The relationship between policies, practices and institutional trends in the awarding of doctoral degrees to Hispanic students

Rosalinda C. Dunlap

The University of Toledo

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A Dissertation

entitled

The Relationship between Policies, Practices and Institutional Trends in the Awarding Of

Doctoral Degrees to Hispanic Students

by

Rosalinda C. Dunlap

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

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May 2013
An Abstract of

The Relationship between Policies, Practices and Institutional Trends in the Awarding Of Doctoral Degrees to Hispanic Students

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According to the United States Census Bureau (2005), Hispanics are the youngest and largest minority group in the country. Unfortunately, Hispanics have the largest drop-out rates of any major ethnic group in the US, which will result in fewer Hispanics entering Ph.D. programs (Yosso & Solorzano, 2006). Because of this doctoral achievement gap among Hispanic students, this dissertation investigated how higher education administration, educational policies, and programs for doctoral students can help address the obstacles and promote retention and graduation of Hispanic Ph.D. students. A 14-question survey addressed the independent variables related to perceived influence of use, perceived frequency of use, and perceived importance of use of social, support, financial, and other institutional programs that either directly or indirectly address Hispanic doctoral students. According to a Pearson correlational analysis of the data collected, no relationship existed between the independent variables and the dependent variable, percent change in doctoral degrees awarded to Hispanic students. Follow-up questions provided qualitative data that were analyzed through coding, from which the major themes of geographic location, differences in general diversity programs versus Hispanic-focused policies and programs, public versus private control, and issues of adequate
versus inadequate funding. Suggestions for future research and implications follow from these findings and themes. Based on the results, the dissertation concludes that in contrast to what some models suggest and what many administrators believe about the value of programs for recruitment and admissions, academic services, curriculum and instruction, student services, and financial aid, the existence and perceived importance, influence, and frequency of use of such programs did not actually correlate with a positive change in the percentage of Ph.D. degrees completed by Hispanic doctoral students.
I dedicate this dissertation to my children, Rachael and Jason, who have been the brightest light of my life. It is because of your never ending love, and your belief in me, that I was able to share with you that no matter how old you are in life, your dreams are always possible to come true. So please never give up on your dreams for you and your families and show the world your great life spirit. Be happy my sweet children, I love you both very much.

To Elijah, Lily, and all of my future grandchildren who call me “Honey.” I hope your future educational journeys take you to places of making your dreams come true too, whatever they may be. Honey loves you dearly and will always be there for you in life!
Acknowledgments

I owe many thanks to those who helped me make this dissertation possible. I would like to thank my mother, Consuelo Cadena Flores, and my father Candelario Flores for believing in the value of education and sacrificing their own lives by moving far away from their families to give me the opportunity to pursue my education all the way to a doctoral degree. I love you Mom and Dad.

I would also like to thank my children, Rachael and Jason, for all of their support and encouragement while pursuing my dream. Their patience, understanding, and belief in me was the foundation to my doctoral degree completion. I am so proud of both of them in pursuing their own educational journeys and life dreams. I love them very much and will always be their soft place to fall.

I owe eternal gratitude to my deceased husband, David, to whom I say, “I did it honey!” Our dream of continuing on with my education after he died kept me motivated. He would be proud of me and our children for completing our educational journeys like he did before his young life ended. We are all doing well because of the foundation he left for us to pursue college degrees. The ripple effect of his heartfelt gifts while he was alive will be everlasting, and I will always love him.

I am also indebted to my partner Keith, whose patience and continual help during my dissertation is most appreciated. His continual presence in my life made it easier for me to get through the writing process and I will always be thankful and grateful for the role he has played. I would like to thank my dissertation advisor, Penny Poplin Gosetti, who has been a great teacher and mentor. And a final thank you to Clay Chiarelott for final draft and editing help. He was most helpful in weaving it all together at the end.
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Chapter One

Introduction

The United States is rapidly becoming a more diverse nation, yet Hispanic minority groups continue to be underrepresented on university campuses. From a national perspective, ensuring the education of Hispanics will positively impact society because they will be able to move upward in their careers. This career mobility will contribute to the growth of our society as 13 million Hispanic men and women will be in the workforce by 2050 according to the U. S. Census Bureau (2008). According to the National Council of LaRaza (as cited in National Science Foundation, Division of Science Resources Statistics [NSF/SRS], 2009), “nearly 21.8 million Latinos are at work in the United States, representing 14.2% of the labor force and by 2050, it is expected that one in three working Americans will be Latino” (p. 2), with only 4 in 10 Hispanic workers being female. As of 2002, 379,666 graduate degrees were awarded in the US with only 17,416 being earned by Hispanics. Of the graduate degrees awarded, 17,428 were doctoral degrees, 4% of which were earned by Hispanics, and 78% of which were earned by whites (NSF, 2009).

While Hispanics as a group represent diversity in the workplace and in education, they are also comprised of diverse races and ethnic origins. The word Hispanic describes a person of Cuban, Mexican or Mexican-American, South or Central American, Puerto Rican, or any other Spanish ancestry or descent. Despite their differences, Hispanics share common bonds of culture, religion, history, language, and educational oppression. Increasing ethnic diversity on college campuses is important because evidence exists that a diverse university student body is associated with greater educational experiences.
Astin (2002) described, “One such characteristic that has generated renewed interest in the academic community is student ethnicity” (p. 68). One possible reason for this interest may be because the Latino population will continue to grow, with the U.S Census Bureau (2008) projecting that by 2050, the Hispanic population will reach 102.6 million people which will account for 24.4% of the population. Fry (2002) reported:

College enrollment is projected to increase 20% from 1999 to 2011 with the bulk of students being minorities, including a sizable and growing number of Hispanic students. In the late 1990s, 1.3 million Latinos went to college, the third largest group of students, about 11 million whites enrolled in college along with 2 million African Americans, however only 1.9 percent of Latino students are pursuing graduate studies, Latinos have the lowest rates of graduate school enrollment of any major racial/ethnic group. (p. 3)

Fry (2002) continued, “The typical holder of a bachelor’s degree earns $2.1 million over 40 years, those with Master’s degrees earn $2.5 million, doctorates $3.4 million” (p. 8).

As stated by Mather and Jacobsen (2010), vice presidents at the Population Reference Bureau, “These differences are important because earning capacity varies considerably by education level. In 2008, poverty levels ranged from a low of 3 percent among those with graduate or professional degrees to a high of 24 percent among high school dropouts” (para. 4). Education changes behavior and the ability to communicate better to work within society. Within the communities of higher education Hispanics can become leaders and their advanced education will open up opportunities for them to have influential careers.
This dissertation research addressed the policies and practices related to retaining and graduating Hispanic Ph.D. students. This research examined the percent change of doctoral degrees awarded to Hispanics and what the relationship was between degree attainment and institutional policies and practices.

**Background of the Problem**

According to the U.S. Census Bureau (2005), Hispanics are the youngest and largest minority group in the country topping out at 41.3 million. Unfortunately, Hispanics have historically had the highest drop-out rates of any major ethnic group in the US, which has resulted in less numbers of Hispanics, both men and women, entering a Ph.D. program (Pinto, 1997). In 2005-2006, of all degrees awarded to Hispanics, 37% of associate degrees, 39% of bachelor’s degrees, 48% of first professional degrees, and 44% of doctoral degrees were awarded to Hispanic males (NCES, 2007). Herein lies the problem: If Hispanics desire to learn, why are there not more Hispanics attaining a Ph.D.? Gonzalez (2006) stated that for Hispanics, “Poor K-12 academic preparation, undesired cultural assimilation and overt and covert racism set the tone for educational challenges through graduate school” (p. 357).

**Purpose of the Study**

The purpose of this research was to examine the percent change of doctoral degrees awarded to Hispanics and what the relationship is between degree attainment and institutional policies and practices related to retaining and graduating Hispanic doctoral students.

Gonzalez (2006) stated that out of the “.26% of Latinas enrolled in graduate school, only .06 % attained their master’s degree and only .003% attained their
doctorates” (p. 348). Guzman (2009), an assistant provost for the multicultural faculty recruitment and retention at the University of Denver (UD), addressed the lack of Hispanic women in graduate school. The University of Denver hosts the National Summer Institute (NSI), which was “developed to address the under-representation of faculty of color and women in academia, and the larger goal of UD is to make NSI the main vehicle for increasing the pool of doctoral students of color and women” (p. 2). However, the underrepresentation of Hispanic men as faculty is a problem as well. Findings collected by NCES (as cited in Babco, 2009) report, “Hispanic men have made very little progress” (para. 7). Hispanic men still account for only 1.5% of all full male professors while Hispanic women account for only 2.7% of all full female professors.

Gandara (2009) stated, “Chicanas consistently out-perform Chicanos at every level of schooling. At the level of the doctoral degree, 1.7 percent of all Ph.Ds. go to women versus 1.4 percent to males” (para. 6). Similarly, Mather and Jacobson (2010) claimed, “Less than one-fourth of Latino men ages 18-24 were enrolled in college or graduate school in 2008, compared with one-third of Latino women” (para. 4). This dissertation is designed to contribute to and provide valuable information on how higher education administrators on doctoral campuses and educational policy makers can help address the obstacles and promote facilitators to the retention and graduation of Hispanic Ph.D. students.

This research contributes to the literature by providing a better understanding of policies and practices that impact retaining and graduating Hispanic Ph.D. students. The research conducted informs institutions on where to assign their resources and support for Hispanics and creates an agenda for future change. The more Hispanics are educated, the
more they will inspire their children to succeed and the less this group will be held back educationally.

**Methodology**

The methodology for this study consisted of five steps. During the first step, I selected the top 24 U.S. institutions awarding doctoral degrees to Hispanic students identified based on research by Excelencia in Education (Santiago, 2008). This organization works with The U.S. Department of Education, NCES and the Integrated Postsecondary Education Data System (IPEDS) to analyze and collect data to help strengthen institutional policies and practices for the success of Hispanic students in higher education. I calculated the percent change in doctoral degrees awarded using IPEDS data from 2002-2008 to examine the percent change of doctoral degrees awarded to Hispanics at the top 24 institutions and what the relationship was between degree attainment and institutional policies and practices.

The second step involved developing a survey of best practices and policies that support retention and graduation of Hispanic Ph.D. students based on the information collected in the literature review. I conducted a telephone survey with the deans of the Graduate Colleges at the 24 institutions. The survey consisted of questions regarding institutional policies and practices contributing to retention rates and degree completion rates of Hispanic Ph.D. students.

Third, based on the 24 institutions identified, I analyzed the differences and similarities in their institutional policies and practices to study if commonalities exist that have a relationship to retention rates of Hispanics in a Ph.D. program.
The fourth step involved comparing similarities and differences between the policies, practices, and programs of the 24 institutions that were geared directly or indirectly towards the needs of Hispanics doctoral students. A correlational analysis between the independent variables of perceived importance, influence, and frequency of use and the dependent variable of percent change of Ph.Ds. awarded to Hispanics was conducted.

**Research Questions**

1. What is the percent change in the number of doctoral degrees awarded to Hispanic students at each of 24 identified institutions from 2002-2008?

2. What institutional policies and practices if any are related to doctoral degrees awarded to the change in the number of Hispanic students?

3. What is the relationship if any between independent variables related to institutional programs listed in Appendix A of policies and practices and the percent change in the number of Ph.Ds. awarded to Hispanics from 2002-2008?

**Definition of Key Terms**

For the sake of clarity and conciseness of communication, a common vocabulary of key terms must be established. Some of these terms are rarely encountered and so require definition because of their potential unfamiliarity, while others must be defined because, while generally familiar, are used in particular ways not necessarily explicit in the common use of the term. The key terms used throughout this dissertation that may require definitions and explications to facilitate a common understanding include bonding social capital, Hispanic/Latino/Latina, homophily, institutions, social capital, and social capital bridging.
Bonding social capital: Unlike social capital bridging, which occurs between groups or networks that do not already have ties, bonding social capital is when people get resources from within certain groups with which they already have ties. Group cohesiveness based on commonalities such as nationality, age, life experiences, goals, and shared experiences can also be created to form bonding social capital (Gittell & Vidal, 1998).

