institutions on baccalaureate completion rates for Latino students. In addition, the study examined what influence, if any, Latino student involvement with constituents (faculty, staff, alumni and community members) had on the institution’s baccalaureate completion rates for Latino students.

Chapter two informs the reader about the related bodies of knowledge that currently exist with regard to Latino college student success. To begin, the researcher provides the reader with an overview of the state of Latinos in higher education from 1980 to present, including current data on baccalaureate completion rates for Latinos. Next, the theoretical and conceptual frameworks that guide the study are explained. Section three examines the research on the college environment, including campus climate and sense of belonging. The fourth section is a discussion of institutional resources and practices that enhance college completion rates. Finally, the chapter concludes with a summary of the chapter, and a preview of future chapters.

State of Latinos in Higher Education

Historical context. Duran’s (1983) Hispanics’ Education and Background: Predictor of College Achievement was among the first attempts by a researcher to address Latino degree completion. He began by addressing this new frontier, stating,

The investigation of what factors underlie ethnic minorities’ opportunities to attain and succeed in higher education is an inductive enterprise that has no absolute beginning or end. In terms of social science analyses of what factors
influence educational attainment, the wise are quick to understand that there are no simple answers. (p. iv)

There are several explanations for the limited information. First, prior to the 1970s, researchers noted the limited sample size of Hispanics in higher education made analyses difficult or impossible (Llagas & Snyder, 2003; de los Santos & Rigual, 1994). These same researchers also recognized that the limited availability of disaggregated data often led researchers to treat Hispanics as if they were a homogeneous group; in fact, the U.S. Hispanic population is extremely diverse (Llagas & Snyder, 2003; de los Santos & Rigual, 1994). Finally, as noted above, while enrollment statistics for Latinos existed prior to the 1980s, there were no major empirical research studies conducted that offered suggestions for policy or practice for this very small subpopulation of college students.

However, Latinos have experienced a rapid growth in higher education due to several factors. First, the nation as a whole has experienced many social changes following the Civil Rights Movement. The creation of various federal and state grant and loan programs has increased access to postsecondary education for all students (Justiz, 1994). Indeed, this national progress enabled more low-income, first-generation and minority students, such as Latinos, to afford college (Justiz, 1994).

In addition to significant legislative changes, other factors contributed to a rapid increase in Latinos entering higher education. Increased immigration and the ongoing demographic shifts occurring in the nation resulted in a substantial number of young Latinos entering into higher education. According to the Pew Hispanic Center report titled *The Rise of the Second Generation: Changing Patterns in Hispanic Population Growth*, Suro & Passel (2003) reported that “by 1990 the newcomers were clearly the
largest segment of the Latino population” (p. 6). These demographic and societal changes would lead to two major empirical research studies that offer suggestions for policy and practice for Latinos in higher education. Those studies are discussed next.

As stated previously, Duran’s (1983) work *Hispanics’ Education and Background: Predictors of College Achievement* was the first manuscript devoted entirely to the examination of the ethnic group as a whole, as opposed to isolated study of Chicanos, Cubans, and other Hispanic subpopulations. Duran (1983) described his work as a report that “concentrates primarily on summarizing and interpreting selected empirical studies of Hispanics’ educational attainment, preparation for college, college aptitude assessment, and prediction of achievement in college” (p. 1). Following an extensive synthesis of the empirical data, Duran discussed the need to broaden the indicators that can be used to predict success for all Latinos in higher education.

Michael Olivas’ (1986) work, *Latino College Students*, built on the work of Duran. Olivas examined three areas: the transition from high school to college, Hispanic student achievement, and the economic factors of Latinos in higher education. In his book, Olivas pointed to several higher education policies and practices that have proved disadvantageous to Latino college students, including an insufficient pipeline to postsecondary education, inadequate financial aid policies, and applying non-Hispanic student success factors to Hispanic college students. Olivas proposed that once these policies and practices were corrected, Latinos would prosper in higher education.

Duran and Olivas’ research, while hopeful, conveyed a portrait of an educational system in need of much improvement to ensure Latino student success. Indeed, Arturo Madrid captured the despondent feeling in the forward of Olivas’ (1986) work, stating,
“We have not yet captured the sustained attention of educational policy-makers, and consequently our impact on them has been limited” (p. xvii). The creation of Hispanic-serving institutions, discussed next, is the result of both legislative and educational changes that have changed the landscape of higher education in the twenty-first century.

**Hispanic Association of Colleges and Universities.** In 1986, an Hispanic advocacy association, the Hispanic Association of Colleges and Universities (HACU), was established by 18 institutions to garner support for institutions that enrolled a critical mass of Latino college students. “Although they represent only about 3 percent [in 1991] of all colleges and universities in the United States, HACU’s members enroll about 45 percent of all Hispanic college students in the nation” (Barry, 1991, p. 2). Barry, writing for the College Board Review, interviewed HACU’s first president, Dr. Antonio Rigual, about the new organization and its strategy for improving education for Latinos.

Dr. Rigual’s leadership and vital connections between schools, colleges and the nation’s economic and social welfare positioned HACU for national distinction (Barry, 1991). HACU’s political presence resulted in formal recognition from the federal government, which ultimately coined the term ‘Hispanic Serving Institutions’ or ‘HSIs’. This national recognition brought much collaboration for HACU, including grants from the Educational Testing Service, the W.K. Kellogg Foundation, and other professional associations focused on improving access for Latinos (Flores, 1999a, 1999b).

In 1994, the Higher Education Act of 1965 was reauthorized and the federal government adopted the official definition for Hispanic-Serving Institutions (Laden, 2004). According to the Title V Program Statute, Hispanic-serving institutions (HSIs) are defined as “accredited, degree-granting, public or private, nonprofit colleges and
universities with 25% or more total undergraduate full-time equivalent (FTE) Hispanic student enrollment” (Laden, 2004, p. 186). In addition to the enrollment factor, fifty percent of the Latino students must be at or below the federal poverty level in order to be eligible for federal funding (Laden). The U.S. Department of Education is responsible for the verification of these two criteria as outlined in Title V of the Higher Education Act of 1965 (Laden).

Unlike Historically Black Colleges and Universities and Tribal Colleges, whose missions were to educate African American and Native American students respectively, the Hispanic Serving Institution designation is derived from its enrollment of Hispanics, rather than a mission to serve a specific population (O'Brien & Zudak, 1998). One of the greatest accomplishments for HACU was the awarding of appropriations under Title V in 1998, which allowed HSIs to receive federal funding (Laden, 2000).

This receipt of federal funding, coupled with the close proximity to the large percentages of Latinos living close to HSIs, had a significant impact on the enrollment of Latinos in higher education (Laden, 2000). Overall, Hispanic enrollment in postsecondary institutions nearly doubled, from 520,000 in 1992 to 1,045,600 in 1997 (U.S. Department of Education, 1998). Hispanic enrollment in HSIs accounted for 42% of the total enrollment in HSIs, up from 29% in 1990 (Llagas & Snyder, 2003, p. 96).

Today, Hispanic-serving institutions are vital to the issue of Latino college students because they enroll nearly half of all Latino college students (NCES, 2005). In addition to enrolling a large percentage of Latino college students, HSIs are also used in a number of research studies, due to the access to this subpopulation of students. Dr. Deborah A. Santiago, the vice president for policy and research at ¡Excelencia in
Education!, stated that HSIs “provide a valuable laboratory to study practices that help improve Latino access, retention, and academic success” (2008, p. 3). Santiago noted that “in 2006, there were 252 HSIs located in 16 states educating almost half of all Hispanic undergraduates in the United States” (p. 3). According to Laden (2004), existing research “suggests that many HSIs offer a variety of academic and student support programs and holistic approaches that are specifically designed to raise Latino student aspirations and enhance their retention and completion rates” (p. 193).

However, just over half of Latino college students are enrolled at non-Hispanic-serving institutions. In fact, 41.3% of Latino college students who attend non-Hispanic serving institutions attend an institution where they represent fewer than 10% of the study body (NCES, 2005). Much research can be found on students who attend Hispanic-serving Institutions; however, few studies have been conducted about Latino college students who attend non-Hispanic-serving institutions.

**Current Status of Latinos in Higher Education.** The twenty-first century has brought great progress for Latinos in postsecondary education. From research to enrollment, this change is affirming and progressive. In 2004, ¡Excelencia in Education! was created to connect research, policy, and practice in its mission to improve the success of Latino students in higher education (Santiago, 2008). While the organization is still in its infancy, it works closely with researchers in the field to inform policy and practice for Latinos in education.

In terms of enrollment over the past decade, a substantial change has occurred for Latino college students in the United States. Latino college students are enrolling at the nation’s institutions of higher education at record rates, and the rates continue to increase.
Between 2000 and 2005, the number of Hispanics enrolled in undergraduate education increased about 30%, compared to only a 10% increase for whites, a 28% increase for blacks, and a 16% increase for Asian/Pacific Islanders (NCES, 2007). The increase of Latinos in higher education is the largest increase for all racial/ethnic groups.

According to the Pew Research Center report entitled *Minorities and the Recession-Era College Enrollment Boom*, “freshman enrollment of Hispanics in higher education jumped by 15% in 2008, compared to 8% for blacks, 6% for Asians and 3% for whites” (Fry, 2010, p. 1). According to Fry, the rise in enrollment for Latinos can be attributed to the increase of high school graduation rates for Latinos, which grew by 29% from October 2007 to October 2008.

While these enrollment gains are impressive, many Latinos are not completing their college education. According to the Pew Hispanic Center, Latinos remain half as likely as their White peers to complete undergraduate degrees (Pew Hispanic Center, 2005). In 2006, just 13% of Latinos (age 25 and over) had at least a bachelor’s degree, as compared to 32% of whites, and 19 percent of blacks (Snyder et al., 2008). The gap is even higher for younger, traditional-age college students (18-29 year-olds). In 2007-08, 49 percent of whites ages 18-29 attained an associate or bachelor’s degree, as compared to 22 percent of Latinos ages 18-29, which resulted in a degree attainment gap of 27 percent (US Census, 2008).

Today, Latinos are enrolling in higher education more than ever before. Access to higher education for Latinos is no longer the greatest issue facing this population. Instead, degree completion is of increasing concern to not only Latinos, but to higher education researchers and administrators. Figure 1 shows the percentage of persons ages
25 to 29 with a bachelor’s degree or higher that were conferred from 1996-2007, by race/ethnicity (Snyder et al., 2008). Multiple researchers have found that Latinos have experienced factors that have negatively impacted their baccalaureate degree completion rates, including lack of Latino role models in the academy, lack of a sense of belonging, and insufficient financial aid (Dayton, Gonzalez-Vasquez, Martinez, & Plum, 2004; Hurtado and Carter, 1997; Lee et al., 2011; Ortiz, 2004). Before addressing successful institutional resources and practices for Latino students, the next portion of this review of the literature will discuss the theoretical and conceptual frameworks that directed the study.

*Figure 1.* Percentage of persons age 25 to 29, by race/ethnicity, with bachelor’s degree or higher from 1996-2007.
Theoretical and Conceptual Frameworks

One theoretical framework and one conceptual framework, both created by Alexander Astin, will be used in this study. Astin’s student involvement theory was chosen for the study because of its wide application for determining whether involvement and engagement by Latino college students is related to the dependent variable, baccalaureate completion rates. Astin’s I-E-O model was selected because of its ability to the relationship between environmental variables and outcomes.

Student Involvement Theory. Alexander Astin has surveyed college students over the past 45 years about their college experience. He developed his theory of student involvement as a result of his research over nearly a half century, and he is one of the most frequently-cited authors in the field of higher education (Budd, 1990). In his work, Astin surveyed how often and to what extent students become involved in their academics, as well as in their campus social life.

In his seminal article, Student Involvement: A Developmental Theory for Higher Education, Astin (1984) outlined the five postulates of his theory; they are as follows:

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 daydreams).
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 (p. 298).

Astin’s theory suggests that students are active participants in their learning, rather than passive ‘black boxes’ in which professors simply deposit knowledge. Through his extensive research, he continued to refine his theory.

According to Astin (1985), his theory is “the idea that students learn by being involved” (p. 133). Astin revealed that there are specific practices that have a positive impact on student learning and development. “A highly involved student is one who, for example, devotes considerable energy to study, spends much time on campus, participates actively in student organizations, and interacts with faculty members and other students (Astin, 1984, p. 297). His research has also found factors that negatively impact student outcomes. “A typical uninvolved student neglects studies, spends little time on campus, abstains from extracurricular activities, and has infrequent contact with faculty members or other students” (Astin, 1984, p. 297).

In his work, What Matters Most in College: Four Critical Years Revisited, Astin (1993) asserted that "...the student's peer group is the single most potent source of influence on growth and development during the undergraduate years” (p. 398). In addition to involvement with peers, involvement in academics, involvement with faculty, time spent working and other forms of involvement influenced student satisfaction, retention, and degree attainment in college (Astin, 1993).

Other researchers have found student involvement significant in their work as well. Tinto’s model of student departure (1993, 1998) proposed that academic and social involvement in college life improve retention, and ultimately, degree completion.
Similarly, McLaughlin, Brozovsky, and McLaughlin (1998) found that “a unifying theme for many of the academic studies is the idea that a student’s involvement in the social environment as well as the academic environment is critical to success in college” (p. 2). Student involvement theory was selected for this research study because it “can explain most of the empirical knowledge about environmental influences on student development” (Astin, 1999, p. 518).

**I-E-O Model.** A modified version of Astin’s (1991) Input-Environment-Output (I-E-O) model served as the conceptual framework for this study. The I-E-O model was developed to assess student-learning outcomes in higher education. Astin (1993) wrote “…the basic purpose of assessing students is to enhance their educational development” (p. 4).

Assessment is crucial to understanding how to improve programs and services in higher education. Astin recognized that consideration must be given to the innate characteristics a student brings to an educational setting. Those characteristics, or “inputs”, are the talents, experiences, and fixed attributes (demographics) that students are equipped with when they begin their programs of study (Astin, 1993). Environment "refers to the student’s actual experiences during the educational program” (Astin, 1993, p. 18). These experiences include those inside as well as outside of the classroom. Outputs, or outcomes, refer to talents that students develop as a result of the environment, or experiences with the learning process (Astin, 1993).