Hispanic/Latino/Latina: These terms are used interchangeably in this dissertation to describe a person of Cuban, Mexican or Mexican-American, South or Central American, Puerto Rican, or any other Spanish ancestry, or descent who, despite their differences, share common bonds of culture, religion, history, language, and oppression. The term Latino is the masculine descriptor while Latina is the feminine descriptor for this population. The term Hispanic is not gendered.

Homophily: Homophily comes from the Greek words homo- (same) and –phil (love). It refers to the attraction between similar entities and most commonly describes communication between two people of a kind. The adjective form of the word is homophilous (McPherson, Smith-Lovin, & Cook, 2001).

Institutions: For the purposes of this dissertation, the term “institution” refers to institutions of higher education located in the United States of America, in other words, U.S. colleges and universities.

Social capital: The variety of tangible and intangible returns a person acquires through social investment, in the form of receiving information, resources, and knowledge from group memberships that can influence and create social credentials (Lin, 1999).
Social capital bridging: When social capital creates links between networks of people, such as formal organizations, or informal group cohesiveness, who may otherwise not have shared social relations, it is referred to as bridging (Falk & Guenther, 2006).

Conclusion

As the number of Hispanics in the US continues to grow at a rapid pace, it is becoming more and more important to ensure this population is served at all levels of education. Unfortunately, Hispanic minority groups continue to be underrepresented on university campuses at all levels. The following literature review explores in greater depth the issue of Hispanics in higher education, with specific attention placed on the doctoral level.
Chapter Two

Literature Review

Higher education administrators have spent a lot of time trying to evaluate and understand the relationship between institutional practices and the successful graduation of underrepresented Hispanic students. Focusing on doctoral education, past trends, and critical issues affecting Hispanic doctoral students, the Texas Higher Education Coordinating Board (2004) in its report *Doctoral Education in Texas* suggested, “Universities have a major responsibility to work with both K-12 and undergraduate institutions to encourage Black and Hispanic students to prepare and complete doctoral education in a broad variety of fields” (p. 30) because Hispanics are underrepresented in doctoral education and careers that require doctoral degrees. Institutions need to focus on graduating students, not just enrolling them. Tinto (1987) claimed, “Decisions to withdraw are more a function of what occurs after entry than what precedes it” (p. 6). The *Closing the Gaps by 2015* report as adopted by the Texas Higher Education Plan (2000) suggests, “different types of institutions should focus on strengthening their own unique missions” (p. 15). Developing programs, policies, and best practices that focus on support services and institutional culture can make a significant difference on the successful graduation of Hispanic doctoral students.

Understanding an institution’s commitment to access programs that assist student graduation outcomes for Hispanic students may be the key to understanding how to build a bridge from undergraduate to graduate school programs. Hispanics face formidable challenges when it comes to higher education. Those students that who do not wrestle with English have other barriers to negotiate, including cultural, social, familial, and
economic (CollegeScholarships.org, 2010). An example of an institutional commitment to access programs is the Mellon Minority Undergraduate Fellowship Program (MMUF). This access program prides itself on carrying over its undergraduate students into graduate programs by financing the repayment of undergraduate loans for minority students who want to pursue doctoral degrees. The MMUF also builds effective support programs in minority students’ undergraduate programs to assist them in competing for admissions into a graduate program (Drewry, 1993). At the national level, although Hispanics are 7% of the US population, only 3% earned Ph.Ds. as compared to Whites who represent 78% of the US population yet earned 88% of Ph.Ds. (Drewry, 1993). When it comes to higher education, most Hispanic students are not offered the opportunity to earn a Ph.D. degree due to lack of education beginning as early as elementary school. Therefore, it is important to understand and create processes that open educational opportunities for Hispanics.

Developing institutional policies and practices to create greater access from undergraduate to graduate programs for Hispanic students is important for Ph.D. matriculation and graduation to occur. However, if there is no matriculation, there will be no graduation. In Palmer and Williams-Greer’ (2006) study of the barriers facing Hispanic students, the authors found many barriers including social and cultural issues that affect graduation:

College leaders have failed to build bridges between under-represented students’ and their doctoral programs. Just accepting more minority candidates is not the solution; working to understand cultural conflicts, remove institutional barriers and increase the quality of diversity initiatives are essential. (p.2)
Therefore, the fewer Hispanic students who enroll in higher education institutions, the fewer Ph.Ds. will graduate. Brown, Santiago, and Lopez (2003) have claimed the problem starts as early as high school when dropout rates for Hispanic students is 30%, twice the African-American and thrice the white student percentage. Discussing the implications of this statistic, Brown et al. add:

Some policymakers argue that cutting the dropout rate of Latino youth is top priority for improving Latino advanced educational attainment. Without plugging this hole in the educational pipeline for Hispanic students they argue, we will never substantially increase Latino enrollment in higher education. (p.2)

Regardless of the exact point the problem manifests itself most severely, a general lack of social and academic support seems to be among the contributing factors.

Whenever students do not have the necessary social and academic support, graduation rates tend to decline and drop-out rates increase (Berger, 2010). Yosso and Solorzano (2006) uncovered alarming statistics regarding how Hispanics are poorly served by the educational system. Out of 100 Hispanic students who begin elementary school, 54 drop out and 46 graduate from high school. Of that same 100, 26 enroll in higher education institutions, 8 graduate with a baccalaureate degree, and only 2 with a graduate or professional degree. “Less than one will receive a doctorate” (p. 1) in comparison to 10 out of 100 White students. Not being academically prepared to enter college impedes future educational opportunities for Hispanics. President Barack Obama’s Executive Order (2010) reports that although there are currently 1 in 5 Hispanic students enrolled in the public school systems, almost half of them never earn their high
school diploma, which limits Hispanic higher education opportunities. In Padilla’s (2007) most recent report to the Lumina Foundation, he writes:

For every 100 Latino elementary school students, 48 drop out of high school and 52 graduate from high school. . . . Of the 31 who enroll in college, 20 go to a community college and 11 go to a 4-year institution. . . . Of the 20 who go to community college, 2 transfer to a 4-year college. . . . Of the 31 who enrolled in college, 10 graduate from college. . . . Of the 10 who graduate from college 4 earn a graduate degree and less than 1 earns a doctorate. (p. 2)

While it is promising that the numbers of Hispanic students earning various levels of higher education degrees have grown between 2006 and 2010, it is important to maintain and increase this rate of growth until parity between Hispanics and other racial and ethnic groups is achieved.

The lack of academic preparation is a sobering reality for Hispanics. Economically challenged and disadvantaged background conditions impede the flow of Hispanics through the educational pipeline. Drewry (1993) reports, “The underrepresented minority groups start out behind, in that significantly smaller percentages of them go to college and earn degrees, in part because of attrition in earlier stages in the educational process” (p. 2). Early elementary academic preparation is imperative for Hispanic students to succeed in higher education. “The metaphor of the pipeline for Latino students begins as early as the 7th grade when illiterate students begin to fall behind, young Latino boys and girls enter juvenile detention systems, and/or assume familial economic provider roles” (Zambrana & Zoppi, 2002, p. 39). Increasing the numbers of successful Hispanic students in the educational pipeline will create a
better environment for engaging Hispanic citizens in their community because it will give them improved life opportunities.

There are several ways to increase Hispanic students on college campuses by marketing to their needs. Rosales (2006) claimed Hispanic graduate students often feel like the “lonely only” in their graduate programs and departments, and so universities need “to sponsor culturally diverse programs, events and workshops for them and community members” (p. 208). Offering, “student support groups, retention committees, research and writing teams creating Latina/o doctoral student anthology and informal support networks” helps because it makes the campus culture comfortable for Hispanic students by reducing cultural shock associated with joining a predominately white student body (Gloria & Castellanos, 2006, p.177).

Numerous programs exist to market to scholars from underrepresented groups. Cooper (2011) reported on how The University of Texas attracts and prepares graduate students by having an annual grad fair that gathers all graduate programs under one roof. The fair offers a “one-stop shop to learn about the many master’s, doctoral and graduate certificate programs it offers” (p. 1). The University of Florida’s College of Education plans to market to graduate students, which adds a personal touch from faculty by involving them in the recruitment process. The university offers campus visits for potential graduate students where they meet the graduate faculty, administrators, and current graduate students. At this time, funding opportunities, fellowships, and assistantships are discussed. Advertising in organizational newsletters and magazines that attract potential underrepresented diverse students and diverse representation in
marketing materials such as brochures, posters and advertisements are used (College of Education at the University of Florida, 2011).

A May 3, 2011 letter written by Chicano Latinos Graduate Student Collective co-chairs Carlos and Alexander to the Dean of Graduate Division at The University of California, Irvine, expressed ways to improve issues on campus that affect Hispanic doctoral students such as the loss of Hispanic doctoral students on their campus and not enrolling any additional doctoral Hispanic students in the previous two years. The issues of concern were “an academic climate that is hostile to Chicano/Latino scholars, both graduate students and faculty” and “certain themes we have found negatively affected our own integration into our respective doctoral programs” (p. 2). Their suggestions for improvement were to have more faculty of color to support a culture of diversity and to provide support to pursue research and methodological interests. The letter also stated, “faculty wish for us to help them in their research rather than seeking to help us or guide us in ours” (p.2), which may undermine their scholarly pursuit. Having a formal annual event welcoming students of color to the university, having a staff person coordinate outreach programs and network to graduate students of color, and compensating or giving workload credit to faculty who mentor larger amount of graduate students are additional suggestion in the letter. Perhaps if leadership and college administrators make a more welcoming environment on college campuses, they could market their positive environment to recruit and retain Hispanic doctoral students.

Georgia State University markets to Hispanic students by hiring a bilingual recruiter to help not just Hispanic students, but to speak to the parents who may not speak English to answer questions in their own language. They also offer a bilingual counselor
and recruitment brochures available in Spanish, and provide Hispanic college fairs
awarding scholarships for Hispanic students (Burk, 2006). University of Arizona reports
that in the US one out of every four people who live in poverty are Hispanic, so for better
outreach efforts, the University markets to Hispanic students in middle school by inviting
parents and students to tour its campus with Spanish-speaking recruiters, and Spanish
speaking counselors who know culture and language (Pallack, 2004). The University
also offers a Chicano-Hispanic Center where students can get advice on social-cultural
opportunities (Pallack, 2004).

Taking advantage of academic and institutional support can be the key to
Hispanic student achievement in a Ph.D. program. Examining factors that promote
Hispanic student success and retention at the undergraduate level has assisted in the
development of innovative and effective institutional programs to increase the graduation
rates of Hispanic students. Engle and O’Brien (2006) suggest several ways universities
can promote a culture of student success. Belonging to freshman interest groups, and
using faculty and staff to serve the students’ needs if a problem arises are some ways to
improve the first year experience. Having special programs for low income and minority
students such as bridge and orientation programs, mentoring, tutoring, and enrolling in
freshman seminar classes are more ways to enhance student success. Creating a social
credential for students by reinforcing what they gained from belonging to the groups is
also very important for student success. Mentoring, tutoring, and enrolling in freshman
seminar classes reinforces of the social capital of knowledge gained by belonging to the
group. Interaction between students, faculty, and administration must go beyond the
formal classroom environment; it must include informal contact as well. Integrating
students into the fabric of the institution seems to be the key to success at both the graduate and undergraduate level. This chapter presents literature that describes how institutional programs, faculty mentorship, and funding are contributing factors in successfully retaining and graduating Hispanic Ph.D. students.

One of the greatest issues that faces higher education institutions today is the low number of Hispanic students who graduate with a Ph.D. (Huneke, 2010). Huneke states: Hispanic students graduate at lower rates than their white peers across similarly ranked colleges, from the nations least selective to its most selective colleges and universities. Even many federally designated Hispanic-Serving institutions are graduating less than half of their Hispanic students. (para. 3)

Lin (1999) uses social capital theory to explain how Hispanic students’ lack of information on policies and procedures to getting into college is one reason why they tend to have unequal access to higher education information, which in turn creates lower graduation rates for Hispanic students.

**Social Capital Theory**

Social capital theory can be used to understand the process of a student weaving into and through the higher education institutional system. Social capital is what a person acquires by receiving information, resources, and knowledge from group memberships that can influence and create social credentials (Lin, 1999). A form of social capital is information, and capital is knowledge that can be transferred. Social networks will increase the Hispanic student’s social relationships and knowledge that can create opportunities for social, personal, and educational advancement that they might otherwise not have. Without adequate resources, Hispanic students cannot get correct information
about steps necessary to enroll in college. Inadequate resources put the Hispanic student at an unfair disadvantage with students who have greater access to social resources. There are considerable benefits and economic rewards from having connections between individuals who trust and cooperate with one another within a shared network group. If social capital network is limited, then the quantity and quality of information and resources about education the student receives will be limited.

Passing knowledge onward in one’s own network is an example of social capital. The more educated individuals are, the more social capital they will have available to them (Kadushin, 2004). Some examples of social capital may include one’s educational preparation and one’s family’s educational background. When parents are undereducated and are not familiar with a higher education system, they may not be able provide contacts with university personnel, social contacts, and social networks that could assist students in their quest for higher education. Zambrana and Zoppi (2002) discuss the importance of family benefits and resources by stating, “Through social capital, Latino families can translate and transmit their cultural assets intergenerationally” (p. 45). An educated student can then pass on his/her knowledge to other social networks that offer economic and sociological benefits and outcomes. In order for many Hispanic students to understand the Ph.D. educational process, they need to connect with individuals who can help them understand that process. Gandara (2008) explained:

It’s clearly the result of a complex web of social, economic and educational condition . . . families with exceptionally low human and social capital . . . benefits available to those without higher education . . . schools that lack the resources to meet many students’ most basic educational needs. (p. 2)
While Gandara emphasized the negative aspects of Hispanic students’ lack of social capital in the higher education setting, Zambrana and Zoppi (2002) explained the positive outcome that can be expected when social capital is promoted. They claimed, “Translating cultural wealth into social capital will foster resilience and hope among young Latinas and increase their opportunity to develop cognitively, emotionally and behaviorally” (p. 47). In turn, social connections will serve as a larger network of individuals who can be an integral link to information on how to succeed in a Ph.D. program.

The theory of social capital has been contributed to many authors and its roots can be traced back to the 18th and 19th centuries. Social capital can be linked to the earliest of human societies through Greek philosopher Aristotle and his concept of growth and development as illustrated in his famous acorn analogy. “The mighty oak tree stands as an illusion of what an individual acorn may become . . . potential exists within the acorn, but the external factors such as rain, sunlight, and foraging animals may assist or impede its full development” (Maynard & Kleiber, 2005, p. 2). The growth of the acorn to a tree represents positive movement of growth, development, and elevation into something greater. The story of the acorn can be seen as an analogy for the attainment of social capital. The growth and development that students experience as a result of participation in a group or campus organization, translates into social capital. Social capital develops when social organizations and networks improve the students’ growth and upward mobility in higher education. Social capital is about establishing personal connections that create intangible and tangible benefits that help students both short term and long
term. Social capital works by improving and reinforcing relationships that will influence the positive outcome of networking.

Building on the work of Aristotle, social reformer Hanifan in 1916, referred to social capital theory as “goodwill, fellowship, mutual sympathy, and social intercourse among a group of individuals and families” (as cited in Claridge, 2004, p. 2). Putnam (2000) stated, “The networks that constitute social capital also serve as conduits for the flow of helpful information” (p. 289), when referring to the benefits and values of social capital in networks. Smith (2009) described the strengthening of social capital by stating, “Education’s longstanding concern with association and the quality of life in associations can make a direct and important trust and tolerance” (p. 10).

Homophily is the likeness or similarity between entities and most commonly describes communication between two people. McPherson et al. (2001), noted the Greek roots of homophily, citing Aristotle’s definition, “love those who are like themselves,” and Plato’s statement of “similarity begets friendship” to describe the tie homophily has amongst people who are similar to others. McPherson et al. drew on the work of sociologist Simmel who wrote, “the proverbial expression of homophily, birds of a feather flock together” (p. 417) and represents the elementary definition of homophily. When describing common memberships with other individuals, Simmel (1908/1971) suggested that when we have commonalities with others, it is easier to relate to them. Simmel described the importance of individual development and group expansion, “As the circle increases, so do its cultural offerings and therefore the possibilities of our fully developing inner lives, personalities” (p.12). Simmel expressed the importance of the social circle and its relationship to the larger social circle. McPherson et al. found in their
review of the literature on race and ethnicity that race and ethnicity are the biggest divide in the US and stated “strong homophilous association patterns by race and ethnicity” (p. 417) are a common ground that concentrated on demographic characteristics in social groups. Social group characteristics such as parents and family background related to ethnicity and race also influence the ties of homophily. “African Americans and Hispanics fall at moderate levels of homophily, while smaller racial and ethnic groups have networks dominated by the majority group” (p. 420).

When focusing on the education dimensions of homophily, McPherson et al. (2001) found that people will most likely confide in other people of the same educational level and will not confide in people who are not at the same educational level as themselves. Yamaguchi “found that homophily is education extended to inbreeding bias amongst the statuses of the friends themselves, with one choice predisposing other choices of the same educational level” (as cited in McPherson et al., 2001, p.426). Yamaguchi clarified homophily inbreeding as homophilic behavior among students who associate with others similar to themselves and form groups with their cultural peers (as cited in McPherson et al., 2001). In regards to forming educational cohorts on which homophily is based, educational cohorts were found to, “create substantial kin-based contacts with different educational and class levels” (p. 431.) even if they were put together randomly. Therefore, people who are similar in socio-demographic backgrounds are likely to communicate because they are homophilous.

Combining these postulates the rationale for the theory of homophily is straightforward: Similarity breeds connections (McPherson et al., 2001 p. 415) and “birds of a feather flock together” (p. 417). Empirical research has found
strong support for homophily hypothesis, particularly in terms of age, (e.g., Feld, 1982), gender (e.g., Ibarra, 1992; Leenders, 1996), race/ethnicity (e.g., Mollica, et al., 2003), education (e.g., Marsden, 1987), status (e.g., McPherson & Smith-Lovin, 1987). (as cited in Yuan & Gay, 2006, p.3)

The types of social connections associated with homophilous relations can be divided further into two distinct types of network resources, bonding social capital and bridging social capital.

Bonding and bridging are two types of social capital. According to Gittell and Vidal (1998), who gave the original definitions of the terms, bonding social capital is “The type that brings closer together people who already know each other” (p. 15), and bridging social capital is “the type that brings together people or groups who previously did not know each other” (p. 15). In describing the work of Falk and Guenther, Claridge (2004) noted communities cannot move forward without social capital bridging. Social capital bridging can be created through networks of people such as formal organizations or informal group cohesiveness. Group cohesiveness based on commonalities such as nationality, age, life experiences, goals, and shared experiences can also be created to form bonding social capital. Bonding social capital is when people get resources from within certain groups with which they already have ties. For example, a group of Hispanic students enrolled in the same Ph.D. program at the same university would exemplify bonding social capital as opposed to bridging social capital.

While bridging social capital can be referred to as getting information from outside one’s circle of ties and connections, it can also be described as social ties that link people together who might otherwise be divided through race, class, or education levels.
In relating to educational development, Yuan & Gay (2006) wrote, “Scholars believe that a learning community can produce more fruitful learning experiences when its members can learn from each other through social interaction” (p. 15). When students are bonded through race, ethnicity, and education as in homophily, social bonding capital occurs through social resources such as knowledge gained from belonging to a group, influencing through internship programs, and social credentialing of earning a Ph.D.

**Social Resources**

Lin (1999) explained that dissimilarities in the diversity or extent of students’ social connections will result in unequal basic social resources. When inequalities are present in basic social resources for Hispanic Ph.D. students, inequalities may occur in resources received to gain access to higher education Ph.D. programs. Some examples of social resources that may be obtained could be the knowledge and understanding of what is expected in the Ph.D. application process. Additional social resources such as knowledge about how to obtain financial aid and how to access different type of resources may help to create campus relationships that reinforce personal self-esteem, which reinforces social capital. All students may experience personal, financial, or institutional barriers that result in limited access to a university. Underrepresented students however, may experience additional obstacles in the form of social and institutional discrimination. Therefore, the influence of a diverse social climate may soften the transition for them. A university with a diverse student body may be more attractive to Hispanic students than a university without one. Reinforcement of understanding one’s self-worth through the welcoming institutional climate is yet another social resource that is obtained. Institutional administrators need to ensure policies,
practices, and programs are directed toward Hispanic students so they acquire the credential of a Ph.D. degree. Therefore, the more social capital one gains, the greater advantage one has of obtaining his/her Ph.D.

The relationship between institutional policies and practices and the percentage of growth in the number of Ph.D.s awarded to Hispanics is a good indication of how increased graduation rates may occur (Sólorzano, Vallalponda, and Oseguera, 2005). Solorzano et al. wrote “Although there are many factors that may have influenced the lack of educational attainment and progress for Latina/o college students, most of the responsibility lies in the racialized structures, policies, and practices that guide higher education” (p. 289). Hispanic students may arrive at universities academically underrepresented and with financial problems due to weaker secondary education experiences that create barriers to degree completion.

Having a climate supportive of Hispanic students is the key to showing an appreciation of their presence. Therefore, higher education institutions need to evaluate their programs and policies to determine if their campuses are culturally inclusive of Hispanic students. The presence of minority faculty and administrators attract Hispanic students to that institutional environment. Jan (2010) stated:

A diverse faculty helps universities recruit top minority students and provides them with mentors and role models, say students and university officials. The different perspectives and experiences that minority faculty bring can also make colleges more competitive academically and further intellectual debate. (p. 2) Campuses that value diversity are apt to have climates that encourage the graduation of Ph.D. Hispanic students. According to the NCES’s National Postsecondary Student Aid
Study (NPSAS) in 2004, “approximately 369,000 students were enrolled in a Ph.D. and other doctoral programs” (as cited in Redd, 2007, p.4). Since minorities and women disproportionately dropped out of Ph.D. programs and were not counted as continuing students, the number of enrolled students could have been less (Redd, 2007). Therefore, it is more important than ever to devote resources necessary for Hispanics to graduate and increase degree Ph. D. completion rates for Hispanics.

Although the importance of academic success for Hispanic students lies in the strengths and support of a good K-12 elementary education, the enhancement of Hispanics in a Ph.D. program can occur only if institutions implement policies and practices focused on Hispanic graduation success. The institutional support system factors that are structured to support the academic and social growth are contributing factors to success (Santiago & Brown, 2004a; Santiago & Brown, 2004b).