In utilizing Astin’s I-E-O model with statistical methods, inputs and environment are typically the independent variables of a study, and the output is the dependent variable. The I-E-O model assesses the impact of various environmental experiences by
determining whether students grow or change under varying environmental conditions (Astin, 2001, p. 7). The ‘I’ or input factor in this study refers to the demographics of the chief student affairs officer. This study will employ the ‘I’ and ‘E’ factor of Astin’s I-E-O model to examine what influence, if any, the inputs and the environmental variables have on the ‘O’ or output factor: baccalaureate completion rates of Latino college students. In this study, the ‘E’ or environmental factor refers to the institutional resources and practices that are available at the participating institutions, as well as the level of Latino student involvement with constituents (faculty, staff, alumni and community members).

In summary, the I-E-O model is “designed to yield assessment results that will simultaneously yield maximal information on the possible connections between various educational practices and educational outcomes” (Astin, 1993, p. xii). A review of the literature on the college environment, campus climate, and sense of belonging is next, followed by an examination of the institutional resources and practices that are incorporated in the survey instrument.

**Environmental Factors**

The landscape of higher education has undergone a major transformation in the past thirty years. Historians have released supplementary editions to their history of higher education texts to report these last few decades of rapid change in American higher education (Brubaker & Rudy, 1997; Cohen & Kisker, 2010). One major development is that of changing student demographics. Unlike the campuses prior to the 1980s, college campuses today are extremely diverse. In fact, on many campuses,
college students today are increasingly nonwhite and more socio-economically diverse (Brubaker & Rudy, 1997; Cohen & Kisker, 2010).

A diverse student body has led to much debate in higher education and in many cases, turmoil on college campuses (Cohen & Kisker, 2010; Brubaker & Rudy, 2004). As a result, many research studies have focused on the campus climate or a sense of belonging, in an effort to enhance today’s college environment. Before reviewing the literature on campus climate and sense of belonging, a quick review of the college environment will be discussed next.

**College environment.** In the early study of factors that contributed to college student success, the college environment was mostly defined in terms of institutional size, institutional type, location and curriculum (Astin 1968; Tinto, 1975; Pascarella, 1985). While the majority of the literature on student development focused on academic and social integration, reference to institutional fit is discussed in the earlier works of student success (Astin 1968; Tinto, 1975; Pascarella, 1985). Today, the college environment is still essential to student success.

In one of his earliest works, *The College Environment*, Astin (1968) examined the college environment as “an array of potential “stimuli”, defining this term as any behavior, event, or other observable characteristic of the institutions that is capable of changing the student’s sensory input, and whose existence or occurrence can be confirmed by independent observation” (p. 118). Astin surveyed a wide variety of diverse institutions to determine what college environmental factors affected student development. He found many positive effects on a student’s personal development and
also negative effects that an institution could have on a student’s behavior, self-esteem, academic achievement and general ‘mood’.

Astin’s results pointed to the need for much further study, including an examination of student inputs and administrative practices (Astin, 1968). He concluded that “these results demonstrate dramatically that we must come to a better understanding of how environmental differences actually affect the students’ educational and personal development” (p. 142).

Tinto’s (1975) work on student departure also suggested that the relationship between the student and the institution results in “a person’s normative and structural integration into the academic and social systems” (p. 96). In fact, he made the point that without this relationship, a student is likely to leave before degree completion. Tinto (1975) stated,

In the final analysis, it is the interplay between the individual's commitment to the goal of college completion and his commitment to the institution that determines whether or not the individual decides to drop out from college and the forms of dropout behavior the individual adopts. (p. 96)

Perhaps foreshadowing the impending changes in future student demographics, Tinto suggested further exploration in two vast areas. He stated, “We simply do not know enough about the processes of interaction that lead individuals of different racial backgrounds to drop out from higher education” (Tinto, 1975, p. 119). He continued, stating “there is a need for additional research on the phenomenon of dropout from urban institutions of higher education” (p. 119)

Likewise, in his article, *Students' Affective Development within the College Environment*, Pascarella (1985) noted a limitation of his study of the 1975-77 CIRP
survey is its inability to be applied to minority students. Pascarella’s General Causal Model of Student Development (1985) argued that an institution’s environment is related to student development, asserting “one might conclude from the results of this research that the structure/organizational characteristics of the college attended are of trivial importance to educational impact” (p. 641).

The college environment is essential to studying Latino college students because of this unique population of students. As stated earlier in the history of Latinos in higher education, Latinos are the largest demographic in the United States, and although their enrollment on college campuses is growing, their baccalaureate completion rates are among the lowest of all student groups (Fry, 2004). As college campuses have become more diverse, institutions have been forced to examine their environments, which have led to empirical research on campus climate, which is discussed next, followed by the research on sense of belonging among Latino college students.

**Campus climate.** The aftermath of student unrest on college campuses in the late 1960s and early 1970s led to “fundamental readjustments” in higher education (p. 399), according to Brubacher and Rudy (1997) in their chapter, *The University Transformed, 1975-1995*. Several important legislative cases and acts, including Bob Jones University v. United States (1983), Regents of The University of California v. Bakke (1978), The Rehabilitation Act of 1973, and The Age Discrimination Act of 1975, led to the growth of more diverse student bodies on college campuses (Brubaker & Rudy, 1997; Cohen & Kisker, 2010). One result of these changes was a growth of studies on campus climate (Hurtado, 1992).
One such study resulted in a handbook that was endorsed by the American Council on Education because it offered policy guidelines to enhance diversity and multiculturalism on college campuses. (Miller, et al., 1998). Green’s (1989) *Minorities on Campus: A Handbook for Enhancing Diversity* proposed policy changes for implementation by higher education administrators. The guiding principles included improving recruitment and retention of minority faculty and students, ideas for teaching, learning and curricular enhancement that embrace diversity, and strategies for fostering a pluralistic campus climate. Green (1989) defined a pluralistic campus climate and its benefits for all constituents of an institution, stating:

> Campus climate embraces the culture, habits, decisions, practices and policies that make up campus life. It is the sum total of the daily environment, and central to the “comfort factor” that minority students, faculty, staff, and administrators experience on campus. Students and other members of the campus community who feel welcome or alienated from the mainstream of campus life are unlikely to remain. If they do remain, they are unlikely to be successful. (p. 113)

Green’s assessment corroborated Astin (1968), Tinto (1975) and Pascarella’s (1985) earlier work that the college environment is related to student involvement, and student departure.

According to Dr. Sylvia Hurtado, the current director of the Higher Education Research Institute (HERI) at UCLA, institutions have had limited success with student groups that have been historically marginalized or excluded from the academy (Hurtado, 1997). Hurtado has been studying institutional climates, practices, and student outcomes for the past twenty years and has authored numerous studies on the adjustment of Latino college students within higher education. Her research has advanced the literature on these topics, as has Bollen and Hoyle’s (1990) study of sense of belonging.
**Sense of belonging.** Bollen and Hoyle (1990) stated that a “sense of belonging is fundamental to a member’s identification with a group and has numerous consequences for behavior” (p. 484). The first dimension of Bollen and Hoyle’s perceived cohesion is the Sense of Belonging Scale. Therefore, studying a student’s sense of belonging can help identify which academic and social forms of interaction will affect their membership and identification with their institution.

Hurtado and Carter (1997) examined the background characteristics and college experience of Latino students in their first and second years of college to see if they provided a sense of belonging in their third year. One of the areas that Hurtado and Carter (1997) examined was that of participation in ethnic student organizations and other “cultural forms of expression on campus” (p. 327). They felt that participation in solely mainstream activities and organizations may “not promote the kinds of support that Latino students need to be successful” (p. 327).

The results of their study were that students who frequently talked with faculty outside of class and who reported tutoring other students typically had a higher sense of belonging than students who did not spend as much time in these activities. They also found that student’s grade point averages in their second and third years of college were “not significantly associated with their sense of belonging” (p. 334). This last finding suggests that Latino students’ sense of belonging was not necessarily associated with their academic performance. Finally, membership in social organizations created the most significant sense of belonging. However, members of ethnic student organizations did not experience a greater sense of belonging than did non-members.
More recently, in his work titled *A Hierarchical Analysis Predicting Sense of Belonging Among Latino College Students*, Strayhorn (2008) found that Hispanic students who spent more time studying and who did better academically felt a greater sense of belonging than did low-performing Hispanic students. In addition, Hispanic students who had interaction with others of diverse backgrounds reported a greater sense of belonging than their white counterparts (Strayhorn, 2008).

In conclusion, Astin (1968), Tinto (1975) and Pascarella’s (1985) earlier studies found that college environment was related to student involvement, and student departure. The college environment research has led to studies about campus climate and sense of belonging. A sense of belonging can help students to feel connected to the institution. When students feel connected, they were more likely to get involved and to be an active participant in campus life (Astin, 1984).

**Institutional Resources and Practices**

Today, Latinos are entering higher education in record numbers; however, their baccalaureate completion rates are the lowest of all racial and ethnic groups (Fry, 2004, 2002; Astin & Osguera, 2003). Multiple researchers have found that Latinos have experienced various factors that have negatively impacted their baccalaureate degree completion rates, including lack of Latino role models in the academy, lack of a sense of belonging, and insufficient financial aid (Dayton, Gonzalez-Vasquez, Martinez, & Plum, 2004; Hurtado & Carter, 1997; Lee et al., 2011; Ortiz, 2004).

Institutions can assist Latino students by offering a wide variety of institutional resources and practices with which to participate (Arbona & Nora, 2007; Justiz & Rendon, 1989; Santiago, 2008). Both academic-support programs and co-curricular...
activities offer students opportunities to become more involved, and as a result, improve baccalaureate completion rates. Before discussing successful co-curricular offerings, the next section will discuss some academic programs and services that have proved to be successful for Latino college students.

**Academic programs and services.** In their article, *The Influence of Academic and Environmental Factors on Hispanic College Degree Attainment*, Arbona and Nora (2007) suggested that colleges must focus on institutional practices such as first-year or freshman-year orientation programs, academic advising, mentorship programs, and other assistance programs in order to increase completion rates for Latinos. Arbona and Nora also suggested that Hispanic students could benefit from outreach efforts that should be promoted as early as middle school. Similarly, Deborah Santiago of ¡Excelencia in Education! stated, “What we see across the most successful institutions are comprehensive efforts to improve the quality of the academic experience and to meet student needs for a rapidly growing, non-traditional, and diverse Latino population” (Santiago, 2008, p. 10).

In their article *The Declining ‘Equity’ of Higher Education*, Astin and Oseguera (2004), pointed out that “most undergraduate institutions also embarked on major outreach programs to encourage members of heretofore underrepresented groups—especially African Americans and Latinas/os—to attend college” (p. 332). Outreach programs, sometimes called “bridge” or “pipeline” programs, allowed institutions to invest in underrepresented populations that, in the end, increased access for these students. In the state of California, the University of California Board of Regents
increased funding for precollege outreach programs from $62 million in 1995 to over $250 million in 2001 (Moreno, 2002, p. 572).

The ¡Excelencia in Education! Report, Modeling Hispanic-Serving Institutions (HSIs): Campus Practices that Work for Latino Students, found five programs that were “models for higher education/community partnerships that create an atmosphere of educational success for Latino and other students” (Santiago, 2008, p. 10). The outreach programs highlighted by the report emphasized the importance of educational partnerships that enticed Latino students to consider college early on, and then once in college, positioned these same students for a successful college career.

Once students do matriculate, the freshman year is the most crucial time in a student’s college career. Many of the experiences in this first year can determine whether or not a student will continue, and ultimately succeed, in their postsecondary career. Upcraft and Gardner (1989) suggested that a student’s experiences during the freshman year will greatly influence his/her success in college. Upcraft and Gardner (1989) proposed that freshman students can best be served by specific programs and services at an institution in order to have a successful first year in college. These programs and services include: orientation programs, academic advising, academic-support programs, mentoring programs, counseling services, residence halls, campus activities, and health and wellness programs. According to these researchers, participation in programs such as these is the key to the successful retention of first-year students.

Most colleges and universities conduct some type of orientation program for their first-year students (Upcraft & Farnsworth, 1984; Upcraft & Gardner, 1989). An orientation is designed to provide new students with information about the institution
they will be attending. Orientation usually provides information that includes where facilities are on campus, and what programs and services those facilities provide, as well as provides an opportunity for students to meet faculty, staff, and other students (Upcraft & Farnsworth, 1984). Many orientation programs are conducted just prior to the start of school, and, in some cases, throughout a student’s first year of college (Upcraft & Gardner, 1989).

With regard to the freshman experience of Hispanic college students, Justiz and Rendon (1989) identified several barriers to Hispanic freshman achievement. Justiz and Rendon described student-related barriers, as well as institutional barriers, that have a negative effect on Hispanic college student retention. Examples of student-related barriers to Hispanic freshmen included: those who are first-generation college students; those who are from low-socioeconomic households; those who have poor reading, writing, and math skills; and those whose second language is English (Justiz & Rendon, 1989). In addition, institutional barriers included: lack of Hispanic role models, an ethnocentric curriculum, and a lack of administrative leadership and commitment to the needs of Hispanic students (Justiz & Rendon).

Justiz and Rendon (1989) had four recommendations to combat these barriers. The first recommendation was to “front load” academic and student- support services. This helped those students who had poor scholastic skills and eliminated feelings of alienation from the institution. The second recommendation was to develop a systematic program of guidance and advisement. This helped to increase student involvement with faculty, staff, and other students. The third recommendation was to create learning communities built around common themes. This recommendation included introducing
the Hispanic experience into the otherwise ethnocentric curriculum. Finally, the fourth recommendation was to establish English as a Second Language (ESL) programs. Justiz and Rendon felt these recommendations would increase the academic and social involvement, as well as the retention of Hispanic freshmen (Justiz & Rendon, 1989).