The integration of Hispanic students through connecting them with other students, faculty and the institution appears to be an important factor in their success. The Undergraduate Research Opportunity Program (UROP) was founded at The University of Michigan in 1988 (UROP, 2012). During the first three years of the UROP programs, enrollment was limited to underrepresented minority students exclusively. The UROP’s major goal was to create concrete relationships amongst faculty and first and second year undergraduate students. Four goals were developed to address the highest attrition rate of freshmen and sophomores; to enroll students in Fall and Spring semesters to receive the greatest amount of financial aid; to create support systems such as workshops, peer mentoring, and research groups, and to target underrepresented minority groups and women, which are the two groups at the greatest risk for attrition.
The University of Michigan’s UROP program used many strategies related to funding and mentoring, that help students graduate. Students involved in the program received funding that contributed to increases in retention and graduation rates. Funding was extremely important because students who choose to go into graduate school, which is more costly than undergraduate school, will have less debt entering graduate school than those who were not in the funded undergraduate program. A rewarding transition into graduate school can occur if the institution enables students to succeed without encountering a lot of educational debt. Hill (2008) suggested that increased financial aid to undergraduate Hispanic students positively affects minority enrollment into graduate school. When discussing attrition from Ph.D. programs, Lovitts and Nelson (2000) stated, “As one would expect, students who receive no financial support have the lowest level of participation and are the most at risk of withdrawing from the program” (p. 3). Therefore, the rising costs of graduate school including textbooks, housing, and tuition can negatively impact a minority student’s choice to pursue his/her doctoral studies (Stewart, Russell & Wright, 1997).

Nettles and Millett (2006), researchers in the Policy Evaluation and Research Centers in the Educational Testing Service in Princeton, New Jersey, researched predictors of Hispanic doctoral students’ completion of Ph.D. degrees. In their study of demographic backgrounds affecting progress in higher education for Hispanic students, they found Hispanics earned just 1,270 or 3% of the total doctoral degrees awarded in the US in 2003. They identified predictors of degree completion and research productivity that included research assistantships and faculty mentors. Institutional administrators and
faculty who focus on providing these predictors help prepare Hispanic Ph.D. students for degree completion.

Financial assistance provides opportunities for Hispanic doctoral students to achieve in graduate school. While all students have financial concerns, Hispanics lack social capital and therefore have unique needs. “For Hispanics at the doctoral level, assistantships might represent higher status and greater academic opportunities than fellowships because fellowships tend to separate Hispanics from research obligations and opportunities” (Nettles & Millett, 2006, pp. 209-210). Offering financial support such as research assistantships to Hispanic Ph.D. students enables them to complete their degrees.

Cultural and societal factors such as being economically disadvantaged intertwined with financial barriers can be a barrier for Hispanic doctoral students. A 2004 study by the Tomas Rivera Policy Institute found 43% of all undergraduate Hispanic students and 51% of Hispanic parents were not aware of even a single source of college financial aid (PRNewswire, 2004). Fry (2002), author of numerous articles on U.S. racial, ethnic, and immigrant populations and senior researcher, stated three primary barriers to Hispanic success in college: family pressures, lack of resources from parents who are either incapable of or unwilling to assist them, and lack of preparedness of the student.

Having a faculty interaction is a key predictor of Hispanic Ph.D. graduation rates. Mentoring is faculty interaction and the wisdom, and guidance of a mentor connects the doctoral student with the program and gives the student a sense of appreciation for his/her studies. Nettles and Millett (2006) suggested that when a Ph.D. student’s faculty advisor
is also his/her mentor, the student’s doctoral experience is much happier than if the student did not have a mentor.

Bass, Rutledge, Douglass, and Carter (2007) have suggested the solution to opening the academic pipeline for Hispanic students must include strategies for mentoring. Peer mentoring can have a positive impact on a student’s graduate experience and can assist students in completing their doctoral degree (Cesari, 1990). Cesari suggested peer relationships are an important source of support and encouragement and students can gain a sense of self-worth by helping their peers. Chan’s (2008) findings on mentoring suggested that peer mentoring is a crucial part of a student’s success in the student’s social and intellectual environment. Chan’s study examined the mentoring relationship between ethnic minority doctoral students and how their faculty mentors provide valuable information to the students, who have little knowledge of doctoral studies. Faculty mentors also help to provide understanding of the institutional system of policies and procedures the Hispanic student may not be privy to or even understand. Institutional programs such as peer tutoring helped to increase learning, socialization, and a positive self-image (Chan, 2008). Tinto (1987) noted communication that is constant between undergraduate students and the institution reinforces institutional bonding; this may apply to graduate students as well. The mentor provides the Hispanic student with valuable advice, validation, and feedback about an academic world that can be unclear to navigate, confusing, and anxiety-provoking.

The outcome for research productivity of doctoral students is necessary to train future researchers both in and out of the academy. Therefore, if the Hispanic Ph.D. student can produce either sole- or joint-authored works such as articles or books, or
present a paper, the better opportunity he/she will have at degree completion. Nettles and Millett (2006) support the value of helping doctoral students publish by stating, “Publishing before completing a degree may an indicator of doctoral program quality and student performance as well as student and program marketability” (p. 105). Previously, Wong and Sanders (1983) made similar claims in support of producing research as a doctoral student as an indicator of success, asserting that “research productivity activities are determinants of initial placement and career development after the Ph.D.” (p. 33).

Doctoral degree completion rates for Hispanics is lower than for white students (50% vs. 61%) (Choy, 2002). Baird (1993) noted that, “Researchers have estimated that only half of all doctoral students persist until graduation” (p. 27). The findings of Nettles & Millett (2006) support the importance of financial support during a doctoral program because lack of financial support can delay, lengthen the time, or cause a Hispanic Ph.D. student to drop out of the program completely.

Therefore, institutional administrators and educational policy makers need to do all they can to increase access to a problematic pipeline for Hispanics to participate in graduate school and to implement programs and policies to reduce the obstacles and barriers that stand in the way of Hispanic students completing their Ph.D. degree. This academic pipeline must be strengthened to create access to graduate degree programs and increase racial and ethnic diversity on university campuses.

**Faculty Mentorship**

Faculty, administrators, and policy makers who make policies for doctoral students and who study doctoral education need to understand the institutional climate for Hispanic doctoral students and how faculty mentorship impacts retention of those
students. Creighton et al. (2006) suggested, “Attrition rates in doctoral programs could be as high as 50% with minorities and women leaving their doctoral degrees in higher numbers” (para. 4). Haynes (2008) suggested that studying program and departmental culture would be the first place to begin in order to understand the bearing student programs and departmental culture have on attrition and persistence to degree completion of Hispanic doctoral students. Haynes explained that doctoral student drop-out can occur because of alienating departmental climates. For example, not having enough faculty advisors to meet the doctoral student population needs can create difficulty in those students maintaining close relationships with advisors, which leads to student disappointment with advising. Institutional leaders need to provide opportunities for good mentoring to occur. Therefore, this literature review section addresses the importance of faculty/student relationships and how program and departmental culture can strengthen the degree completion of Hispanic doctoral students.

The literature repeatedly stresses the importance of mentoring and suggests that students are more likely to persist to graduation if they develop and have a strong relationship with faculty members who give them meaningful and adequate guidance on a regular basis (Lovitts & Nelson (2000). Also important for persistence are formal advising meetings that set goals and steps for dissertation completion. The high quality of a relationship between the mentor and the Hispanic student has a positive strong relationship to that student graduating with a Ph.D. degree. Dickenson (1983) found, “the single most important factor associated with student attrition is a feeling of lack of cooperation and understanding on the part of the student advisor” (p. 79). Therefore, having a faculty mentor at both the undergraduate and graduate level can potentially
improve retention and graduation rates. Segura-Herrara (2006) described the importance of a faculty–Hispanic student relationship stating:

The two faculty members whom I consider mentors became more like *padrinos* (godparents) of sorts. These professional and personal relationships allowed me to receive continuous mentorship and support and, most importantly, a safe refuge for me regardless of how frazzled, sad, confused, angry or stressed I might be. (p. 227)

In order to achieve the closeness of the faculty–Hispanic student mentor relationship described by Segura-Herrara, the relationship between the mentor and student must be healthy. Dickenson (1983) has claimed three important criteria are positively related to successful doctoral mentoring and usually exist in a healthy mentor-student relationship for all doctoral students: the quality of the relationship, the accessibility of the mentor, and the mentor’s demeanor. Because of the importance of these qualities that all doctoral students must experience in a mentorship program, it is worth looking closer at how and to what extent they apply to Hispanic students.

An example of the “quality of the mentor/student relationship” is the ability to discuss problems encountered during the dissertation process. Like all students, if a Hispanic student is satisfied with the mentoring relationship, has frequent contacts with the mentor, has an ease of interactions, and feels like he/she has close personal relationships that develop the trust and opportunities to meet informally, then the student will succeed in the doctoral program (Dickenson, 1983).

Second, the characteristics of the mentor are crucial, with accessibility being of the utmost importance (Dickenson, 1983). Characteristics of a good mentor include
being cooperative with the student’s committee members and supportive of the student
during committee meetings (Dickenson, 1983). Dissertation meetings can create a lot
less stress for the student. The personal support from the mentor during the dissertation
meetings encourages the Hispanic student to persist in his/her writing. The Jackson State
University Division of Graduate Studies (n.d.) recommends a mentoring best practice of,
“Offering advice concerning the selection of a dissertation/thesis committee that affords
relevant expertise as well as providing access to faculty members who can play a
supportive mentoring role” (p.1).

The third criterion positively related to successful doctoral mentoring is the
mentors’ demeanor. A mentor who is caring, patient, kind and acts like a personal
counselor during the dissertation process, can enhance the Hispanic student’s confidence
in moving forward in his or her writing process to degree completion. Yahner and
Goodstein (2010) described a mentor as, “a trusted guide. A mentor can offer support in
difficult times. A mentor socializes her or his mentee” (p.1). The dissertation phase
presents additional opportunities for the faculty mentor to have a positive impact on
Hispanic student persistence to degree completion. Faculty can begin developing a well-
grounded foundation with the student by exploring dissertation topics early on in the
program. This can be done on a one-on-one basis with the student or through dissertation
seminars or peer support groups. It is also imperative for faculty mentors to clearly
communicate and clarify what is expected in a dissertation and for dissertation research
as this is a very different type of writing process than what the student was used to in
his/her undergraduate program (Creighton et al., 2006). When writing research papers at
both the undergraduate level and master’s degree level, the student is generally in a
classroom setting with both peers and faculty to assist him or her weekly, which is not the case when writing the dissertation. Writing a dissertation is a single student’s responsibility and feelings of isolation can occur through the writing stage. “Graduate student protégés benefit from guidance by their mentors in many ways. Among these are academic guidance, career development, personal guidance and overall aid in the socialization of the graduate student” (Thomas, Willis, & Davis, 2007, p. 180).

Boyle and Boice (1998) suggested there are three critical components needed for mentoring to be effective for doctoral students. The first component is to assign a mentor when the student enters the doctoral program (Boyle & Boice, 1998). This is important because during the student’s first year of doctoral studies, the student spends most of his/her efforts and time on coursework, so it is important to have mentoring so he/she can understand and get a clear sense of the program. First year mentorship is very important. Most institutions however, delay the mentoring process until the dissertation process begins, which is too late.

The second component for effective mentoring, according to Boyle and Boice (1998), is to have a well-structured procedure for graduate students to select a quality mentor who will be responsive to their needs as a doctoral student. This component is important because the Hispanic doctoral student can begin to learn and understand the faculty mentor’s research interests and find out if the faculty member would be a good mentor or chair for the student’s dissertation committee. This process also helps the student understand the personality and work habits of the faculty mentor and analyze if the student wants to work the next few years with this mentor.
The third component is socialization with faculty and other Ph.D. students. This component is an ideal way to avoid isolation issues, stress issues and can be provide opportunities to meet people who can become a sounding board for future dissertation questions the student may have (Boyle & Boice, 1998). This could also serve as a mentorship for future doctoral students to help them select their dissertation topic, answer any questions they may have about the doctoral program or dissertation process, or help them pick a faculty mentor. Yahner and Goodstein (2010) best described the fulfillment of a mentor by stating:

Becoming a mentor is like making a wise investment; it can be costly as first but the long-term returns are surprisingly large…the mentor benefits at least as much as the mentee. The rewards continue long after one’s student becomes one’s colleague, oftentimes for a lifetime. (p.2)

**Funding**

Although a considerable amount of Ph.D. students are funded by the university they attend, many still must work full and part-time jobs to support their families. Lack of funding may cause students to drop out of school, or it may impede the process of completing their Ph.D. in a timely manner. This section addresses the scholarships affecting Ph.D. progress and completion for Hispanic students.