More recently, Hernandez (2002) suggested that orientation programs for first-year students were still needed for Latinos in higher education. In his study of the first-year experience of Latino college students, Hernandez found that his participants found the transition from high school to college difficult. His participants relied on their families for support through the adjustment, but their families were unable to understand the extent of their situation, due to the lack of experience. Hernandez made this suggestion for practitioners,

Bilingual and culturally sensitive parent orientation programs need to be developed to familiarize parents with the college setting; to provide opportunities to meet and develop rapport with college faculty and staff; and to better understand the academic rigor and demands that will be placed on their children.

(p. 79)

Other institutional services, such as academic advising, were also vital to student success. Campbell and Nutt (2008) stated “When done well, academic advising can serve as a powerful lever in improving the college student experience and supporting the institution's goals with regard to persistence and time to graduation” (p. 5). In addition, Astin and other researchers have found that advising allows for frequent and meaningful contact between students and faculty/staff members, which increased student involvement and student satisfaction (Astin 1984; Pascarella, 1980, 1985; Tinto, 1987).

With regard to Latinos, Torres et al. (2006) conducted a multi-institutional, qualitative study of Latino college students. The purpose of the study was to discover
how students sought academic information at their respective institutions. The results indicated that many students did not recognize advisors as authority figures (Torres et al., 2006). In fact, most students sought information from those individuals on campus, including peers, with whom they had previously built a personal relationship, which resulted in some students obtaining incorrect advice (Torres et al., 2006).

Torres et al. (2006) suggested a culture barrier between the students and advisors and proposed that advisors learn more about the diverse cultures of Latinos, as well as seek out these students as opposed to expecting them to come on their own. “As these students learn about the culture of academe, advisors must accept the culture from which these students come” (Torres et al., 2006, p. 69). Another suggestion was for advisors to involve family members when possible in an effort to build a trusting relationship with the student. Torres et al. (2006) stated,

By asking about the possibility of involving the students’ families, the advisor will have a greater chance of succeeding with the student and will create a greater sense of trust, which in turn will more clearly define her or his role as an expert authority. (p. 69)

In addition to advising, Astin and other researchers have found that mentoring is a positive factor for college student success. Astin (1984) suggested that academic involvement and interaction with faculty members, as well as peers, increased the time and energy that students devoted to their academic experience. Mentoring programs offer a formal environment for students to interact with either (or both) faculty members and/or peers.

“Peer mentoring focuses on a more experienced student helping a less experienced student improve overall academic performance, encourages mentors’
personal growth and provides advice, support, and knowledge to the mentee” (Colvin and Ashman, 2010, p. 122). In the literature on mentoring, there have been various mentoring programs designed for Latino students that have been very successful. These programs vary greatly with regard to the type of mentor, the type of mentee, as well as a variety of outcomes and results.

Santos and Reigadas (2000; 2002) evaluated a university faculty mentoring program and its effect on college adjustment for Latino college students. The Faculty Mentoring Program (FMP) at California State University, Dominguez Hills matches “at-risk” students with faculty mentors. The goal of the program is to “encourage faculty-student interaction through a mentoring relationship that will lead to improved student academic achievement, retention, and graduation” (Santos & Reigadas, 2000, p. 635). The results for Latino students were that their college self-efficacy and academic goal definition (two of the three college adjustment measures in the study) increased as a result of the FMP program. In addition, the study found that mentees matched with mentors of their same ethnic background resulted in feeling more supported and more satisfied with their mentoring experience. Finally, the study found that the more contact between mentees and mentors positively correlated to higher satisfaction rates and higher adjustment to college.

The Puente Project, a support services program for Latino students enrolled in California community college, also had positive outcomes (Laden, 1998). The Puente Project had three components: a writing component, a counseling component, and a mentoring component. The mentoring program was unique in that it matched Latino student mentees with Latino mentors from the professional community, as well as those
from within the institution. “Again, central to the mentoring relationship is the notion that as successful Latino professionals, the mentors are able to retain their cultural identity while achieving their academic and career goals” (Laden, 1998, p. 12). The results of the program were excellent. Ninety-seven percent of program participants persisted in their community college studies, and 48 percent of them matriculated to four-year institutions. The success of the Puente Project has resulted in its expansion to nearly sixty-community colleges and thirty-high schools in the state of California (Laden, 1998).

The Educational Opportunity Program (EOP) of the California State University and Community College systems paired Latino first-year students with Latino graduate students. The study participants were identified based on their responses from a pilot survey that determined their risk assessment for success in college. The results of the study were encouraging. Mentees reported feeling more confidence, a greater sense of belonging, increased awareness and knowledge of campus resources and the campus setting (Torres Campos et al., 2009). In addition, mentees reported “feeling supported in their academic pursuits and having adjusted positively to the college environment” (Torres Campos et al., 2009, p. 173).

Mentoring programs, advising and orientation programming, as well as outreach programs, assist Latino college students in becoming more engaged in their academic experience. In addition, these programs increase students’ interaction with faculty members and peers, both of which are important for Latino college students to feel more involved and connected to the institution. Co-curricular programs and student services also offer opportunities for Latino college students to excel in academia.
Co-curricular programs. In Astin’s (1993) work *What matters in college? Four critical years revisited*, he stated, “the student’s peer group is the single most potent source of influence on growth and development during the undergraduate years” (p. 398). Research has shown that co-curricular or extra-curricular activities facilitated not only essential interaction among peers, but also contributed to increased student satisfaction, as well as improved persistence in college (Astin, 1993; Pascarella & Terenzini, 1991).

According to Baker (2007), participation in student organizations also assists under-represented students during their transition to college. Hurtado’s (1997) study of sense of belonging found that membership in student organizations aids students’ social and academic experiences in college. Some recent studies have discussed the impact that Latino-based student organizations have on the Latino college experience.

In their article, *An Examination of Academic Nonpersistence Decisions of Latino Undergraduates*, Gloria et al. (2005), suggested that Latino-based student organizations can be used to begin peer-mentoring:

Implementing formalized peer-mentor programs by collaborating with student organizations that are Latina/o specific would assist students to develop strong internal and external university connections thereby enhancing their sense of *familismo*, self, and educational efficacy. (p. 216)

Likewise, Barajas and Pierce (2001) found that Latino-based student organizations helped Latina college students overcome negative stereotypes, as well as maintain a positive identity. Finally, Conchas (2001) stated that the strong connections found in these types of student organizations equated to a positive impact on the academic achievement of a group of Latino college students.
Similarly, students who join social fraternities and sororities gain many benefits, including an increased connection to peers and the institution, as well as increased leadership and cognitive development (Astin, 1977, 1993; Kuh, Vesper, Conolly, & Pace, 1997; Pascarella & Terenzini, 1991). According to Astin’s research (1993), membership in social fraternities and sororities has a positive association with leadership abilities. In *The Influence of Fraternity and Sorority Membership on Students’ College Experiences and Cognitive Development*, Pike (2000) also noted that membership in these organizations helped students to be more involved and “that involvement is positively related to cognitive development” (Astin, 1977, 1993; Kuh, Vesper, Conolly, & Pace, 1997; Pascarella & Terenzini, 1991).

While social fraternities and sororities have been a staple in higher education, Latino Greek letter organizations (LGLOs) are relatively new to student life. According to Muñoz and Guardia (2009), the founding of LGLOs on campuses grew in the 1990s, and this development was “a tremendous catalyst for promoting Latino and Latina student success and cultural awareness” (p. 104). Despite the presence of LGLOs in higher education for the past twenty years, few empirical studies have examined the effects of membership in Latino Greek letter organizations (LGLOs).

Guardia and Evans (2008) conducted a qualitative study to determine what factors influences the ethnic identity development of members of Latino fraternities. The factors that enhanced the ethnic identification of participants included family, the HSI campus, other Greeks and Greek Affairs policies, gender, language, and involvement. Guardia and Evan’s research findings validated the positive contribution student involvement has on ethnic identity development. While the study was conducted at a Hispanic-serving
institution, the implications of his research are applicable for Latinos who attend non-Hispanic-serving institutions as well.

Many students are unable to participate in co-curricular programming due to family and employment obligations. According to a federal policy brief titled *How Latino Students Pay for College*, Santiago and Cunningham (2005) reported that Latino college students “received the lowest average financial aid award of any racial/ethnic group in 2003-4” (Santiago & Cunningham, 2005, p. 8). The brief explained that the four most common methods of payment included grants, loans, work-study and personal contributions (Santiago & Cunningham, 2005). Aside from personal contributions, the other methods of aid came from federal and state governments or from institutions of higher education themselves.

The price of college and the availability of financial aid were among the most significant factors that influenced college decisions, according to The College Board (2003). A recent report from College Board Advocacy & Policy Center reported that the total out-of-pocket price (price of attendance minus total aid) for Hispanic students was $10,200, compared to the full tuition price of $15,100 in fall of 2008 (Lee et al., 2011, p. 151). Without allowing for tuition hikes, this would equate to an investment of over $40,000 for a four-year degree (excluding fees, books and other expenses).

In an effort to increase Latino college completion, The College Board report called for additional need-based grant money as well as simplifying the financial aid system (Lee et al., 2011). Other researchers have also suggested that institutions elevate the levels of awareness and understanding of college prices and financial aid, which can be confusing for low-income and under-represented students (Grodsky & Jones, 2004;
Carriulol et al., 2001). The high cost of college prevented some Latinos from attending four-year institutions, and in many cases, forced students who do attend to balance their academics with family and work obligations (Santiago, 2008).

**Summary**

The literature review has revealed many important factors that shape the framework for this study. First, a review of the history of Latinos in higher education has provided the reader with an understanding that this subpopulation of students has only been studied for the past few decades. The rapid growth of Latinos in the nation and consequently, in higher education, has not equated to successful baccalaureate completion for this population. In fact, Latinos have the lowest baccalaureate completion rates of all racial and ethnic population in the academy (Fry, 2004).

Second, the reader was provided an overview of the theoretical and conceptual frameworks that will guide this study. Astin’s Student Involvement Theory can “explain most of the empirical knowledge about environmental influences on student development” (Astin, 1999, p. 518). Astin’s I-E-O model is a “powerful framework for the design of assessment activities and for dealing with even the most complex and sophisticated issues in assessment and evaluation” (Astin, 1991, p. 16).

Third, a review of the importance of the college environment and campus climate was provided for the reader. In addition, an explanation of how Hurtado’s study of sense of belonging can help Latino college students to feel more connected to the institution was also presented. Hurtado and Carter (1997) found that students who interacted with faculty and tutored other students had a higher sense of belonging than students who did
not engage in these activities. Hurtado and Carter (1997) also found that membership in social organizations created the most significant sense of belonging.

Institutional resources and practices, such as advising, orientation, outreach and mentorship programs are vital to the success of Latino college students. These types of institutional resources and practices have proven to have a positive effect on academic achievement. These programs equip students with vital institutional information and also allow for interaction with faculty and staff, which influences student learning and personal development.

Finally, peer interaction is one of most significant factors in a college student’s development (Astin, 1993). Interaction with other students has had positive correlations with leadership abilities and satisfaction with student life (Astin, 1993). Because of the low numbers of Latinos on college campuses, peer interaction is important to the retention of Latino college students. Numerous studies cited in the literature review have contributed to the research on what factors are positively related to the academic achievement, and in some cases, the baccalaureate completion rates, of Latino college students.

Chapter Three explains the methodology of the study and Chapter Four reports the results. Finally, Chapter Five presents the conclusions drawn from the findings of the study and discusses the implications of those findings for theory, for policy and practice, and suggests some ideas for further research.
Chapter Three

The Method

This chapter reviews the purpose and research questions of the study, identifies the population that was surveyed, outlines the instrument that was used to gather the data, and discusses the procedures that were used to analyze the data. The chapter also provides a conclusion and a preview of the content of the remaining chapters.

Purpose of the Study

The purpose of this study was to examine the influence, if any, of institutional resources and practices at four-year baccalaureate degree-granting institutions on baccalaureate completion rates for Latino students. In addition, the study examined what influence, if any, Latino student involvement with constituents (faculty, staff, alumni and community members) had on the institution’s baccalaureate completion rates for Latino students.

Chief student affairs officers at four-year baccalaureate degree-granting institutions were surveyed regarding what types of institutional resources and practices were available to Latino college students at their institutions, and what contribution they perceive it had on baccalaureate completion rates. A regression analysis was conducted and the results were used to inform theory and practice on Latino college student baccalaureate degree attainment. In addition, this study examined the utility of Astin’s involvement theory as it related to this student population.

Research Questions

This study was designed to answer four main research questions, which were:
1. What influence, if any, do demographic characteristics of chief student affairs officers have on the baccalaureate completion rates of Latinos at four-year baccalaureate degree-granting institutions?

2. What influence, if any, do institutional characteristics have on the baccalaureate degree completion rates of Latinos at four-year baccalaureate degree-granting institutions?

3. What influence, if any, do various institutional resources and practices have on the baccalaureate degree completion rates of Latinos at four-year baccalaureate degree-granting institutions?

4. What influence, if any, does Latino student involvement with constituents (faculty, staff, alumni and community members) have on the baccalaureate degree completion rates of Latinos at four-year baccalaureate degree-granting institutions?

**Research Method**

A quantitative research method was used to explore what influence, if any, institutional resources and practices at select institutions of higher education have on baccalaureate completion rates for Latino students. Creswell (2003) states that quantitative research “employs strategies of inquiry such as experimental and surveys, and collects data on predetermined instruments that yield statistical data” (p. 18). In addition, quantitative research allows the researcher to generalize results that extend beyond a particular research study (Fraenkel & Wallen, 2000). A quantitative research design was appropriate for this study because this researcher believed that the results of this research study would be generalizable to four-year baccalaureate degree-granting institutions.
This study used two forms of quantitative research: survey research, and descriptive and inferential statistics. Survey research provides a quantitative explanation of the trends, attitudes, or opinions of a population by studying a sample of that population (Creswell, 2003). The information retrieved from the surveys determined the availability of institutional resources and practices at participating institutions. The surveys also provided information about the level of student involvement with constituents (faculty, staff, alumni, and community members). Descriptive statistics were used in order to portray the typical respondent and the typical institution that participated in the study. Inferential statistics referred to the use of current information regarding a sample of subjects, in order to make assumptions about the population at large and/or to make predictions about what might happen in the future. Further information about the survey instrument and the data analysis is discussed later in this chapter.

**Description of Participants**

The population that was surveyed was chief student affairs officers at all the four-year baccalaureate degree-granting institutions in the United States. These professionals were selected because of their knowledge of institutional resources and practices available to Latino undergraduate students at their respective institutions. In addition, many programs that support Latino students are housed within a student affairs department. These professionals are well positioned to answer inquiries regarding the level of Latino student involvement with constituents (faculty, staff, alumni and community members).
**Description of Participating Institutions**

Four-year baccalaureate degree-granting colleges and universities across the nation that were listed in the IPEDS were selected to participate in this study. Individual campuses of multi-district institutions were considered single institutions for the purposes of this study. A total of 1,662 institutions met the criteria for this study.

**Development of Survey Instrument**

A survey was chosen as the method of instrumentation for several reasons. First, due to the large sample size needed for this study, a survey was a cost-effective method to gather a large amount of data in a very short time. Second, a survey allowed participants the flexibility to participate in the study at their chosen pace. Surveys also allowed for anonymity which may have resulted in more honest and candid responses. Next, surveys can result in a higher response rate (Fraenkel & Wallen, 2000). Finally, in most cases, the results gained from using a quantitative research method, such as a survey, are usually generalizable to a broader population (Fraenkel & Wallen, 2000).

A cover letter (see Appendix A) outlining the purpose of the study, asking for participant consent, and ensuring the confidentiality of the responses of the participants was provided to respondents. The cover letter also informed the participants that the results of the study would be made available for their use and reference. An original survey was designed by this researcher (see Appendix B), based on a review of the literature. The title of the survey was *Survey of Institutional Support for Latino Students*.

The survey was designed to gather the information needed to answer the research questions. The survey questions were grouped into nine separate sections, placing closely-related questions together to allow for a natural sequence. The nine sections
were: (a) demographic characteristics of chief student affairs officer, (b) HACU membership, (c) offices for student success, (d) academic programs of study, (e) institutional offerings for Latino students (f) institutional practices and resources, (g) program/service restrictions and (h) Latino student involvement with others. Each section is described next and Tables 1-9 provide the reader with an illustration of the survey sections, including the survey question number, the information collected and the purpose of collecting the information.

Section one of the survey retrieved the demographic characteristics of the respondents (see Table 1). These characteristics were collected in order to construct a profile of the typical survey respondent. In addition, this researcher also retrieved the

Table 1

Summary of Survey Section 1

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Information Collected</th>
<th>Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gender (male, female)</td>
<td>To collect respondents’ demographic information for typical respondent data as well as to see if the demographic information of chief student affairs officers has an influence on Latino baccalaureate completion rates</td>
</tr>
<tr>
<td>2</td>
<td>Age (25-35, 35-45, 45-55, 55-65, over 65)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Race/Ethnicity (American Indian/Native American, African American, Caucasian/White, Hispanic/Latino, Asian American/Pacific Islander, Other)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Highest degree earned (Bachelor’s, Master’s, Professional Degree, Doctorate)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Number of years in student affairs field (Less than 5 years, 5-10, 10-15, 15-20, 20-25, over 25 years)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Number of years at your current institution (Less than 5 years, 5-10, 10-15, 15-20, 20-25, over 25 years)</td>
<td></td>
</tr>
</tbody>
</table>
demographics of the respondents in the event that these characteristics could have had an influence on the baccalaureate degree completion rates of Latino students at the institution.

Section two of the survey asked if the institution is a member of the HACU (see Table 2). While the association began as an advocate for Hispanic-serving institutions, non-Hispanic serving institutions can also join and benefit from membership in the association. According to the association’s website,

Now more than ever, joining the Hispanic Association of Colleges and Universities (HACU) is important to strengthening Hispanic higher education. Whether you are new to HACU’s membership or a renewing member, we hope we can count on you to join us and support advocacy efforts for Hispanic higher education. (Hispanic Association of Colleges and Universities, 2012)

Some benefits of membership include access to professional development and resources for staff, and student access to paid internships and scholarship opportunities (Hispanic Association of Colleges and Universities, 2012). Because these types of opportunities can benefit Latino students and may influence baccalaureate completion rates, this researcher included this question in the survey. This section also asked the respondents to report what level of HACU membership their institution held.

Table 2

Summary of Survey Section 2

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Information Collected</th>
<th>Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Member of HACU</td>
<td>Identify if an institution is a member of HACU</td>
</tr>
<tr>
<td>8</td>
<td>Level of HACU membership</td>
<td>Identify what level of membership the institution holds</td>
</tr>
</tbody>
</table>
The next section of the survey, section three, inquired as to the availability of two important offices on campus (see Table 3). The first was an office that served all multicultural students; the second was an office aimed solely at supporting Latino students, as well as how many staff such an office employs. Several studies have cited the need for more Latino role models in the academy (Rodriguez et al., 2000; Hernandez, 2000). According to Rodriguez et al., “When institutions demonstrate a commitment to hiring and promoting Latino and Latina professionals, they provide role models for Latina students, while helping to make the campus a more welcoming environment for them” (p. 1523). This researcher believes that either an office dedicated to multicultural students, or an office aimed at Latino student success, shows an institutional commitment to Latino students.

Table 3

Summary of Survey Section 3

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Information Collected</th>
<th>Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Office for multicultural students (yes/no)</td>
<td>Identify if an institution has an office that supports multicultural students</td>
</tr>
<tr>
<td>10</td>
<td>Office for Latino students (yes/no)</td>
<td>Identify if an institution has an office that supports Latino students</td>
</tr>
<tr>
<td>11-13</td>
<td>Staffing (# of part-time employees, # of full-time employees, # of graduate assistants)</td>
<td>Identify if an institution has staff to assist Latino students</td>
</tr>
</tbody>
</table>

Section four of the survey asked respondents if their institution offered any academic programs of study that focused on Latinos or Latino culture (see Table 4). In
her work, *The Institutional Climate for Talented Latino Students*, Hurtado (1994) investigated if being enrolled in a Latino studies course was a factor for talented Latino students in their perceptions of racism and/or discrimination on campus. While the factor was not significant for that study, this researcher hypothesized that offering these types of academic programs of study could have had an influence on Latino baccalaureate degree completion rates because it is an institutional resource for Latino students.

**Table 4**

*Summary of Survey Section 4*

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Information Collected</th>
<th>Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Identify academic programs of study that focus on Latinos or Latino culture</td>
<td>Determine if Latino students have programs of study that reflect their heritage</td>
</tr>
</tbody>
</table>

The fifth section of the survey asked respondents if their institution offered programs and services that were designed to serve Latino students (see Table 5). If the respondent answered ‘yes’ and the institution offered such programs and services, the respondent was directed to complete section six of the survey. If the respondent answered ‘no’ to this question, the respondent was directed to go to section seven of the survey.

**Table 5**

*Summary of Survey Section 5*

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Information Collected</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Offering of Latino-based programs of services or not</td>
<td>Direct respondent to Section 6 or Section 7 of the survey</td>
</tr>
</tbody>
</table>
Section six of the survey queried the respondents to discern if specific Latino-based programs and services were offered at the institution (see Table 6). In addition, the survey asked to what extent the respondent believed the programs and services contributed to baccalaureate degree completion for Latinos. Respondents were asked to indicate whether they believed the programs and services were a “major contribution,” “moderate contribution,” or “little to no contribution” to baccalaureate degree completion for Latinos. These programs and services offer students the academic and social interaction that has been found to enhance student learning and retention (Astin, 2001; Hernandez, 2000; Pascarella & Terenzini, 1991; Tinto, 1993). This section also included an open-ended question that allowed respondents to write in if their institution had other programs or services available to Latino students that had not been listed.

Table 6

*Summary of Survey Section 6*

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Information Collected</th>
<th>Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-39</td>
<td>Availability of Latino-based programs and services and contribution to Latino baccalaureate completion rates (major, moderate, little to no contribution)</td>
<td>Determine what Latino-based programs and services are available to Latino students and what contribution chief student affairs officers feel these programs and services have on Latino baccalaureate completion rates.</td>
</tr>
<tr>
<td>40</td>
<td>Other Latino-based programs and services not listed</td>
<td>Allows respondent to report other Latino-based programs and services not listed</td>
</tr>
</tbody>
</table>
Section seven asked respondents to indicate why their institution did not offer programs and services designated to specific student populations (see Table 7). In addition to a list of possible reasons why this might be, the respondent was able to write in her/his answer to this question. The purpose of this section was to ascertain if some regions of the country had limitations to why they could not offer programs or services to specific student populations.

Table 7

*Summary of Survey Section 7*

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Information Collected</th>
<th>Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>Identify reason(s) why institutions do not offer Latino-based programs and services</td>
<td>Determine reason(s) why institutions do not offer Latino-based programs and services</td>
</tr>
</tbody>
</table>

In section eight of the survey, respondents were asked to indicate the level of involvement between Latino college students and constituents (faculty, staff, alumni and community members) (see Table 8). Research by Astin and others indicates that the greater the interaction with faculty, the more student learning and personal development occurs (Astin, 2000; Kuh & Hu, 2001; Pascarella & Terenzini, 1991; Tinto, 1993). This researcher included this section because interaction with others also contributes to Latino students’ sense of belonging (Hurtado & Carter, 1997).
Table 8

Summary of Survey Section 8

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Information Collected</th>
<th>Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>42-45</td>
<td>Latino student involvement with certain constituents (frequently, occasionally, never)</td>
<td>Determine the involvement of Latino students with certain constituents</td>
</tr>
</tbody>
</table>

Finally, the last and ninth section of the survey was an open-ended question that allowed the respondent to share any other information with regard to Latino baccalaureate completion rates (see Table 9).

Table 9

Summary of Survey Section 9

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Information Collected</th>
<th>Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Other information regarding the subject of Latino baccalaureate completion rates</td>
<td>Allow respondents to offer comments on the research topic</td>
</tr>
</tbody>
</table>

Field Testing of Instrument

A draft of the survey was sent to 4 former chief student affairs officers selected by the researcher. After each chief student affairs officer completed the survey, the researcher obtained feedback on the following questions:

1. Were the questions easy to understand?
2. Were the response choices appropriate for each question?
3. Did the participant need any clarification to answer any questions in the survey? If so, what question(s) and what needs to be clarified?
4. Did the participant believe additional questions were needed?
Once the feedback was received, the researcher revised the draft survey to clarify ambiguous questions. The reviewers did not recommend additional questions for the survey.

**Survey Administration**

The names and electronic mail addresses of all chief student affairs officers for all four-year baccalaureate degree-granting institutions were obtained from the *Higher Education Directory 2011* in the form of a Microsoft Excel spreadsheet. The spreadsheet of the names and email addresses of the survey participants was uploaded into Vovici survey software.

An electronic mail message was sent to the survey participants with a cover letter explaining the purpose of the study, and acknowledging voluntary participation in the study. A link to the electronic survey was embedded within the electronic mail message. In addition, a link to the endorsement letter from HACU was also in the electronic mail message. The electronic mail message was sent to the respondents using Vovici survey software.

After two weeks, a reminder electronic mail message was sent to those respondents who had not completed the survey. Two weeks after the reminder electronic mail message was sent, the response data were downloaded into the Statistical Package for the Social Sciences (SPSS) for analysis.

Because the web-based survey administration yielded a total of only 244 responses, the researcher prepared a paper cover letter and paper survey to mail to non-respondents. Postage-paid envelopes were provided to survey participants to return the surveys. Each survey and postage-paid envelope was coded with the IPEDS
identification number in order to match the response data with the institutional data. The paper surveys yielded 259 responses. Once the paper survey responses were received, this researcher entered those results into SPSS for analysis.

**Conceptual Framework**

Figure 2 displays the conceptual framework of the research design based on the I-E-O model. Astin’s (1985) Input-Environment-Output (I-E-O) model served as the conceptual framework for this study. The I-E-O model was developed to assess student learning outcomes in higher education. Astin (1993) wrote “the basic purpose of assessing students is to enhance their education development” (p. 4). Astin recognized that consideration must be given to the innate characteristics a student brings to an educational setting. Those characteristics, or “inputs,” are the talents, experiences, and fixed attributes (demographics) that students are equipped with when they begin their

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**Figure 2. Conceptual Framework for the Research Design**
programs of study. For the purposes of this study, the “inputs” were the demographics of the chief student affairs officers.

Environment "refers to the student’s actual experiences during the educational program” (Astin, 1993, p. 18). These experiences include those inside as well as outside of the classroom. Outputs, or outcomes, refer to talents that students develop as a result of the environment, or experiences with the learning process (Astin). In utilizing Astin’s I-E-O model with statistical methods, inputs and environment are the independent variables of a study, and the output is commonly the dependent variable.

This study employed Astin’s I-E-O model to examine what influence, if any, the inputs and environment had on the baccalaureate completion rates of Latino students.

Dependent Variable

The dependent variable in this study was the baccalaureate completion rate of Latino students at each institution. All postsecondary institutions in the United States report their institution’s baccalaureate completion rates for all students, categorized by race and ethnicity, to the NCES and these rates are available in the IPEDS Data Center. This study utilized the six-year baccalaureate completion rate data. The six-year baccalaureate completion rate data was for all first-year, full-time Latino undergraduate students who entered in the Fall of 2004.

Independent Variables

Based upon the literature review, as well as the earlier discussion regarding the design of the survey instrument, the independent variables (64 in total) are between-college environmental factors. Between-college environmental factors are the institutional resources and practices that were available to Latino college students at each
institution. The independent variables are listed in Tables 1-8 and are also displayed in Figure 3.

As discussed in Astin’s work (1968), *College Environment*, institutional characteristics, such as an institution’s size or control (private vs. public), are factors that affect student learning. Institutional size, control, Carnegie classification and geographic region were utilized as independent variables, in this study. All of these between-college factors are accessible from the IPEDS Data Center.

**Data Analysis**

A query was prepared by matching the IPEDS institutional identification number of the respondent data with the identification numbers in the IPEDS database. The query produced the following information about the institutions: control, Carnegie classification, geographic region, total undergraduate enrollment, total Hispanic undergraduate enrollment, and Hispanic six-year baccalaureate degree graduation rates. The researcher downloaded the institutional data into the PC version of the SPSS, so the data could be studied in a variety of ways.