Most students will attend college only if they know they can afford it. Nettles and Millett (2006) stated, “In the beginning, money calculations are often a part of the decision process that students move through when considering doctoral programs” (p. 71). Nettles and Millett wrote that Hispanic men do not experience financial difficulties as much as Hispanic women, therefore Hispanic women have a greater need to borrow
money. The difficulty students experience paying for tuition, books, food, shelter, and other living necessities, can create stress, which affects persistence and degree completion. If eligible, these doctoral students can receive financial assistance by applying for scholarships dedicated to the underrepresented students such as Hispanics, through the Twenty-first Century Scholars program, the Lumina Foundation, and the Gates Millennium Scholars program.

The Twenty-first Century Scholars program enrolls income-eligible students as high school freshman. The program provides full tuition all the way to the doctoral degree level of instruction if the student follows the program guidelines. The Lumina Foundation is the nation's largest foundation dedicated to increasing access to postsecondary education for students of low income and underrepresented backgrounds. The foundation partners with Excelencia in Education to work with minority-serving institutions (Lumina, 2010). The Gates Millennium Scholar program, established in 1999, was funded by Bill and Melinda Gates. It enrolls high school seniors and juniors into undergraduate programs and provides assistance for unmet tuition needs as well as leadership training for underrepresented students such as Hispanics. The program’s goal is to provide minority students who have financial need the ability to attend college and to reduce their financial barriers at both the undergraduate and graduate levels of instruction.

Although these programs are different, they have the same general structure; students sign a program agreement early in high school and are awarded tuition assistance. These programs provide an excellent solution to high doctoral tuition costs.
and may influence more students to attend college as compared to those who did not receive a scholarship.

Another scholars program aimed toward underrepresented students is the McNair Scholars program, which is one of the U.S. Department of Education programs that is aimed just at graduate students. The Robert E. McNair Post Baccalaureate Achievement Program was founded in 1989 and awards scholarships to low income students who are first generation or underrepresented in graduate studies to pursue their doctoral degrees.

The program was named after McNair and was dedicated to his success of being a segregated African American student. McNair earned his Ph.D. degree after receiving many fellowships that assisted him financially so he could finish his Ph.D. in physics. His scholarship is dedicated to help underrepresented students achieve their dream of obtaining a graduate degree (St. Olaf College, 2010).

Institutions can increase the number of Hispanic students graduating with a doctoral degree by making a number of small, but very important strategic changes that empower their faculty, staff, and students to work together in very productive ways. College administrators can play a key role in Hispanic student graduation success by making decisions that prioritize the writing of programs and policies to promote graduating Hispanic students with a Ph.D. In order to understand the road ahead for institutional success, they must understand the trials and tribulations of Hispanics who have traveled and will continue to travel such a road. Completing a Ph.D. as a Hispanic student can be a long, difficult process if one has no guidance.
Chapter Three

Methodology

Chapter two provided a review of a growing body of literature of factors that affect Hispanic students in completing a Ph.D. degree. The literature also provided factors that are important in understanding how institutional practices and policies affect enrollment, retention, and Ph.D. degree completion for Hispanic students. Social interaction, faculty mentorship, and financial support are important factors that affect persistence of Hispanic students while in graduate school (Palmer & Williams-Greer, 2006).

The purpose of this research was to examine the percent change from 2002-2008 in doctoral degrees awarded to Hispanics and the relationship between degree attainment and institutional policies and practices. Understanding Hispanic Ph.D. student graduation and retention rates may become clearer by researching the following questions:

1. What is the percent change of doctoral degrees awarded to Hispanic students at each of 24 identified institutions from 2002-2008?
2. What institutional policies and practices if any are related to doctoral degrees awarded to Hispanic students?
3. What is the relationship if any between independent variables related to institutional programs listed in Appendix C of policies and practices and the percent of change in number of Ph.Ds. awarded to Hispanics from 2002-2008?

This chapter addresses the research design, research participants and institutions, data collection method, instrumentation, statistical analysis, and limitations.
Research Design

This study used both qualitative and quantitative methods to answer the research questions. A correlational analysis was used to look at the relationship between the dependent variable and independent variables related to institutional policies and programs. A correlational analysis is a statistical test for relationships between variables. The correlational analysis determined if the independent variables were related to the dependent variable and, if so, whether the relationship was positive or negative.

Dependent Variable

The dependent variable was the percent change in doctoral degrees awarded to Hispanics from years 2002-2008. The data were gathered from the IPEDS completion survey data.

Independent Variables

Based on the review of the literature, independent variables related to institutional programs were developed (see Appendix C). What follows is an explanation of the various types of institutional programs considered in the collection of data for the independent variables.

**Dedicated scholarship programs.** These programs assist students in undergraduate and graduate school and can increase retention rates.

**National Summer Institute programs.** These programs address the underrepresentation of faculty of color and women as a way to increase the pool of Hispanic doctoral students. Jan (2010) stated, “A diverse faculty helps universities recruit top minority students and provides them with mentors and role models” (p. 2). Chan (2008) studied the mentoring relationship between ethnic minority doctoral students and
faculty mentors. Mentors provide valuable information to the students who have little knowledge of doctoral studies and how role models contribute to retention.

**Fellowship program.** A fellowship program finances the repayment of undergraduate loans for minority students who want to pursue doctoral degrees. An example of this institutional commitment to access programs is the Mellon Minority Undergraduate Fellowship Program (MMUP). It builds effective support programs for minority students in undergraduate programs to assist them in competing for admissions into a graduate program (Drewry, 1993). The MMUP found that the identified predictors of degree completion and research productivity included financial assistantships and faculty mentors. Institutional administrators who focus on providing these predictors helps prepare Hispanic Ph.D. students for degree completion (Drewry).

**Cohorts.** Cesari (1990) suggested that peer relationships have a positive impact on a student’s graduate experience and can assist students in completing their doctoral degree.

**Orientation programs.** Engles and O’Brien (2006) suggested that having special programs for low income and minority students such as orientation programs, and tutoring are ways to enhance student success.

**Social networks.** Organizations help foster growth to create social capital. Yuan and Gay (2006) wrote, “Scholars believe that a learning community can produce more fruitful learning experiences when its members can learn from each other through social interaction” (p. 15).

**Faculty mentoring.** Faculty mentoring can enhance student success. Lovitts and Nelson (2000) suggested students are more likely to persist to graduation if they develop
and have a strong relationship with faculty members who give them meaningful and adequate guidance on a regular basis.

**Funding programs.** Programs such as University of Michigan’s undergraduate research opportunity program (UROP, 2010) ensure minority students receive the greatest amount of financial aid available. Examples of such programs include the 21st Century Scholarship programs that provide full tuition for students up through their doctoral degree, the Lumina Foundation that increases access to postsecondary education for low income and underrepresented backgrounds (Lumina, 2010), and the Gates Millennium Scholars program that provides unmet tuition needs for Hispanic students (Huneke, 2010). Lovitts and Nelson (2000) stated, “As one would expect, students who receive no financial support have the lowest level of participation and are the most at risk of withdrawing from the program” (p. 3). Stewart et al. (1997) suggested the rising costs of graduate school can negatively impact a minority student’s choice to pursue and complete his/her doctoral studies.

**Telephone Survey**

A telephone survey was developed to provide data regarding the independent variables. The survey questions were developed based on information researched in the literature review regarding institutional policies, practices, and programs.

Telephone surveys provided both quantitative and qualitative data. The data collected from the telephone survey were gathered and used in chapter four to explain contextual factors that are related to the percent of change in number of Ph.Ds. awarded to Hispanics from 2002-2008. Therefore, the survey involved follow-up questions,
thereby providing a deep understanding of the specifics of the policies, programs, and practices related to the independent variable selected.

A phone survey was used over an internet survey because of the level of interactivity and to maintain a higher quantity and quality of participants. As Henning (2009) stated, “Concern about panel quality keeps many researchers using phone surveys rather than doing general studies on the internet . . . clearly a telephone survey is ‘high touch’ compared to an internet survey” (p.2). In an email survey, participants can easily quit in the middle of the questionnaire and may not be as likely to complete the questionnaire as they would when talking to a good interviewer (Henning, 2009). Additionally, a telephone survey provided the interviewer with the context surrounding a response that a mailed or emailed survey could not.

**Conceptual Framework**

The conceptual framework used for this study came from Swail’s Geometric Model of Student Persistence and Achievement (as cited in Swail, Redd, & Perna, 2003). The strength of this model is that it provides administrators with information about the relationship between institutional practices and the academic and social needs of students (see Figure 1). The information in the framework can enable an institution to work proactively to help students persist, achieve higher academic success and graduate.
The main concept of this model is equilibrium (Swail et al., 2003). When the forces of social, cognitive and institutional elements combine equally to create equilibrium, the model indicates persistence, graduation and achievement will occur. Institutions need to increase graduation rates for doctoral Hispanic students which Swail’s model suggests requires identifying policies that best promote persistence and retention for these underrepresented students (Swail et al., 2003).

The Geometric Model of Student Persistence is comprised of three forces that influence a student’s persistence, degree attainment, and achievement. The first force, social factors, including cultural values, goal commitment, family influence, and financial
issues, relates to student persistence and performance by helping with career goals through peer support, family support, and the ability to cope with social situations (Swail et al., 2003). The second force, cognitive factors, which include content knowledge, academic rigor, learning skills, and quality of learning, can relate to degree completion because of the knowledge and academic ability the student brings to the institution (Swail et al., 2003). The third force is institutional factors, which include financial aid, student services, and academic services, because when the institution provides both academic and social support systems to the student, the student has a better chance to successfully graduate (Swail et al., 2003).

The third force, institutional factors, is placed at the base of the geometric model. “The geometric model places this set of factors at the base of the triangle because it is the college that forms the foundation for college success” (Swail et al., 2003, p.79). The intent of this study was not to focus on the equilibrium, but to focus and examine the important piece the institution plays as the foundation in the model, which forms its own support dynamic that can improve student persistence with factors the institution has control over (see Figure 2).
The institution is responsible for putting policies and programs in place to contribute to success for student persistence and achievement. Administrators need to ask themselves what they can do to contribute in a greater way to student’s degree completion because “how the institution reacts to students is of primary importance to retention, persistence and completion” (Swail et al., 2003, p. 79). “The more understanding the institution has of students’ needs, the better prepared it is to design and implement programs and support services to meet those needs” (p. 87).

The emphasis of this model lies on the role the institution has in meeting the needs of the students. There are five components to the institutional force in Swail’s framework, and the model places students as the center component of the model rather than the peripheral (Swail et al., 2003). Focusing on the cognitive and social attributes a student brings to the institution and the institutional role in the student experience, the Geometric model asks what the institution can do to help each student succeed in college.
Understanding the relationship between these framework components represents all of the factors that are related for student success. However, the foundation of the institutional factor pertains to the ability the institution has to provide appropriate support to students, both academically and socially.

The institution has the ability to be proactive in creating support systems for student achievement and persistence. The purpose of the retention framework of the foundation piece of institutional factors helps institutional administrators understand the foundation of the model by “providing an understanding of the various roles that was expected and required of administrators, faculty members, and staff members on campus if the effort is to be successful” (Swail et al., 2003, p. 89).