The first step of the data analysis involved a frequency distribution that was used to describe the characteristics of the participant institutions and of the respondents. This analysis allowed the researcher to describe the typical institution as well as the typical respondent who participated in the study.

A chi-square analysis was performed to determine if the sample was representative of the survey population in terms of size, control, Carnegie classification, and geographic location.
Next, a multiple regression analysis was conducted to examine what influence, if any, the independent variables had on the dependent variable. This allowed the researcher to determine the influence of each independent variable and the dependent variable separately. Incorporating the multiple regression statistical analysis into the study allowed the researcher to identify the significant variables and to provide information for answering the research questions of the study. According to McMillan & Schumacher (2001), "predictor variables can be combined to form what is called a multiple regression prediction equation. This equation adds together the predictive power of several independent variables" (p. 294). In summary, this analysis measured the significant influence of specific institutional resources and practices that were available at the participating institutions on the baccalaureate completion rates of Latino college students.

A stepwise regression analysis was utilized for this study because it showed how predictor variables influence the dependent variable. "The purpose of stepwise regression is to reduce the set of independent variables down to the most important predictors" (Stephens, 2004, p. 175). Brace, Kemp, and Snelgar (2000) describe the stepwise method:

Each variable is entered in sequence and its value assessed. If adding the variable contributes to the model then it is retained, but all other variables in the model are then re-tested to see if they are still contributing to the success of the model. If they no longer contribute significantly they are removed. Thus, this method should ensure that you end up with the smallest possible set of predictor variables included in your model. (p. 211)

A data analysis framework is displayed in Figure 3. The first block of variables that was analyzed was the respondents’ characteristics. Variables in this block included:
gender of respondents, age of respondents, race/ethnicity of respondents, highest degree earned of respondents, number of years of student affairs experience of respondents, and number of years at the current institution of the respondents. The purpose of the first block of variables was to answer the first research question.

The second block of variables that was analyzed was the institutional characteristics. Variables in this block included: institutional control (public/private), size of institution, geographic region of institution, membership with HACU, availability of an office of multicultural student services, availability of an office for Latino student success and the number of staff (full-time, part-time, and graduate assistants) employed by such an office, the existence of Latino-based academic programs of study, total undergraduate enrollment of the institution, and total Hispanic undergraduate enrollment of the institution. The purpose of the second block of variables was to answer the second research question.

The third block of variables that was analyzed was the Latino-based programs and services available and the level of Latino student involvement with constituents at the participant institutions. Variables in this block included: Outreach/early intervention/bridge/ pipeline program, recruitment program, outreach program, scholarship program, living-learning community, freshman-year experience program, learning communities, student success course, financial aid program, mentorship program, advising program, tutoring/academic support/skills enhancement/study tables, career program, leadership program, community service program, study abroad program, student organizations, Greek chapters, student lounge/office space, cultural awareness programs, Latino graduate student organization, Latino faculty/staff association, Latino
Figure 3. Data Analysis Framework
alumni affiliate/group, Latino community advisory group, Latino student involvement with faculty, Latino student involvement with staff, Latino student involvement with alumni, and Latino student involvement with community members. The purpose of the third block of variables was to answer the third and fourth research questions.

**Assumptions**

The study assumed that:

1. The baccalaureate degree completion rate data reported to IPEDS was accurate.

2. Institutions offered Latino-based programs and services.

3. Latino students have participated in the institutional resources and practices that were available at the selected baccalaureate degree-granting institutions.

4. The chief student affairs officer was the most informed person at the institution about the institutional resources and practices and Latino student involvement with constituents.

**Summary**

This chapter included a description of the methodology that was used to answer the research questions. It restated the purpose of the study, identified the population that was surveyed, outlined the instrument that was used to gather the data, and the procedures that were used to analyze the data.

In Chapter Four, the researcher reports the results from the survey. The results of the survey furnish evidence to answer the research questions. Finally, Chapter Five includes the conclusions drawn from the findings of the study and discusses the implications of those findings for theory and for policy and practice. Some
recommendations for further research and concluding thoughts are also presented in Chapter Five.
Chapter Four

The Findings

The purpose of this study was to examine the influence, if any, of institutional resources and practices at four-year baccalaureate degree-granting institutions on baccalaureate completion rates for Latino students. In addition, the study examined what influence, if any, Latino student involvement with constituents (i.e., faculty, staff, alumni and community members) had on the institution’s baccalaureate completion rates for Latino students.

This chapter provides a detailed account of the results of the statistical analysis. First, the study’s research questions are provided for the reader. Second, descriptive statistics of the population and the respondents are presented. Third, a description of the regression analysis methods that were used is provided. Next, the findings of the regression analysis furnish evidence to answer each of the research questions. Finally, a summary of the findings and analysis conclude the chapter.

Research Questions

This study was designed to answer four main research questions:

1. What influence, if any, do demographic characteristics of chief student affairs officers have on the baccalaureate completion rates of Latinos at four-year baccalaureate degree-granting institutions?

2. What influence, if any, do institutional characteristics have on the baccalaureate degree completion rates of Latinos at four-year baccalaureate degree-granting institutions?
3. What influence, if any, do various institutional resources and practices have on the baccalaureate degree completion rates of Latinos at baccalaureate degree-granting institutions?

4. What influence, if any, does Latino student involvement with constituents (faculty, staff, alumni and community members) have on the baccalaureate degree completion rates of Latinos at four-year baccalaureate degree-granting institutions?

Population and Respondents

This study identified the chief student affairs officer at all four-year baccalaureate degree-granting institutions as its research population. The Higher Education Publications, Inc. provided the researcher with the email addresses of all chief student affairs officers of four-year baccalaureate degree-granting institutions. On May 1, 2012, an electronic survey using Vovici survey software was sent electronically to the population of 1,662 chief student affairs officers. After two weeks, a reminder email was sent to the respondents. A total of 244 chief student affairs officers responded to the electronic survey. In an effort to increase the survey response, surveys were mailed to non-respondents via the United State Postal Service. An additional 259 responded to the mailed survey, for a total of 503 survey respondents, and a return rate of 30%.

The institutional characteristics of the population were downloaded from the IPEDS maintained by the NCES. It was discovered that 274 institutions of the population did not report key institutional data, including baccalaureate completion rates, the dependent variable, and subsequently these institutions were subtracted from the population. The number of respondents was also reduced for this same reason. As a
consequence, the findings of this study are based on a net population of 1,388 four-year baccalaureate degree-granting institutions, and a sample of 410 respondents.

**Descriptive Analysis**

The characteristics of the respondents, as well as the institutional characteristics of the colleges and universities included in the sample and the population, are discussed in the sections that follow. Descriptive statistics, including, when appropriate, frequencies, means, and standard deviations are used to describe the respondents and the institutions that they represent.

**Institutional characteristics of respondents.** The institutional characteristics that were collected for the study included control, size, Carnegie classification, and geographic location. These characteristics were obtained electronically from the IPEDS database. The institutional control category includes public or private. For this study, the number of undergraduates enrolled at the institution was used as the measure of institutional size. Carnegie classification is described as baccalaureate-degree granting, master’s-degree granting and doctoral-granting institutions. The NCES categorizes geographic location into eight regions: (a) New England, (b) Mid East, (c) Great Lakes, (d) Plains, (e) Southeast, (f) Southwest, (g) Rocky Mountains, and (h) Far West. Table 10 displays the NCES regional designations.
Table 10

*Geographic Regions by State*

<table>
<thead>
<tr>
<th>Region</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>New England</td>
<td>CT     ME   MA   NH   RI   VT</td>
</tr>
<tr>
<td>Mid East</td>
<td>DE     DC   MD   NJ   NY   PA</td>
</tr>
<tr>
<td>Great Lakes</td>
<td>IL     IN   MI   OH   WI</td>
</tr>
<tr>
<td>Plains</td>
<td>IA     KS   MN   MO   NE   ND   SD</td>
</tr>
<tr>
<td>Southeast</td>
<td>AL     AR   FL   GA   KY   LA   MS</td>
</tr>
<tr>
<td></td>
<td>NC     SC   TN   VA   WV</td>
</tr>
<tr>
<td>Southwest</td>
<td>AZ     NM   OK   TX</td>
</tr>
<tr>
<td>Rocky Mountains</td>
<td>CO     ID   MT   UT   WY</td>
</tr>
<tr>
<td>Far West</td>
<td>AK     CA   HI   NV   OR   WA</td>
</tr>
</tbody>
</table>

Table 11 offers a comparative illustration of the sample’s characteristics to those of the population. Over half of the respondents represent private institutions. The chi-square analysis revealed a significant difference in the sample distribution and the population distribution by control, $\chi^2 = .003$, $p < .05$. This finding suggests that the characteristics of the respondent sample may not be representative of the population of all four-year baccalaureate degree-granting institutions with respect to institutional control. Private institutions were underrepresented and public institutions were overrepresented in the sample. As a result, generalizations with regard to control should be made with caution.
The second institutional characteristic to be considered was institutional size. Institutions with less than 3,000 students were described as small; institutions with 3,000 to 9,999 students were classified as medium-sized; institutions with more than 10,000 students were considered large colleges and universities. Half of the respondents (50%) represented small institutions; one-third of respondents (32%) represented medium-sized institutions, and less than one-fifth of respondents (17%) represented large institutions. These representations were very similar to the population distribution by size. This was confirmed by the chi-square statistic of $\chi^2 = .62, p < .05$, which revealed no significant difference in the distribution of institutional size between the sample and population.

Carnegie classifications are defined as baccalaureate-granting, master’s-granting and doctoral-granting institutions. Less than one-half (44%) of respondents represented master’s-granting institutions. Thirty-seven percent of respondents were from baccalaureate-granting institutions, and 19% were from doctoral-granting institutions. The chi-square analysis revealed a significant difference between the sample distribution and the population distribution of four-year baccalaureate degree-granting institutions by this characteristic, $\chi^2 = .001, p < .05$. This result suggested that the respondent sample may not be representative of the population. In fact, baccalaureate-granting institutions were underrepresented, and master’s-granting institutions were overrepresented, in this study.

Finally, the respondents represented each of the eight geographic regions of the country. Institutions located in Southeast and Mideast represented 44% of the total number of respondents. In contrast, just 2% of respondents represented the Rocky Mountains region, what was representative of the population of this region. The chi-square analysis confirmed that the geographic regions of the institutions in the sample
Table 11

*Basic Descriptive Data of the Sample and the Population*

<table>
<thead>
<tr>
<th></th>
<th>Sample n</th>
<th>Sample %</th>
<th>Population N</th>
<th>Population %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
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<td>100.0</td>
<td>1388</td>
<td>100.0</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>165</td>
<td>40.2</td>
<td>474</td>
<td>34.1</td>
</tr>
<tr>
<td>Private</td>
<td>245</td>
<td>59.8</td>
<td>914</td>
<td>65.9</td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 – 2,999 students</td>
<td>207</td>
<td>50.5</td>
<td>816</td>
<td>58.8</td>
</tr>
<tr>
<td>3,000 – 9,999 students</td>
<td>133</td>
<td>32.4</td>
<td>380</td>
<td>27.4</td>
</tr>
<tr>
<td>Over 10,000 students</td>
<td>70</td>
<td>17.1</td>
<td>192</td>
<td>13.8</td>
</tr>
<tr>
<td>Carnegie Classification</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Baccalaureate-granting</td>
<td>152</td>
<td>37.1</td>
<td>624</td>
<td>45.0</td>
</tr>
<tr>
<td>Master’s-granting</td>
<td>181</td>
<td>44.1</td>
<td>524</td>
<td>37.7</td>
</tr>
<tr>
<td>Doctoral-granting</td>
<td>77</td>
<td>18.8</td>
<td>240</td>
<td>17.3</td>
</tr>
<tr>
<td>Geographic Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Far West</td>
<td>34</td>
<td>8.3</td>
<td>130</td>
<td>9.4</td>
</tr>
<tr>
<td>Great Lakes</td>
<td>69</td>
<td>16.8</td>
<td>234</td>
<td>16.9</td>
</tr>
<tr>
<td>Mid East</td>
<td>87</td>
<td>21.2</td>
<td>265</td>
<td>19.1</td>
</tr>
<tr>
<td>New England</td>
<td>35</td>
<td>8.5</td>
<td>124</td>
<td>8.9</td>
</tr>
<tr>
<td>Plains</td>
<td>53</td>
<td>12.9</td>
<td>152</td>
<td>11.0</td>
</tr>
<tr>
<td>Rocky Mountains</td>
<td>8</td>
<td>1.9</td>
<td>37</td>
<td>2.6</td>
</tr>
<tr>
<td>Southeast</td>
<td>92</td>
<td>22.4</td>
<td>350</td>
<td>25.2</td>
</tr>
<tr>
<td>Southwest</td>
<td>32</td>
<td>7.8</td>
<td>96</td>
<td>6.9</td>
</tr>
</tbody>
</table>

were representative of the population, \( x^2 = .16, p < .05. \)

**Characteristics of the Survey Respondents.** Table 12 presents the characteristics of the survey respondents. Chief student affairs officers were selected to participate in this study due to their institutional knowledge of the programs and services available to Latino undergraduate students. The respondents were asked to indicate their
gender, age, race, and highest degree earned. In addition, the respondents were asked how many years they have worked in the student affairs profession, and how many years they have worked at their current institution. The typical respondent was reported to be 55-64 years of age, Caucasian and male. This respondent holds an earned doctoral degree.