Swail’s framework suggests certain programs lead to minority student persistence. “Swail’s study was based on an extensive review of pertinent literature, which resulted in the development of a series of research based institutional practices that have been shown to effectively increase minority student persistence” (Swail et al., 2003, p. 89). The conceptual framework also ties into all of the survey questions because each question assesses the perceived importance, influence, and frequency of use the programs. Swail’s framework is appropriate for this study because, “The framework provides administrators and practitioners with a menu of activities, policies, and practices to consider during planning and implementation of a comprehensive campus-based retention program” (Swail et al., 2003, p. 90.)

A solid foundation is needed for students to succeed and persist in college. Swail’s model suggests each element has its own impact on the student and when the solid foundation or
balance is non-existent or lost, the students risk not graduating because they reduce their academic and social integration with the institution.

Research Participants and Institutions

The research participants were drawn from the deans of graduate colleges at the U. S. institutions that awarded the greatest number of doctoral degrees to Hispanic students in 2008. Additional participants included other staff or faculty recommended by the heads of the graduate schools/colleges who provided additional information. One survey was completed per institution. Excelencia in Education identified the top 25 institutions awarding doctoral degrees to Hispanics using IPEDS data (Santiago, 2008). This organization works with the U. S. Department of Education, NCES, and IPEDS to analyze and collect data to help strengthen institutional policies and practices for the success of Hispanic students in higher education. The most recent top 25 list available from Excelencia is from academic year 2006-2007. While I followed the same method as Excelencia in Educations to determine the top colleges for graduating Hispanic doctoral students, I used more recent IPEDS data from 2008. Additionally, I eliminated Puerto Rico from the list of the 25 schools, which decreased the pool of colleges and universities from which I drew my sample to the top 24 institutions (see Table 1).
Table 1

*Top 24 Institutions Awarding Doctoral Degrees to Hispanic by Numbers and Percentages*

<table>
<thead>
<tr>
<th>Institution</th>
<th>State</th>
<th>Ph.D. degrees</th>
<th>Degrees to Hispanics</th>
<th>% of Hispanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nova Southeastern University</td>
<td>FL</td>
<td>881</td>
<td>81</td>
<td>9</td>
</tr>
<tr>
<td>University of Southern California</td>
<td>CA</td>
<td>708</td>
<td>55</td>
<td>8</td>
</tr>
<tr>
<td>The University of Texas at Austin,</td>
<td>TX</td>
<td>865</td>
<td>52</td>
<td>6</td>
</tr>
<tr>
<td>University of California-Los Angeles</td>
<td>CA</td>
<td>752</td>
<td>45</td>
<td>6</td>
</tr>
<tr>
<td>University of California-Berkeley</td>
<td>CA</td>
<td>873</td>
<td>37</td>
<td>4</td>
</tr>
<tr>
<td>Texas A&amp;M University</td>
<td>TX</td>
<td>594</td>
<td>33</td>
<td>6</td>
</tr>
<tr>
<td>University of Florida</td>
<td>FL</td>
<td>857</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>University of Michigan-Ann Arbor</td>
<td>MI</td>
<td>753</td>
<td>31</td>
<td>4</td>
</tr>
<tr>
<td>Alliant International University</td>
<td>CA</td>
<td>361</td>
<td>29</td>
<td>8</td>
</tr>
<tr>
<td>Capella University</td>
<td>MN</td>
<td>814</td>
<td>29</td>
<td>4</td>
</tr>
<tr>
<td>University of California-San Diego</td>
<td>CA</td>
<td>488</td>
<td>27</td>
<td>6</td>
</tr>
<tr>
<td>Arizona State University</td>
<td>AZ</td>
<td>418</td>
<td>26</td>
<td>6</td>
</tr>
<tr>
<td>CUNY Graduate School &amp; University Center</td>
<td>NY</td>
<td>358</td>
<td>25</td>
<td>7</td>
</tr>
<tr>
<td>Florida International University</td>
<td>FL</td>
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<td>20</td>
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<td>University of Miami</td>
<td>FL</td>
<td>173</td>
<td>24</td>
<td>14</td>
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<tr>
<td>AT Still University of Health Services</td>
<td>MO</td>
<td>467</td>
<td>23</td>
<td>5</td>
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<td>University of Arizona</td>
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<td>452</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>University of California-Irvine</td>
<td>CA</td>
<td>370</td>
<td>22</td>
<td>6</td>
</tr>
<tr>
<td>Harvard University</td>
<td>MA</td>
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<td>Stanford University</td>
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<td>3</td>
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<td>University of Washington-Seattle Campus</td>
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<td>622</td>
<td>21</td>
<td>3</td>
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<td>New York University</td>
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<td>4</td>
</tr>
<tr>
<td>University of Houston</td>
<td>TX</td>
<td>259</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>University of New Mexico-Main Campus</td>
<td>NM</td>
<td>166</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>13,124</strong></td>
<td><strong>741</strong></td>
<td><strong>6.0</strong></td>
</tr>
</tbody>
</table>

**Data Collection Method**

The data collection method included a two-step process. The first step involved conducting a telephone survey to collect quantitative data. The second step involved asking follow-up questions for qualitative data to help interpret the quantitative data. The dependent variable was the percentage change in degrees awarded using IPEDS data.
from years 2002-2008. I determined the percent change in the number of Ph.Ds. granted to Hispanics among the top 24 U.S. higher education institutions using IPEDS data from 2002-2008. The independent variables were identified through literature review. The independent variables were as follows:

1. Perceived frequency of use and importance of dedicated scholarship programs.
2. Perceived frequency of use and importance of polices addressing underrepresentation of faculty of color and women faculty.
3. Perceived frequency of use and importance of programs for repayment of undergraduate loans addressing minority students.
4. Perceived frequency of use and importance of institutional cohorts.
5. Perceived frequency of use and importance of orientation programs that enhance minority student success.
6. Perceived frequency of use and importance of social network programs that foster Hispanic student growth to create social capital.
7. Perceived frequency of use and importance of faculty mentoring programs for Hispanic doctoral students.
8. Perceived frequency of use and importance of funding programs for minority students.
9. Perceived frequency of use and importance of dedicated program providing full tuition for income eligible high school freshman to complete their doctoral degrees.
10. Perceived frequency of use and importance of funding programs increasing access to postsecondary education for low income and underrepresented students.

11. Perceived frequency of use and importance of funding programs enrolling high school students into underrepresented programs to meet unmet tuition needs for Hispanic students.

IPEDS data prior to 2002 were not used because institutions were not required to report data to IPEDS prior to 2002, and it would have provided an incomplete data set. Reliable IPEDS data were available only until 2008. From 2003-2007 institutions reported doctoral degree completions in IPEDS by classifying them as “doctor’s degree.” In 2008, IPEDS changed the way institutions reported doctoral completions for their institutions, changing the classification title for doctoral degrees to the new degree classification “doctor’s degree research scholarship.” Because institutions had a transition period of up to three years to report data under the new degree classification, some institutions chose to report data for 2008 and 2009 under the old classification of “doctor’s degree.” Therefore, I ran the analysis under both the new and old degree classification to ensure no duplications in degree award level of reporting. IPEDS data were used for the category of first degree conferred doctoral degrees and not second degree conferred.

The percent change in growth of doctoral degrees granted to Hispanics was determined by selecting from IPEDS data the variables of institution name, doctoral completion degree conferred, race of Hispanic, total degree completions, and specific year for each of the 24 identified institutions for years 2002-2008.
A telephone survey was conducted to determine if the institutions had specific programs that provide assistance to Hispanic students in graduating with a Ph.D. and to fully understand and gather the information about institutional programs from the participants. The data were collected in the following manner.

Participant contact information was gathered from the institution website. Participants were contacted via telephone or email to ask if they would be willing to participate in the survey. A consent form was faxed to each person who agreed to participate. An explanation of the survey and the approximate time needed to complete the survey was explained. Once the signed consent form was faxed back to me, an appointment was made to participate in a telephone survey. If informed consent was not received, a follow-up call was made. If a participant declined to participate, that was recorded and another director at the institution who had knowledge about institutional programs and services offered to Hispanics was contacted. Once permission was received by the participant to be part of the study, the survey questions (see Appendix B) and the consent form (see Appendix C) were faxed prior to the interview. Participants were called and interviewed, and the survey results recorded.

**Instrumentation**

I used a 13 question telephone survey with multiple sub questions underneath the primary questions. The survey questionnaire consisted of closed-ended questions, with additional follow-up, open-ended questions being asked depending on the type of responses given from participants. These follow-up questions were asked if it was indicated by the participant that a particular program existed at the institution. The
additional questions addressed perceived participation rates of institutional programs, and how programs were funded.

The survey questions were developed using factors found in the literature regarding institutional programs contributing to Hispanic Ph.D. students’ completion of their degrees. The questions were worded so some of the answers could be quantified. The response structure for each policy/program addressed was a four-point ranking scale regarding perceived importance of policy/program, perceived frequency of use of services, perceived funding, and additional answers given by the respondents. The administration of the survey took no longer than 30 minutes for each participant.

Deans of the graduate college were chosen to participate because they are the persons most likely to have knowledge about the programs and services offered that impact degree completion for Hispanic doctoral students. Deans of Graduate Colleges are the senior level administrators on campus most likely to have the opportunity to interact with Hispanics in graduate school. Deans who did not want to participate in the telephone survey were asked for the contact information of anyone else on campus who may have knowledge about programs and services offered that impact Hispanic students. In five cases, the referred person was contacted.

**Data Analysis**

Statistical analysis included both descriptive and correlational analysis. The majority of the data were descriptive in nature. However, a correlational analysis was conducted to determine if a relationship exists between independent variables of participants’ perceptions of importance, influence, and frequency of use of programs directly and indirectly supporting Hispanic doctoral students and the independent variable
of percent change in the awarding of doctoral degrees to Hispanics. The data analysis involved the calculation of the coefficient correlations, which are the measurements of the relationship between the variables. Qualitative analysis of the data used the coding method. Following the coding method, quotes from the interviews were sorted, coded, and generalized into themes.

**Conclusion**

This study used mixed methods to answer the research questions. Descriptive statistics were used to depict the basic numbers and percentages regarding degree completion rates, institutional types, state differences, and number of programs offered. Additionally, the correlational analysis was used to determine the relationship between the independent variables of perceived importance, influence, and frequency of use of programs for Hispanic doctoral students and the dependent variable of percent change in degrees awarded to Hispanic doctoral students. Qualitative analysis added depth to and further understanding of the phenomena observed from the quantitative data. The results of these methods and analyses follow.
Chapter Four

Results

Studies of degree completion have been plentiful for Hispanics graduating with an undergraduate degree, but not for graduating with a Ph.D. Understanding the factors relating to Hispanics earning Ph.D.s. are important for college administrators. The purpose of the study was to examine the percent change in doctoral degrees awarded to Hispanics and what the relationship is between degree attainment and institutional policies, practices, and programs.

Understanding Hispanic Ph.D. student graduation and degree completion may become clearer by researching the following questions:

1. What is the percent change of doctoral degrees awarded to Hispanic students at each of 24 identified institutions from 2002-2008?

2. What institutional policies, practices, and programs if any are related to doctoral degrees awarded to Hispanic students?

3. What is the relationship if any between independent variables related to institutional programs listed in Appendix C of policies, practices, and programs and the percent of change in number of Ph.D.s. awarded to Hispanics from 2002-2008?

Chapter four focuses on reporting the findings of this study regarding Hispanic serving programs at participating institutions, the influence of these programs, the frequency of use and importance of these programs, and primary sources of funding.
Hispanic-Serving Programs at Participating Institutions

Twenty-four (24) institutions that awarded the greatest number of doctoral degrees to Hispanic students were invited to participate. Of the institutions that were invited, only 14 agreed to participate. The 14 participants were comprised of 10 administrators from graduate schools, 1 from a multicultural affairs office, 1 associate dean of diversity, 1 associate vice provost, and 1 associate director of diversity.