Table 12

Characteristics of the Survey Respondents

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
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<td>100.0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>231</td>
<td>56.3</td>
</tr>
<tr>
<td>Female</td>
<td>152</td>
<td>37.1</td>
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<tr>
<td>Missing</td>
<td>27</td>
<td>6.6</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-34</td>
<td>11</td>
<td>2.7</td>
</tr>
<tr>
<td>35-44</td>
<td>68</td>
<td>16.6</td>
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<tr>
<td>45-54</td>
<td>130</td>
<td>31.7</td>
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<tr>
<td>55-64</td>
<td>158</td>
<td>38.5</td>
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<tr>
<td>65+</td>
<td>19</td>
<td>4.6</td>
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<tr>
<td>Missing</td>
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<td>5.9</td>
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<tr>
<td>Race</td>
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<td></td>
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<tr>
<td>American Indian</td>
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<td>0</td>
</tr>
<tr>
<td>African American</td>
<td>52</td>
<td>12.7</td>
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<tr>
<td>Caucasian/White</td>
<td>289</td>
<td>70.5</td>
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<tr>
<td>Hispanic/Latino</td>
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<td>8.3</td>
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<tr>
<td>Asian/Pacific Islander</td>
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<td>1.0</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>1.2</td>
</tr>
<tr>
<td>Missing</td>
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<td>6.3</td>
</tr>
<tr>
<td>Highest degree</td>
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<td>Doctoral degree</td>
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<td>53.9</td>
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<tr>
<td>Professional degree</td>
<td>16</td>
<td>3.9</td>
</tr>
<tr>
<td>Master degree</td>
<td>141</td>
<td>34.4</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>5</td>
<td>1.2</td>
</tr>
<tr>
<td>Missing</td>
<td>27</td>
<td>6.6</td>
</tr>
</tbody>
</table>
Table 12 continued

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>410</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Years in student affairs

<table>
<thead>
<tr>
<th>Years in student affairs</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 years</td>
<td>17</td>
</tr>
<tr>
<td>5-9 years</td>
<td>26</td>
</tr>
<tr>
<td>10-14 years</td>
<td>33</td>
</tr>
<tr>
<td>15-20 years</td>
<td>55</td>
</tr>
<tr>
<td>20-25 years</td>
<td>71</td>
</tr>
<tr>
<td>25+ years</td>
<td>183</td>
</tr>
<tr>
<td>Missing</td>
<td>25</td>
</tr>
</tbody>
</table>

Years at current institution

<table>
<thead>
<tr>
<th>Years at current institution</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 years</td>
<td>72</td>
</tr>
<tr>
<td>5-9 years</td>
<td>100</td>
</tr>
<tr>
<td>10-14 years</td>
<td>63</td>
</tr>
<tr>
<td>15-20 years</td>
<td>49</td>
</tr>
<tr>
<td>20-25 years</td>
<td>33</td>
</tr>
<tr>
<td>25+ years</td>
<td>69</td>
</tr>
<tr>
<td>Missing</td>
<td>24</td>
</tr>
</tbody>
</table>

degree and possesses over 25 years of experience in student affairs. The typical respondent has worked at their current institutions for nine years or less.

**Dependent Variable**

The dependent variable for this study is the six-year graduation rate of Latino undergraduate students at four-year baccalaureate degree-granting institutions. A simple t test revealed the average 6-year graduation rate for Latino undergraduate students for the respondent institutions was 43% and the graduation rate mean for the non-respondents was also 43%, resulting in no significant difference in the mean of the
degree-completion rates. This result suggests that the respondents are highly indicative of the entire population with regard to baccalaureate completion rates.

**Summary of Descriptive Statistics**

The descriptive statistics have described the typical institution that participated in the study, as well as the typical respondent and the average baccalaureate completion rate for the sample and the population.

Over one-half of the respondents were from private institutions. The majority of institutions that participated in this study were small colleges and universities, with an enrollment under 3,000 students. The respondent institutions represented all three Carnegie classifications, with slightly less than half being from master’s-granting institutions. Finally, the respondent institutions were representative of the eight geographic regions of the country, with almost one-half of respondents from the Mideast and Southeast.

Finally, the average 6-year graduation rate for Latinos for the respondent institutions, as well as for the non-respondents was 43%, which suggests that the responding institutions are highly representative of the population of institutions.

**Findings**

The next section provides the analysis and findings of the study that are used to answer the four research questions. The study used a blocked stepwise regression analysis to analyze the data and a description of that analysis is provided below.

**Blocked stepwise regression.** The purpose of the regression analysis was to identify the influence, if any, of the input and environmental variables on the baccalaureate completion rates of Latino undergraduate students at four-year
baccalaureate degree-granting institutions. In addition, the regression analysis was used to determine the best combination of variables that can predict the baccalaureate completion rates of Latino undergraduate students at four-year baccalaureate degree-granting institutions.

The predictor variables (70 in total) were grouped into three blocks and entered into the regression using the stepwise method. The three blocks in the regression analysis were: (a) demographics of the chief student affairs officers, (b) institutional characteristics, and (c) Latino programs and services and Latino student involvement. The regression analysis identified 7 variables that are significant predictors of baccalaureate completion rates of Latino undergraduate students at four-year baccalaureate degree-granting institutions.

Table 12 summarizes the variables that emerged as significant predictors for baccalaureate completion rates of Latino undergraduate students at 4-year baccalaureate degree-granting institutions. Zero r is a measure of the degree of linear relationship between an independent variable and the dependent variable, according to the Pearson product moment correlation. Step β shows the beta weight of the variable as it entered the regression analysis as well as at the final step. The F value at the final step of the regression equation was 9.1. The adjusted $R^2$ at the final step was .13, indicating that 13% of the variance in the criterion variable can be explained by the predictor variables.

**Research Question 1.** What influence, if any, do demographic characteristics of chief student affairs officers have on the baccalaureate completion rates of Latinos at four-year baccalaureate degree-granting institutions? The demographic characteristics
### Table 12

**Predictor Variables of Baccalaureate Completion Rates**

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>Zero $r$</th>
<th>Step $\beta$</th>
<th>Final Step $\beta$</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Latino-related academic programs</td>
<td>.18**</td>
<td>.18**</td>
<td>.14**</td>
<td>13.9</td>
</tr>
<tr>
<td>2</td>
<td>Private control</td>
<td>.17**</td>
<td>.20**</td>
<td>.25**</td>
<td>15.9</td>
</tr>
<tr>
<td>3</td>
<td>Doctoral granting institutions</td>
<td>.13**</td>
<td>.15**</td>
<td>.12*</td>
<td>13.8</td>
</tr>
<tr>
<td>4</td>
<td>Plains region</td>
<td>-.11*</td>
<td>-.11*</td>
<td>-.11*</td>
<td>11.7</td>
</tr>
<tr>
<td>5</td>
<td>Multicultural student center</td>
<td>.12*</td>
<td>.10*</td>
<td>.09*</td>
<td>10.4</td>
</tr>
<tr>
<td>6</td>
<td>Latino mentorship program</td>
<td>.12*</td>
<td>.11*</td>
<td>.11*</td>
<td>9.7</td>
</tr>
<tr>
<td>7</td>
<td>Latino living learning community</td>
<td>.14**</td>
<td>.10**</td>
<td>.10*</td>
<td>9.1</td>
</tr>
</tbody>
</table>

*Note.* Sample size $n=410$, $R^2=.136$, Adjusted $R^2=.121$; *p<.05. **p<.01.

Included (a) gender, (b) age, (c) race, (d) highest degree earned, (e) years in student affairs profession, and (f) years at current institution. Based on the stepwise regression results, these demographic characteristics did not influence the baccalaureate completion rates of Latino undergraduate students at four-year baccalaureate degree-granting institutions.

**Research Question 2.** What influence, if any, do institutional characteristics have on the baccalaureate degree completion rates of Latinos at four-year baccalaureate degree-granting institutions? The institutional characteristics included (a) control, (b) size, (c) Carnegie classification, (d) geographic location, (e) membership in HACU (f) having a Multicultural Student Office, (g) having an Office of Latino Initiatives, (h) having an Office of Latino Initiatives with full-time employees, (i) having an Office of.
Latino Initiatives with part-time employees, (j) having an Office of Latino Initiatives with graduate assistants and (k) offering Latino-related academic programs. Five institutional characteristics emerged as significant predictors.

Control emerged as a strong predictor of baccalaureate completion rates of Latinos at four-year baccalaureate degree-granting institutions ($r=.173, p <.05$). In other words, private institutions are more likely than public institutions to have higher baccalaureate completion rates for Latinos at four-year baccalaureate degree-granting institutions.

Doctoral-granting institutions also emerged as a strong predictor of baccalaureate completion rates of Latinos at four-year baccalaureate degree-granting institutions ($r=.131, p <.01$). This relationship indicates that doctoral degree-granting institutions tend to have higher baccalaureate-completion rates than do master’s and baccalaureate degree-granting institutions.

Institutions located in the Plains region of the country emerged as a negative predictor with baccalaureate degree-completion rates ($r=-.105, p <.05$). This inverse relationship suggests that institutions in this region of the country tend to have lower baccalaureate completion rates for Latinos at four-year baccalaureate degree granting institutions that do institutions in other regions of the country.

The next institutional characteristic to emerge as a positive predictor with baccalaureate-degree completion rates was having an Office of Multicultural Student Services ($r=.124, p <.05$). This predictor suggests that institutions that have an office designed for multicultural student success tend to have high baccalaureate completion
rates for Latinos at four-year baccalaureate degree-granting institutions than do institutions without such an office.

Finally, institutions that offer Latino-related academic programs (such as Chicano or Latino studies) tend to have higher baccalaureate completion rates for Latinos at four-year baccalaureate degree-granting institutions than do institutions that do not offer such academic programs. Institutions with Latino-related academic programs was the strongest predictor of baccalaureate completion rates (r = .184, p < .01).

In summary, the regression analysis in block 2 found five variables that have a significant influence on baccalaureate completion rates. Four of those variables, control and doctoral degree-granting institutions, as well as having an Office of Multicultural Student Services and offering Latino-related academic programs, were positive predictors of higher baccalaureate completion rates for Latinos at four-year baccalaureate degree-granting institutions. One variable, institutions located in the Plains region of the country, was a negative predictor of baccalaureate-completion rates for Latinos at four-year baccalaureate degree-granting institutions.

**Research Question 3.** What influence, if any, do various institutional resources and practices have on the baccalaureate-degree completion rates of Latinos at four-year baccalaureate degree-granting institutions? The institutional resources and practices in block 3 included (a) Latino outreach program, (b) Latino recruitment program, (c) Latino orientation program, (d) Latino scholarship program, (e) Latino living-learning community, (f) Latino freshman-year experience program, (g) Latino learning community, (h) Latino financial aid program, (i) Latino student success course, (j) Latino mentoring program, (k) Latino advising program, (l) Latino tutoring program, (m) Latino
career program, (n) Latino leadership program, (o) Latino community service program, (p) Latino student abroad program, (q) Latino student organizations, mentoring programs, outreach programs, student organizations, orientation programs, scholarship programs, living-learning communities, freshman-year experience programs, advising programs, career programs, alumni groups and academic support/skills enhancement programs, (r) Latino Greek chapter, (s) Latino student lounge, (t) Latino cultural awareness program, (u) Latino graduate student organization, (v) Latino faculty/staff association, (w) Latino alumni affiliate, and (x) Latino community advisory group.

Two institutional programs offered to Latino students were found to be positive significant predictors of an institution’s baccalaureate completion rate. The existence of a Latino mentorship program is a positive significant predictor variable ($r=.117, p<.05$). The offering of a Latino living-learning community is also a positive significant predictor variable ($r=.142, p<.01$). In other words, we can predict that institutions that offer these programs tend to have higher baccalaureate completion rate for Latino students at four-year baccalaureate degree-granting institutions than do institutions without these programs.

**Research Question 4.** What influence, if any, does Latino student involvement with constituents (faculty, staff, alumni and community members) have on the baccalaureate degree completion rates of Latinos at four-year baccalaureate degree-granting institutions?

The involvement factors included involvement with (a) faculty, (b) staff, (c) alumni, and (d) community members. Based on the stepwise regression results, these
involvement factors did not influence the baccalaureate completion rates of Latino undergraduate students at four-year baccalaureate degree-granting institutions.

**Summary of Regression Analysis.** The stepwise regression analysis identified seven predictor variables of baccalaureate completion rates. Six of the seven were positive predictors, and one was a negative predictor, of baccalaureate completion rates of Latino undergraduate students at four-year baccalaureate degree-granting institutions. The findings of the regression analysis were used to answer the research questions and will be discussed further in the upcoming chapter.

**Summary**

Four research questions guided this study to examine the influence, if any, of institutional resources and practices at four-year baccalaureate degree-granting institutions on baccalaureate completion rates for Latino students. The findings of this study are a result of data gathered from an online survey, and a mailed survey and information gathered from the IPEDS database. A descriptive analysis was generated to provide general characteristics of the sample and the population using the SPSS software package. The SPSS software package was also used to perform the stepwise regression analysis that identified those variables that have a significant influence, and that are predictors of baccalaureate completion rates.

In addition to answering the research questions, the findings reported in this chapter guide the discussions in the next chapter. Chapter five includes the conclusions drawn from the findings of the study and discusses the implications of those findings for theory, as well as for policy and practice. Some ideas for further research and concluding thoughts are also presented in chapter five.
Chapter Five

Discussion, Recommendations and Conclusions

The purpose of this chapter is to present a final discussion and summation of the major findings of this research study. To begin, the chapter provides an overview of the study including a synopsis of the research methodology and processes. Next, a detailed discussion of the findings and their relationship to Latino baccalaureate completion rates are presented. This discussion also includes how the findings answered each of the research questions. Based on the study’s findings, implications for policy, practice and theory are addressed, as well as the limitations of the study. Finally, the chapter concludes with recommendations for further research and a conclusion section.

Overview of the Study

The purpose of this study was to examine the influence, if any, of institutional resources and practices at four-year baccalaureate degree-granting institutions on baccalaureate completion rates for Latino students. In addition, the study examined what influence, if any, Latino student involvement with constituents (faculty, staff, alumni and community members) has on the institution’s baccalaureate completion rates for Latino students.

To begin, the background and significance of the problem were presented. Latinos are the largest and fastest growing ethnic group in the United States. They are enrolling in record numbers at the nation’s colleges and universities. Unfortunately, they are not completing their baccalaureate degrees at the same rate as their white peers. In order for Latinos to prosper occupationally, economically, socially, and politically, they must increase their baccalaureate-completion rates.
A review of the literature revealed that some institutional resources and practices, such as advising, orientation, outreach and mentorship programs, have had a positive effect on the academic achievement of Latino college students. In addition, the literature review discovered that a sense of belonging can help Latino college students to feel more connected to the institution. Hurtado and Carter (1997) found that membership in social organizations created the most significant sense of belonging. Finally, the literature review found that peer interaction is one of most significant factors in a college student’s development (Astin, 1993). Because of the low numbers of Latinos on college campuses, peer interaction is important to the retention of Latino college students. Numerous studies cited in the literature review have contributed to the research on what factors are positively related to the academic achievement, and in some cases, the baccalaureate-completion rates of Latino college students.