Survey Question Results

The survey conducted included questions about existing programs that serve underrepresented minorities drawn from the literature review, but also allowed institutions to identify their own programs not identified in the survey. The survey encompassed programs and policies related to scholarships, diverse faculty, funding, faculty mentoring, social networks, and admissions.

Survey question # 1: Dedicated scholarship programs. Although nine (64%) of the institutions did not have dedicated scholarship programs for Hispanic doctoral students, one (11%) of the nine universities offered support through an institutional Deans Fellowship for undergraduate students, but not for doctoral students. Of the nine (64%) who answered no to having dedicated scholarship programs, one (11%) participant could not respond to the survey question due to state legislation that prohibits the institution from focusing on specific racial/ethnic groups for scholarships.

Of the five (36%) institutions that offered dedicated scholarship programs, two (40%) of the universities offered the federally funded McNair scholarship; of these two (40%) one (20%) offered an additional research opportunity grant. Of the additional three (60%) institutions of the five institutions that answered yes to offering dedicated
scholarships, one institution offered three different types of programs, which included two honor scholarships and a Mellon Mays nationally sponsored program, while a research scholarship was offered at a different institution. Lastly, while the third institution answered yes to having a dedicated scholarship program, even though it was bound by California’s Proposition 209, the participant shared that the institution offered a diversity fellowship not designated just for Hispanic students. Instead, it was offered for underrepresented minorities as a whole. Examples of underrepresented minorities would be first generation students, or students from low socio-economic backgrounds. Although none of the programs were designated specifically for Hispanic doctoral students, all of the programs were designed to financially assist completion of degrees for diverse doctoral students.

Survey question # 2: Formal policy on underrepresented faculty. Five (36%) respondents answered yes to the survey question addressing the existence at the institution of formal policy focusing on the underrepresentation of faculty of color. When they elaborated on their responses, however it became clear that only one had formal policies. One (20%) of the five institutions had a statement of practice and not a formal policy and one (20%) had a best practice. Although one (20%) of the five institutions could not comment due to state legislative issues, this institution was awarded an NSF grant to increase equity among women in the professoriate, which helps to target underrepresented minority women who are underrepresented in their field of study. An additional (20%) institution was awarded an NSF grant that encourages women of color to apply to doctoral programs and funds are used to recruit faculty of color.
Of the nine (64%) institution participants who answered they did not have a formal policy that addresses underrepresentation of faculty, two (22%) qualified their no answers. The respondents at one of these institutions (11%) stated the institution had a diversity statement, and the other respondent noted the institution (11%) had a best practice. Of the remaining seven (78%) institutions that answered no, no additional comments were made by the participants.

Examples of these informal policies and practices, institutional statements, and programs would be such things as faculty advisor groups that advise on “best practices” for the institution. One institution’s program comes out of the President’s and Provost’s offices labeled as Advancement Faculty Recruitment Tool using administrative funds. This program is used to ensure that the university recruits, promotes, and retains diverse faculty. Working within the office of Minority Affairs and Diversity and in direct consultation with the office of the Provost, the office works both on faculty cases and on institutional policy issues to ensure diversity on campus.

The primary mission of the informal programs, statements, and best practices identified by the respondents is to ensure the institution recruits, promotes, and retains an excellent and diverse faculty. None of the informal policies, practices, or institutional statements focused specifically on Hispanics.

**Survey question # 3: Refinance repayment of undergraduate loans.** All (100%) of the participants agreed their institutions have no repayment of undergraduate loans for minority students who want to pursue a doctoral degree. However, one (7%) private institution did fully fund its Ph.D. students through a Provost Fellowship for
students with underrepresented cultural backgrounds. The participant from this institution stated the program is specific to Hispanic doctoral students.

**Survey question # 4: Formal cohorts.** When addressing the issue of having formal cohorts for Hispanic doctoral students, although nine (64%) responded that they had formal cohorts, only one (11%) institution indicated its cohorts were designed for Hispanic doctoral students, and only one (11%) institution called its fellowship program a cohort. Three (33%) of the nine institutions that reported having formal cohorts, all focused on diverse minority students. Two (22%) of the nine institutions’ formal cohorts were department run, an additional two (22%) had no formal name, but paired returning graduate students with new graduate students to form their own cohorts, and the remaining institution (11%) used faculty mentors/advisors to run the cohort programs.

Of the five (36%) institutions that did not have formal cohorts, one (20%) private institution offered that incoming freshmen are considered an informal cohort because they all begin their education at the same time. The remaining four (80%) institutions that answered “no,” had no additional comments.

One institution’s departmentally run formal cohort program supports college completion for underrepresented students and provides necessary tools that facilitate success by allowing the student to vent or speak freely about challenges he or she is experiencing. Because this program is offered at both the Master’s and Doctoral level, it makes for an easier transition for Master’s students who enter the Doctoral program because the students are already very familiar with the support they will receive in their doctoral program.
The participant from the university discussed that this university has a cohort program that begins with a 10-week summer institutional program that targets incoming students early in their Ph.D. Each student begins the cohort experience by being assigned a faculty mentor and a graduate student staff advisor. This university has a large Hispanic presence and the program had historically been geared toward Hispanic doctoral students. However in 2011, the university opened up the cohort to all doctoral students. The program focuses on how to research, tips and strategies on writing skills, and promoting communication abilities.

Once the student is assigned a faculty mentor and graduate student staff advisor, the graduate student gets an annual academic screening during the first and second years because the institution found that is the most critical time for doctoral students to drop out. The cohort model goes throughout their graduate experience and during the students’ fourth and fifth years the institution focuses more on programs such as career development, job markets, help with CV, job talk, cost of travel for interviews, and post doc practices and opportunities. The common purpose of all of these cohorts was to increase the diversity across campuses, to increase the awareness of college programs to minority students and to build community to prevent isolation of underrepresented students during the 10 week summer institutional program.

**Survey question # 5: Orientation programs.** When asked if their institution had orientation programs that enhanced student success for low income minority students, nine (64%) of the respondents responded yes. Of the nine institutions, two (22%) programs were run by departments, two (22%) were run by the graduate schools, one (11%) was run by the student support services department, and one (11%) was student
led. At one (11%) institution only one division of the entire institution offered an orientation specifically for low income minority students. A different institution (11%) offered both a fellows program funded by the McKnight Doctoral Fellowship program and a NSF federal grant for underrepresented doctoral students in social behavioral sciences. The remaining institution of those that responded yes was awarded a Department of Education grant. One of the components of this grant, titled Title V, increases student engagement with academic support programs to improve campus climate specifically for Hispanic students thereby increasing their persistence and graduation rates. Two (22%) of the nine (64%) institutions have orientation programs specifically dedicated to Hispanic doctoral students. Of the five (36%) institutions that answered no to having orientation programs that enhanced student success for low income minority students, no additional comments were made.

An example of an orientation program that targets all graduate students of color, not just Hispanics, is a program that provides entering students of color information about campus and community resources. The first half of the orientation program consists of faculty and graduate student panels, and the second half is a welcome reception where current graduate students, faculty, and staff from across campus participate.

To foster community amongst Hispanic students, another institution holds a faculty sponsored tea and coffee event that focuses on the importance of research and publication and on outreach in the community. A two hour networking session called the “Faculty Club” is also held to discuss faculty research, share common teaching goals, and sponsor graduate and professional study sessions where the faculty members bring food and invite students.
Of the institutions that had orientation programs, the participants expressed that it was important for them to focus on underrepresented students and enhance their success through educating on-campus students about student programs that make students feel welcomed, and helping students understand how to access student programs, and to utilize campus students as mentors.

**Survey question # 6: Social organizations.** Social organizations were found at 11 (79%) of the institutions surveyed and all social organizations were university sponsored. Of the three (21%) institutions that did not have social organizations, only one (7%) institution from California chose not to elaborate on its organizations due to state legislative concerns. However, an administrator from that institution offered that informal groups exist outside the institution with professional organizations that students consider social organizations.

Social organizations provide students with interaction between other Hispanic students, faculty, and the community at large. One university’s campus diversity is also enhanced by offering a Hispanic Staff Association that provides student mentoring, socialization, and introduction into the college. At another institution, college administrators recognizing the deficit of Hispanic males on campus developed a program to recruit more Hispanic males to Ph.D. programs and to faculty positions to help create a diverse community on campus.

The common denominator of social organizations is helping promote connectedness for the student, so the student does not feel isolated in his/her educational programs. Some of these organizations provide many opportunities that include faculty, community, and social organizations that foster student growth with other Hispanic
students and Hispanic faculty. However, none of the organizations are specific to Hispanic doctoral students.

**Survey question # 7: Faculty mentoring.** Having a formal faculty mentoring program for Hispanic doctoral students helps prepare and positively influences doctoral degree completion for underrepresented minority students as suggested by one of the survey participants. Of the four (29%) respondents who answered yes to having a faculty mentoring program for doctoral students, three (75%) commented that the programs were department run and the remaining institution’s (25%) program was described as institutionally run. However, none of the faculty mentoring programs was specific to Hispanic doctoral students.

Out of 10 (71%) institutions that did not have formal faculty mentoring programs, one (10%) institution’s students participated in formal outside business organizations and used those organization members as mentors. Although one participant (10%) stated her institution does not have a faculty mentoring program, it was issued a three year Department of Education FIPSE grant focusing on diverse educational community and doctoral experiences. This grant will help the institution’s graduate council work on writing mentoring policies to implement a model of university equity and graduate equity. This policy in turn will create a stronger mentoring process to reduce isolation of underrepresented graduate students and to provide another point of faculty contact. Another institution (10%) that did not have a faculty mentoring program, wants eventually to put a mentor-the-mentor program in place. The remaining seven (70%) institutions that do not have a faculty mentoring program had no additional comments.

60
All of the participants surveyed, believed faculty mentoring programs positively influence doctoral degree completion for underrepresented minority students. They believe that stronger mentoring reduces student isolation of underrepresented graduate students and that faculty mentoring gives the student another point of contact with faculty.

**Survey question # 8: Targeted funding.** Funding is a very important part of an education and five (36%) of the institutions surveyed were able to provide funding to increase access to graduate education to students with a low income and underrepresented background. Of these five institutions, only one institution’s (20%) funding was focused specifically to Hispanic doctoral students; this same institution was awarded a department of education grant to improve graduation rates for Hispanics. Of the remaining four institutions that provide funding, fellowships were offered at three (60%) institutions. One of these three offered two federally funded fellowships, the McKnight Doctoral Fellows Education Fund Program and a McNair Fellowship; one offered a privately funded fellowship; and the other a presidential fellowship. As part of their fellowship responsibilities, McKnight fellows attend orientation and other workshops during their tenure as doctoral students. These four institutions also offered minority diversity fellowship programs as funding options for the students. The remaining institution (20%) of the five institutions that offered funding could not address the topic of targeted funding due to state legislative issues, but did offer that it is allowed to receive philanthropic support to offer a fellowship.

Of the nine (64%) institutions that did not have targeted funding, one participant (11%) stated the institution could not target funding awards due to state legislative
concerns, however it did offer an institutional fellowship for diverse students. Of the remaining eight (89%), no additional comments were offered.

The institutions that did offer targeted funding, carefully considered race, ethnicity, and underrepresented minority groups for their targeted funding as a way for students to finance their doctoral degree, which will assist in degree completion. Targeted funding also helps add diversity to campus groups who might otherwise be excluded.

**Survey question # 9: Dedicated program of full tuition from high school to doctoral degree.** Thirteen (93%) of the institutions surveyed did not have a full tuition package from high school to doctoral degree completion program for Hispanic students. However, one (7%) institution did. This private institution has a program called, “Neighborhood Academic Initiative” where the college representatives go into middle schools on Saturdays and after school and educate the students, teachers, and parents, focusing on preparing students academically. Students located in the lowest socio-economic status, who are also considered the most academically underprepared, apply for the program while in high school and follow the academic guidelines for the program. When selected for the program, students receive funding that includes fully paid tuition, scholarships and housing all through their doctoral degree.