Based on a review of the literature and designed to answer the research questions, an original survey was used to collect data for the study. The survey questions were grouped into six separate sections. The six sections included (a) background characteristics of chief student affairs officers, (b) institutional membership in the Hispanic Association of Colleges and Universities (HACU), (c) offices for multicultural/Latino student success, (d) Latino-related academic programs of study, (e) Latino-based programs and services, and (f) Latino student involvement with various constituents.

Before survey distribution, four former chief student affairs officers reviewed the instrument and provided valuable feedback. Once improvements were made to the survey, it was sent electronically to the population of chief student affairs officers at four-
year baccalaureate-degree granting institutions. In an effort to gather more responses, the survey was also sent via the United States Postal Service. In the end, 503 responses were received, which resulted in a 30%-response rate.

Institutional data for the Fall 2004 cohort of first-time, full-time students were downloaded from the IPEDS database and were matched with the survey data. It was discovered that 274 institutions did not have key institutional information, including the dependent variable. As a result, these institutions were removed from the final dataset, which resulted in the decrease of the population and sample sizes from 1,662 to 1,388 and from 503 to 410, respectively.

The sample was representative of the population, with regard to size as well as geographic region. However, in terms of institutional control, private institutions were underrepresented, and public institutions were overrepresented in the sample. With reference to Carnegie classification, baccalaureate-granting institutions were underrepresented, and master’s-granting institutions were overrepresented in the sample. As a result, generalizations should be made with caution with regard to institutional control and Carnegie classification.

The typical respondent of the survey was a white male, aged 55-64 years of age. The typical respondent has an earned doctoral degree and has over 25 years of experience in the field of Student Affairs. The typical respondent has worked at his current institution for nine or less years.

The study was guided by both a theoretical and a conceptual framework. Astin’s Student Involvement Theory was the theoretical framework that was applied. The basic tenet of this theory is that the more students get involved in their academic experience,
the more learning and development occurs. Astin’s I-E-O model was the conceptual framework that was used in the study. This framework was used because of its focus on how environmental factors affect student outcomes, such as baccalaureate-degree completion rates.

The statistical software program, SPSS for Windows 19.0, was used to analyze the data. Bivariate correlations, frequencies, t tests, cross tabulations, chi-square and regression analysis were conducted with the data. A blocked form of stepwise regression was used, and the 70 variables were entered into the regression based on their characteristics as input, environment, and output variables.

The demographics of the chief student affairs officers served as the input variables. The environmental variables included: (a) institutional characteristics, (b) Latino-based programs and services and (c) Latino student involvement with key constituents. Finally, the output variable was the baccalaureate completion rate of Latino students.

Seven independent variables emerged as significant predictors of Latino baccalaureate-completion rates. Of the seven predictors, only one had a negative influence on Latino baccalaureate-completion rates. These findings were used to answer the research questions, and have provided information on what predicts baccalaureate-completion rates for Latino students.

**Discussion of the Findings**

The findings presented in chapter four have answered the research questions. A summary of the findings for each of the four research questions and their relationship to Latino baccalaureate-completion rates is provided next. In some cases, the findings from
this study were congruent with empirical research that was previously discussed in the literature review. In those cases, the prior research is corroborated by the results of this study.

**Research Question 1.** What influence, if any, do demographic characteristics of chief student affairs officers have on the baccalaureate-completion rates of Latinos at four-year baccalaureate degree-granting institutions? The study assessed the following demographic characteristics of chief student affairs officers: age, gender, race, highest degree earned, number of years worked in the field of student affairs, and number of years worked at the current institution. Seventy percent of the respondents were Caucasian, and over one-half were male. Thirty-seven percent were between the ages of 55-64 years old. Over one-half of the respondents had earned doctoral degrees and just under one-half had over 25 years of experience in the student-affairs field. In addition, nearly one-fourth had been at their current institution for 9 years or less. The regression analysis and correlational analysis did not identify a significant influence or relationship between the demographics of the respondents and the dependent variable. Therefore, the demographics of chief student affairs officers were not found to have a role in predicting Latino baccalaureate-completion rates.

**Research Question 2.** What influence, if any, do institutional characteristics have on the baccalaureate degree completion rates of Latinos at four-year baccalaureate degree-granting institutions? The institutional characteristics included (a) control, (b) size, (c) Carnegie classification, and (d) geographic location. Three institutional characteristics emerged as significant predictors of baccalaureate-completion rates for Latinos.
Private-institutional control was a positive predictor of Latino baccalaureate completion rates. In other words, we may predict that attending private institutions will result in higher baccalaureate-completion rates than will attending public institutions. One reason for this outcome is that private institutions tend to more selective than public institutions (“America’s Best Colleges”, 2001; American College Testing, 2001; Astin, 1985). “By far the most important college characteristic affecting the student’s chances of completing the baccalaureate degree is institutional selectivity” (Astin, 2005, p. 9).

Doctoral degree-granting institutions also emerged as a strong predictor of baccalaureate completion rates for Latinos at four-year baccalaureate degree-granting institutions. This relationship indicates that doctoral degree-granting institutions are more likely to have higher degree-completion rates than are master’s and baccalaureate degree-granting institutions. Doctoral degree-granting institutions tend to be larger institutions, which suggests that they may have more resources to offer students. “Large institutions, in comparison to small ones, offer more diverse social opportunities (social organizations, parties, and so on), more frequent cultural events on campus, a greater number of extracurricular activities, and fewer regulations governing campus life” (Astin, 2001, p. 284). As a result, these institutions may be able to provide students with more opportunities for academic as well as social involvement that, in turn, positively impact Latino baccalaureate-completion rates.

Institutions located in the Plains region of the country emerged as a negative predictor with baccalaureate degree-completion rates. Of the 53 institutions in the Plains region, only three enrolled more than 5% of Latino students. Two-thirds of the 53 institutions had enrollments less than 5,000 students. The institutions from the Plains
region also lacked Latino living-learning communities and Latino mentorship programs, having just 3 of 53 and 2 of 53, respectively. It is the estimation of this researcher that the low number of Latino students at institutions in the region, as well as the lack of key Latino-related programs, may have resulted in the negative influence. However, future research on this region would need to be conducted to test this hypothesis.

**Research Question 3.** What influence, if any, do various institutional resources and practices have on the baccalaureate degree-completion rates of Latinos at baccalaureate degree-granting institutions? The Latino-based programs and services in the survey were: (a) Latino outreach program, (b) Latino recruitment program, (c) Latino orientation program, (d) Latino scholarship program, (e) Latino living-learning community, (f) Latino freshman-year experience program, (g) Latino learning community, (h) Latino financial-aid program, (i) Latino student-success course, (j) Latino mentoring program, (k) Latino advising program, (l) Latino tutoring program, (m) Latino career program, (n) Latino leadership program, (o) Latino community-service program, (p) Latino study-abroad program, (q) Latino student organizations, (r) Latino Greek chapter, (s) Latino student lounge, (t) Latino cultural-awareness program, (u) Latino graduate-student organization, (v) Latino faculty/staff association, (w) Latino alumni affiliate, and (x) Latino community-advisory group. Also, other institutional resources and practices on the survey included: (a) membership in the Hispanic Association of Colleges and Universities (HACU), (b) having a Multicultural Student Office, (c) having an Office of Latino Initiatives, (d) having an Office of Latino Initiatives with full-time employees, (e) having an Office of Latino Initiatives with part-time employees, (f) having an Office of Latino Initiatives with graduate assistants, and (g) offering Latino-related
academic programs. Four institutional resources and practices were found to be positive significant predictors of Latino baccalaureate-completion rates. These predictors were: (a) Latino-based academic programs, (b) Office of Multicultural Student Services, (c) Latino mentorship programs, and (d) Latino living-learning communities.

Institutions with Latino-related academic programs, such as Chicano Studies, Latino Studies, and Latin American Studies, emerged as the most significant predictor of baccalaureate completion rates for Latino undergraduate students in this study. One-third of the responding institutions offered these types of academic programs. Conversely, in his book, *What Matters in College? Four Critical Years Revisited*, Astin (1993) noted that having minority or Third World course offerings negatively affects degree attainment. This researcher would suggest that the changing demographics of college students, as well as the addition of more academic programs in culturally-specific areas, are a contributing factor to the different outcome found in this study. In either case, institutions that offer these types of academic programs have a positive influence on the baccalaureate-completion rates of Latino undergraduate students.

The next institutional characteristic to emerge as a positive predictor with baccalaureate-degree completion rates was having an Office of Multicultural Student Services. The study found that 67% of the responding institutions reported having an office dedicated to the success of minority or multicultural students. In contrast, less than 6% of institutions in the sample had an office dedicated solely to Latino students. Many respondents indicated through open-ended questions that their institution did not offer an office solely for Latino students because their office of multicultural student-services office served Latino students. Several respondents noted their institution did not offer
programs specific to any one culture. In addition, a few institutions reported that they did not have offices for Latino students because their Latino students led the institution in graduation rates in either all graduation rates or those for underrepresented groups.

With the increase of more multicultural students, these centers assist multicultural students in their transition to college, and offer multicultural students additional support during their college career. In addition, we know from Hurtado and Carter’s work (1997) that a sense of belonging is also important for Latino college students. These offices provide a sense of belonging for all multicultural students, including Latino students.

Previous studies have found that the quality and frequency of student-student interaction has been proven to be a strong predictor of positive outcomes at the undergraduate level (Astin, 1993; Pascarella & Terenzini, 1991). “A fuller appreciation of the potential for the peer group as a facilitator of the learning process could . . . . serve to improve undergraduate education in all types of institutions” (Astin, 1993, p. 415). Mentorship programs and living-learning communities both provide for significant student-student interaction, so it is no surprise that these two programs were found to be significant predictors of Latino baccalaureate-completion rates.

The literature suggests that Latino mentorship programs contribute to Latino college-student success. Indeed, several researchers have studied mentorship in different forms, including student-student and student-faculty models, and have found significant academic gains for Latino students who participate in mentorship programs (Colvin & Ashman, 2010; Laden, 1998; Santos & Reigadas 2000, 2002; Torres Campos et al., 2009). In addition to providing for increased student-student interaction, Latino
mentorships offer Latinos a sense of belonging by being connected to other students similar to themselves.

The offering of a Latino living-learning community is also a positive significant predictor variable. In other words, we can predict that institutions that offer these programs will have a higher baccalaureate-completion rate for Latino students at four-year baccalaureate degree-granting institutions than do institutions that do not offer Latino living-learning communities. To date, there is no empirical research available regarding Latino-specific living-learning communities and their relationship to Latino baccalaureate-completion rates. In fact, just 15-responding institutions reported having such communities. A closer look at these 15 institutions showed that they shared some other indicators that predicted Latino baccalaureate-completion rates. One-half were private institutions and one-half were doctoral degree-granting institutions. Eleven of the 15 institutions offered Latino-related academic programs and 14 of the 15 had an office of multicultural student services. Interestingly, only 3 of the 15 institutions had greater than a ten-percent enrollment of Latino undergraduate students. Yet, this was still a unique predictor of baccalaureate degree-completion rates, even after controlling for the influence of the other predictor variables.

**Research Question 4.** What influence, if any, does Latino-student involvement with constituents (faculty, staff, alumni and community members) have on the baccalaureate degree completion rates of Latinos at four-year baccalaureate degree-granting institutions? Based on the stepwise regression results, these involvement factors did not influence the baccalaureate-completion rates of Latino undergraduate students.
Recommendations and Implications

The recommendations and implications presented in this section are based on the findings of the study. The implications for policy and practice can assist administrators and practitioners in improving Latino baccalaureate-completion rates at their respective institutions. The implications for theory are also presented. Finally, recommendations for future research can assist others in improving the study and contributing to the literature on Latino baccalaureate-completion rates.

Implications for Policy and Practice. As state and federal funding for higher education decreases, and the number of Latino students increases on college campuses, institutions of higher education must use their resources wisely to aid Latino students in completing their baccalaureate degrees. The findings of this study have provided numerous implications for policy and practice.

First, this study found that institutions with Latino-related academic programs are more likely to have higher baccalaureate completion rates for Latino undergraduate students than those that do not have such a type of academic program. The addition and development of such programs would require an institutional investment; however, the return on that investment would be higher Latino student-completion rates. In addition, the institution could benefit from partnership that might emerge from academic and student affairs working together to promote Latino student success. The faculty members of the academic programs, many of whom would most likely be Latino, could serve as mentors to Latino students. Latino students may also be more inclined to major or minor in fields that reflect their culture, which would enhance the enrollment of the academic programs. Finally, the success of partnerships between the academic and student affairs
divisions of the institutions can be a source of pride for the institution, and can present opportunities for external funding, as well as for ways to enhance Latino student recruitment.

Second, having an office for multicultural students can aid in providing a sense of belonging to multicultural students, as well as offer programs and services that can aid their transition to higher education. Respondents described these offices as places on campuses that serve as “a home away from home” for many students. In addition to supporting Latino students, this type of office can also assist other students of color.

Third, this study validated numerous studies on Latino mentorship programs that have shown that offering these programs increases academic achievement in Latino students. These programs are successful whether mentors are other students or are faculty members. These programs can be relatively inexpensive, given that time is the biggest investment that is required to offer this type of mentorship program.

Similarly, Latino living-learning communities can be low cost. Living-learning communities require a partnership between academic and student affairs. They also require coordination of residence-life staff to organize and promote a floor or space devoted to where Latinos can reside within a residential community. A sense of belonging naturally would emerge within such a community and could provide Latino students with an extraordinary college experience that would aid in their goal of completing their baccalaureate degrees.

**Implications for Theory.** As previously noted, the theoretical framework that guided this study was Astin’s Student Involvement Theory. Astin (1999) defines involvement, stating, “student involvement refers to the amount of physical and
psychological energy that the student devotes to the academic experience” (p. 518). Astin’s theory states that while student characteristics (inputs) are useful in predicting outcomes (e.g., grade point average, completion rates), the programs and services a student participates in (environmental factors) also contribute to a student’s academic achievement. The findings of the study present evidence to support that student involvement in college enhances student learning and development. The results of this study have validated the utility of Astin’s student involvement theory and use of this theory in predicting Latino baccalaureate-completion rates.

Astin’s I-E-O model was used as the conceptual framework for this research study. The model was designed to study the influence and impact of pre-college characteristics and student involvement on academic persistence and academic achievement. This study used the model to study the influence of institutional resources and practices as well as Latino student involvement on Latino baccalaureate-completion rates. Given the discovery of seven significant predictors of Latino baccalaureate completion rates, Astin’s I-E-O model has proven to be a useful conceptual framework for this study.

**Recommendations for Future Research.** The method that guided this study, the findings from the study, and the limitations that were identified, have pointed to several recommendations for future research. This section discusses ways to address some of the study’s limitations, as well as other considerations and recommendations.

First, this study surveyed chief student affairs officers about the Latino-based programs and services that are offered at the institution. This researcher made the assumption that students participated in the programs and services. In the future, this
study could be replicated by surveying students about what Latino-based programs and services in which they actually participated. This would address this limitation of the study and could validate the results from the student’s perspective.

The current study used a quantitative methodology, which prevented additional insight and interpretation of the findings derived from the study. In the future, this study could be replicated by using a qualitative research method. Qualitative research could provide additional information about why students participate or do not participate in Latino-based programs and services. In addition, Latino students could provide more detail about to what they attribute their success.

As mentioned previously, further research needs to be conducted to determine why the Plains region of the country is a negative predictor of Latino baccalaureate completion rates. This would be especially beneficial to the Latino students studying in the states in this region of the country.

This study could be replicated with other student populations, including African-American students, adult students, low-income students, or other groups with low baccalaureate-completion rates. This could assist institutions in determining what programs and services influence baccalaureate-completion rates in those specific populations.

If this study were to be replicated, this researcher would suggest downloading the institutional data in advance of survey distribution. This would ensure that no responses would need to be excluded from the study at a later date. In addition, this researcher would suggest asking about the involvement of Latino students with other students. This
may prove to be a significant predictor, based on the influence of peer interaction on completion rates.

Finally, this study used four-year baccalaureate-granting institutions as its target population. In the future, this study could be replicated at other types of institutions, such as community colleges, by using a different dependent variable. This could be especially helpful to Latino student success, as many Latinos begin their higher education career at these two-year institutions.

Limitations of the Study

One significant limitation of the study is that the results are not generalizable to all institutions of higher education, such as community colleges.

An additional limitation is that the study assumed the chief student affairs officer was the most knowledgeable person at the institution to answer the survey questions. With a variety of different governance models at institutions of higher education, there may have been another individual who may have been a more appropriate respondent. In fact, numerous responses indicated that programs and services for Latino students were offered through the institution’s office for diversity/multicultural student services, which would indicate that there may be other staff members who work more closely with Latino students than does the chief student affairs officer.

A third limitation of the study is the methodology. Quantitative research does not allow the researcher to ask follow-up questions, or to seek clarification with respondents. A qualitative study could allow for more insight into the influence of institutional practices and resources on Latino baccalaureate-completion rates.
Conclusion

Current President Barack Obama has a goal for the United States to have the world's highest proportion of college graduates by the year 2020. His goal is unattainable without making the increase of Latino baccalaureate-completion rates a national priority. This study has found that there are ways for institutions to increase baccalaureate-completion rates for their Latino students.

One way to assist and support Latino students is to provide programs and services that provide a sense of belonging to them and that have proven to have an influence on Latino baccalaureate-completion rates. This study found six significant, positive indicators of baccalaureate completion for Latino undergraduate students at four-year baccalaureate degree-granting institutions. Of these six, two were institutional characteristics (private institutional control and doctoral degree-granting) that cannot be altered. However, four predictor variables emerged that institutions can adopt in an effort to improve baccalaureate degree-completion rates for Latino undergraduate students.

While previous research has studied the influence of mentorship and living-learning communities on academic achievement, this study found that Latino-based mentorship and Latino-based living-learning communities enhance an institution’s Latino baccalaureate-degree completion rates. In addition, institutions that offer Latino-related academic programs and offices of multicultural-student services also contribute to their Latino baccalaureate degree-completion rates.

All four of these variables share one distinct factor; they enable student-student interaction. Student-student interaction is important to the student experience because it allows peers to learn from each other and to support one another. In addition, student-
student interaction has been linked to student satisfaction (Astin, 1993). In addition, these programs also enable interaction between Latino students, which adds to the sense of belonging among these students (Hurtado & Carter, 1997; Strayhorn, 2008).

This study has also underscored the application of Astin’s student involvement theory, as well as his conceptual framework, the I-E-O model. This study provided evidence to higher education administrators, faculty, and staff that certain types of programs and services that they offer have an influence on baccalaureate degree-completion rates. In addition, this study provides empirical evidence to Latino students and their families that certain institutional types can influence completion rates.

As the landscape of college campuses continue to change, and more Latino students enroll in higher education, educators need to find ways to enhance the completion rates of this student population. We also need to enhance the programs and services that we provide to these students. We can meet both of those needs by continuing to study what contributes to Latino baccalaureate degree-completion rates.
References


Appendix A

Cover Letter

Dear Chief Student Affairs Officer,

In 1992, I was the first of my Mexican-American family to graduate from college with a bachelor's degree. Today, I am writing to ask you to participate in my doctoral research study titled, *The Influence of Institutional Resources and Practices on Latino Baccalaureate Completion Rates.* The purpose of my study is to examine what influence, if any, institutional resources and practices have on Latino baccalaureate completion rates at four-year baccalaureate degree-granting institutions. In addition, my study is examining Latino student involvement with various constituents as well.

This survey is being sent to over 1,600 four-year baccalaureate degree-granting institutions across the nation. According to the 2004 Fall IPEDS dataset, your institution meets this criterion. This study is being supported by the Hispanic Association for Colleges and Universities (HACU). HACU's letter of support can be found here.

The survey should take only 10-15 minutes to complete. Your choice to complete the survey is voluntary. Your responses will not be identified with you personally. All of the survey information will be kept confidential, and reported as combined responses. By answering the survey questions, you are confirming that you are 18 years old or over and you are consenting to participate in my research study. To view the official consent letter, click here.

I sincerely hope that you will take a few minutes from your busy schedule to complete my survey: http://vovici.com/1.dll/JGsB672C6D961laD9XU12659J.htm Every single response is vital to my research results! I would be happy to share my results with you to assist in improving the baccalaureate completion rates of Latino students at your institution.

I am available to answer any questions that you have with regard to my research (Michele.Martinez@utoledo.edu) or you may contact my dissertation chair, Dr. Ron Opp (Ron.Opp@utoledo.edu). If you have questions beyond those answered by the researchers, you may contact the Chair of the SBE Institutional Review Board at (419) 530.2844.

Thanks,

Michele Martinez
The University of Toledo Higher Education Program
2801 W. Bancroft Street Toledo, Ohio 43606
Appendix B

Survey Instrument

Survey of Institutional Support for Undergraduate Latino Students

Thank you for taking the time to complete my survey. Your participation in this research study will assist me in identifying what factors influence Latino baccalaureate degree completion rates.

Section 1: Characteristics of Chief Student Affairs Officer

Please circle your demographic characteristics below.

1. Gender: ` Male Female

2. Age: under 24 25-34 35-44 45-54 55-64 over 65

3. Race/Ethnicity: American Indian/Native American African American Caucasian/White Hispanic/Latino Asian American/Pacific Islander Other

4. Highest degree earned: Bachelor’s degree Master’s Professional Degree Doctorate

5. Number of years in field of student affairs: Less than 5 years 5-9 years 10-14 years 15-19 years 20-24 years 25 years and over

6. Number of years at your current institution: Less than 5 years 5-9 years 10-14 years 15-19 years 20-24 years 25 years and over
Section 2: HACU Membership

Please circle/mark your response to the following questions about your institution.

7. Is your institution a member of HACU (Hispanic Association of Colleges and Universities)?
   Yes  No

8. If yes, to what level of membership does your institution belong?
   - Hispanic-serving Institution
   - Associate Member
   - Partner Member

Section 3: Offices for Student Success

Please circle your response to the following questions about your institution.

9. Do you have an office on your campus dedicated to the success of undergraduate minority or multicultural students?
   Yes  No

10. Do you have an office on your campus dedicated to the success of undergraduate Latino students?

If you have an office dedicated to the success of undergraduate Latino students, please indicate the number of individuals who work in this office at your institution. Please circle your response for each question.

11. Number of full-time staff
    0  1  2  3  4+

12. Number of part-time staff
    0  1  2  3  4+

13. Number of graduate student assistants
    0  1  2  3  4+

Section 4: Academic Program of Study

Please circle your response to the following question about your institution.

14. Does your institution offer any academic program that studies Latinos or Latino culture? (ie. Latino Studies, Chicano Studies, Latin American Studies)
   Yes  No
Section 5: Institutional Offerings for Latino Students

Please circle your response to the following question about your institution.

15. Does your institution offer programs and services specifically for Latino students (i.e., Latino mentoring programs, Latino student organizations, etc.)?
   
   Yes  (proceed to Section 6 of the survey)
   No   (proceed to Section 7 of the survey)

Section 6: Latino-based student programs and services

Please indicate your response to the following question about undergraduate Latino-based student programs and services at your current institution.

Does your institution offer any of the following programs and services specifically for undergraduate Latino college students? If so, please indicate the contribution that you believe it has on baccalaureate completion rates of undergraduate Latino students at your institution.

<table>
<thead>
<tr>
<th>Latino-based program/service</th>
<th>Offered at Your Institution?</th>
<th>Major Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>➢ Latino outreach/early intervention/bridge/pipeline program</td>
<td>➢</td>
<td>Moderate Contribution</td>
</tr>
<tr>
<td>➢ Latino recruitment program</td>
<td>➢</td>
<td></td>
</tr>
<tr>
<td>➢ Latino orientation program</td>
<td>➢</td>
<td></td>
</tr>
<tr>
<td>➢ Latino scholarship program</td>
<td>➢</td>
<td></td>
</tr>
<tr>
<td>➢ Latino living learning community (residential program)</td>
<td>➢</td>
<td></td>
</tr>
<tr>
<td>➢ Latino first year experience program</td>
<td>➢</td>
<td></td>
</tr>
<tr>
<td>➢ Latino learning community (non-residential)</td>
<td>➢</td>
<td></td>
</tr>
<tr>
<td>➢ Latino financial aid program</td>
<td>➢</td>
<td></td>
</tr>
</tbody>
</table>
### Survey of Institutional Support for Undergraduate Latino Students

**Section 6: Institutional Practices and Resources (continued)**

Does your institution offer the following programs and services specifically for undergraduate Latino college students? If so, please indicate the contribution that you believe it has on baccalaureate completion rates of undergraduate Latino students at your institution.

<table>
<thead>
<tr>
<th>Latino-based program/service</th>
<th>Offered at Your Institution?</th>
<th>Major Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Little or no contribution</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Moderate contribution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large contribution</td>
</tr>
</tbody>
</table>

**Latino-based program/service**

24. Latino student success course
25. Latino mentorship program
26. Latino advising program
27. Latino tutoring/academic support/skills enhancement/study tables
28. Latino career program
29. Latino leadership program
30. Latino community service program
31. Latino study abroad program
32. Latino student organizations
33. Latino Greek chapters
34. Latino student lounge/office space
35. Latino cultural awareness programs (ie. Hispanic heritage month)
36. Latino graduate student organization
37. Latino faculty/staff association
38. Latino alumni affiliate/group
39. Latino community advisory group

40. Other Latino-based programs and services that your institution offers that have not been listed here:

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Survey of Institutional Support for Undergraduate Latino Students

Section 7: Program/Service Restrictions

Please mark your response to the following question about your institution.

41. Some institutions do not offer specific programs/services for designated student populations. If your institution does not offer such Latino-based programs or services, please indicate why below:
   - State restrictions
   - Regional/local restrictions
   - Institutional restrictions
   - Latino student population not large enough for such programs/services
   - Do not know/unsure
   - Other: ____________________________

Section 8: Latino Student Involvement with Others

Please indicate your response to the following question about the level of involvement between Latino college students at your institution and key university and community stakeholders. Fill in one response for each question.

In your estimation, how often do Latino college students at your institution interact with:

42. Faculty?
43. Staff?
44. Alumni?
45. Community members?

Section 9: Final Input

Thank you for taking the time to complete this questionnaire. Is there anything else that you would care to share with the researcher with regard to the subject of Latino baccalaureate completion? If so, please provide it here:

________________________________________________________________________

________________________________________________________________________
Appendix C

Letter of Support

April 23, 2012

Michele Martinez
Doctoral Candidate
The University of Toledo Higher Education Program
2801 W. Bancroft Street
Toledo, OH 43606

SUBJECT: Survey for doctoral dissertation

Dear Ms. Martinez:

On behalf of the Hispanic Association of Colleges and Universities (HACU), I am writing to express our strong support for your dissertation study, *The Influence of Institutional Resources and Practices on Latino Baccalaureate Completion Rates*.

Although the majority of Latino students (54%) are enrolled at Hispanic-Serving Institutions (HSIs), it is imperative that we also understand the Latino student experience at non-HSIs. Your proposed study will provide us with additional information on the potential impact institutional resources and Latino student involvement with various institutional stakeholders have on Latino baccalaureate completion rates at four-year institutions. Research has shown that the Latino students' higher education experience is distinctive. This study will add to what is known about the Latino student journey in higher education.

At the heart of HACU's mission is passionate advocacy for the policies, resources, and organizational designs that will increase higher education success of our Latino students. Your dissertation represents just such an effort and we are solidly behind it. I wish you every success both with your study and with the completion of your doctoral degree.

Sincerely,

[Signature]

Antonio Flores
President and CEO