**Survey question # 10: Funding to increase access to postsecondary education for low income/underrepresented backgrounds.** Out of the 14 institutions surveyed, six (43%) had funding that increased access to postsecondary education for low income and underrepresented background students. Of the six institutions, one (17%) institution offered its grants to undergraduate students and not to graduate students, one (17%)
offered funds through a federally funded NFS grant as well as an institutionally funded program, and two (33%) offered institutional fellowships. One of the two institutions offering a fellowship recruits and trains underrepresented minorities, not specifically Hispanics, in healthcare to return to practice within their underrepresented communities. Of the remaining two institutions that provided funding to increase access (33%), three programs are offered at one institution and one program is offered at the other institution in which funding was specific to Hispanic doctoral students.

Of the eight (57%) institutions that do not offer funding to increase access to postsecondary education for low income and underrepresented students, one (13%) institution had a mission to recruit and train underrepresented minorities, but not specifically Hispanics. The remaining seven (87%) institutions out of the eight that do not offer funding offered no additional comments. All of these funding programs offer a foundation for Hispanic students to continue with completing their doctoral degrees and return to contribute to their communities.

Survey question # 11: Additional policies and programs. Several of the participants identified programs different than those asked about by the survey, all of which focused on increasing diversity of faculty, staff, and students. Although the participants identified them as additional programs, they could have been included as a response to some of the questions on the survey that encompassed these types of programs.

Although not described as a formal program, another way of recruiting diverse faculty and staff is practiced at a California university through a group titled; “Faculty Equity Advisor.” This group provides advice on “best practices” to hiring committees to
enhance diversity faculty hires. This university also had a vice president for faculty equity who trained department chairs how to develop faculty diversity (Institution G). To further enhance underrepresentation of faculty of color, this university currently is looking for a vice chancellor for inclusion and diversity to enhance diversity efforts in hiring and student recruitment.

A program for students designed to increase diversity at one institution is called The Summer Research Project and is a dedicated scholarship program for junior status science and engineering students. Since this institution has a large population of Hispanics, most students in the program are Hispanics. The institution recruits students from the Western and Southern portions of the state and provides “South and West fellowships” that include $19,000 in cash stipends, full tuition, and books to some of those students.

One California university offers funds and stipends to doctoral students when they enter the program to cover health benefits, housing, and books throughout the program (Institution H). The program provides stipends that can vary from $1,000–$5,000 per semester in addition to the initial $10,000 the students receive upon entering into graduate school. The graduate school has a goal to fund undergraduates for graduate school and works with them to prepare them for graduate school. Two scholar programs Institution H uses to fund and prepare undergraduates for graduate school are the Discovery Scholars Program and Renaissance Scholars Program. However, these scholar programs are not specific to Hispanics. The Discovery Scholars Program is an honors scholarship that prepares undergrads for graduate school. The Renaissance Scholars Program is an honors scholarship for undergrads entering graduate school. The institution
also receives money from a nationally sponsored program called the Mellon Mays program.

**Survey question # 12: Primary sources of funding.** Higher education institutions look for ways their campuses can become more diverse by making themselves more accessible to students of all ethnicities and economic backgrounds. Financial support for doctoral students enables them to interact closely with the institution, faculty, and their peers and to become integrated into the social and academic systems of their programs. Funding takes different forms and plays different roles in shaping students’ experiences in their doctoral studies. Funds can be provided by private sources, government sources, and institutional sources. Participants were asked what the primary sources of funding were at their institutions and given the following choices on the survey: general fees, grant funded, student fees, tuition fees, and paid subsidy.

Of the six (43%) participants who reported about funding at their institutions, research funding was reported as the most frequent source of funding identified by three of the six participants (see Table 2). Of the same six participants, tuition and grants were followed as the second and third most frequently mentioned source of funding at their institutions, with fellowships, fully funded, and general fees as the least frequently used at their institutions.

Table 2

*Primary Sources of Funding*

<table>
<thead>
<tr>
<th>Name of institution</th>
<th>Fellowship</th>
<th>Fully fund</th>
<th>General fee</th>
<th>Grants</th>
<th>Research</th>
<th>Student</th>
<th>TA</th>
<th>Tuition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution A</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution B</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

65
The other eight (57%) participants did not know the primary sources of funding at their institutions. One of the eight reported doctoral students attend the institution because of programs offered and also to work with specific faculty.

There are multiple ways to fund a doctoral student, but only one institution fully funded its doctoral students. The participant at this institution reported that doctoral students get a fellowship funding package of a $2,000-$3,000 a month stipend, health insurance, tuition, and books for a period of up to 7 years. Sometimes for additional money, its students take on a 3-4 year RA or TA position. Another institution reported that 50% of its doctoral student funding comes from teaching assistantships and the other 50% from research funding. Of the remaining institutions, one reported students being funded by the institution to work with its faculty.

Survey question #13: Success rate of matriculation vs. graduation rates of Hispanics receiving a Ph.D. Five participants responded to this survey question. The five respondents were able to provide information about graduation rates; however none could provide information about both matriculation and graduation rates. One participant who could not provide a percentage of the institution’s success rate, instead stated, “I do not know, this is a very complicated question because the institution looks at this separately, time to degree completion is a very complicated question.” The remaining
four institutions responded with one having a 95% graduation rate for Hispanics, and one having a 65% graduation rate for Hispanics. The third participant responded by stating “the Ph.D. completion rates over the past 10 years has [sic] been 68%, which is higher than the national rate of 57%,” and the fourth responded that, “The institution looks at incoming cohorts dates, entering student dates over the past 10 years in which the completion rate was 60%.” This participant added that only 13% of students who apply get into that institution because it is a very hard school to get into.

Survey question # 14: Marketing. Although only one (7%) university actively focused on marketing to Hispanic students at the graduate level, five (35%) of the participants reported that their institutions participated in the “recruitment of” not “marketing to” underrepresented groups.

Comparisons of Independent Variables and Percentage Change in Hispanic Doctoral Student Degree Completion (Dependent Variable)

The 14 survey questions above were combined into three dimensions of the independent variables: perceived influence of programs, perceived frequency of use of programs, and perceived importance of programs for Hispanic doctoral students. The percentage change of Hispanic doctoral student Ph.D. completion rates from 2002-2008 is displayed as descriptive statistics in Table 3.
Table 3

Percent Change of Doctoral Degrees Awarded to Hispanics students from 2002-2008

<table>
<thead>
<tr>
<th>Institution</th>
<th>Ph.d. grads</th>
<th>Hispanic Ph.Ds.</th>
<th>% of Hispanic Ph.Ds.</th>
<th>Total Ph.Ds.</th>
<th>Hispanic Ph.Ds.</th>
<th>% of Hispanic Ph.Ds.</th>
<th>% change of Hispanic Ph.Ds.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution A</td>
<td>418</td>
<td>45</td>
<td>10.77</td>
<td>313</td>
<td>20</td>
<td>6.39</td>
<td>4.38</td>
</tr>
<tr>
<td>Institution I</td>
<td>259</td>
<td>21</td>
<td>8.11</td>
<td>183</td>
<td>10</td>
<td>5.46</td>
<td>2.64</td>
</tr>
<tr>
<td>Institution L</td>
<td>166</td>
<td>16</td>
<td>9.64</td>
<td>189</td>
<td>14</td>
<td>7.41</td>
<td>2.23</td>
</tr>
<tr>
<td>Institution E</td>
<td>873</td>
<td>50</td>
<td>5.73</td>
<td>805</td>
<td>32</td>
<td>3.98</td>
<td>1.75</td>
</tr>
<tr>
<td>Institution B</td>
<td>467</td>
<td>17</td>
<td>3.64</td>
<td>148</td>
<td>3</td>
<td>2.03</td>
<td>1.61</td>
</tr>
<tr>
<td>Institution H</td>
<td>708</td>
<td>57</td>
<td>8.05</td>
<td>496</td>
<td>34</td>
<td>6.85</td>
<td>1.20</td>
</tr>
<tr>
<td>Institution M</td>
<td>865</td>
<td>43</td>
<td>4.97</td>
<td>639</td>
<td>29</td>
<td>4.54</td>
<td>0.43</td>
</tr>
<tr>
<td>Institution G</td>
<td>488</td>
<td>21</td>
<td>4.30</td>
<td>278</td>
<td>11</td>
<td>3.96</td>
<td>0.35</td>
</tr>
<tr>
<td>Institution F</td>
<td>370</td>
<td>30</td>
<td>8.11</td>
<td>175</td>
<td>15</td>
<td>8.57</td>
<td>-0.46</td>
</tr>
<tr>
<td>Institution D</td>
<td>673</td>
<td>21</td>
<td>3.12</td>
<td>548</td>
<td>20</td>
<td>3.65</td>
<td>-0.53</td>
</tr>
<tr>
<td>Institution N</td>
<td>622</td>
<td>13</td>
<td>2.09</td>
<td>452</td>
<td>14</td>
<td>3.10</td>
<td>-1.01</td>
</tr>
<tr>
<td>Institution K</td>
<td>753</td>
<td>25</td>
<td>3.32</td>
<td>610</td>
<td>28</td>
<td>4.59</td>
<td>-1.27</td>
</tr>
<tr>
<td>Institution J</td>
<td>173</td>
<td>12</td>
<td>6.94</td>
<td>116</td>
<td>14</td>
<td>12.07</td>
<td>-5.13</td>
</tr>
<tr>
<td>Institution C</td>
<td>122</td>
<td>33</td>
<td>18.85</td>
<td>52</td>
<td>17</td>
<td>32.69</td>
<td>-13.84^a</td>
</tr>
</tbody>
</table>

^aDespite the decrease in percent change, the number of Hispanics graduating with a Ph.D. increased and almost doubled in size.
Perceived influence of programs at participating institutions on degree completion of Hispanic doctoral students. As documented in the literature review, there is a gap in doctoral degree completion rates between Hispanics and non-Hispanic students. Many important findings have been reported on the benefits of institutional programs; however, the influence of these programs lacks clarity. Through the survey instrument used, data were collected on the perception of the influence of institutional programs by institutional administrators in the areas of graduate education, multicultural offices, diversity offices, and the provost office.

The programs that the majority of participants agreed or strongly agreed had an influence on degree completion at their institutions were orientation programs, formal cohorts, social organizations, faculty mentoring, targeted funding programs, and faculty of color initiatives (see Table 4).

Table 4
Participants’ Perceptions of Influence of Programs on Hispanic Ph.D. Degree Completion

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree–agree</th>
<th>Disagree–strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5 Orientation programs</td>
<td>13 (92.9)</td>
<td>1 (7.1)</td>
</tr>
<tr>
<td>Q4 Formal cohorts</td>
<td>12 (85.7)</td>
<td>2 (14.3)</td>
</tr>
<tr>
<td>Q6 Social organizations</td>
<td>11 (78.6)</td>
<td>3 (21.4)</td>
</tr>
<tr>
<td>Q7 Faculty mentoring</td>
<td>9 (64.3)</td>
<td>5 (35.7)</td>
</tr>
<tr>
<td>Q8 Targeted funding programs</td>
<td>8 (57.1)</td>
<td>6 (42.9)</td>
</tr>
<tr>
<td>Q2 Faculty of color</td>
<td>7 (50.0)</td>
<td>7 (50.0)</td>
</tr>
<tr>
<td>Q10 Dedicated funding programs</td>
<td>6 (42.9)</td>
<td>8 (57.1)</td>
</tr>
<tr>
<td>Q1 Dedicated scholarship</td>
<td>4 (28.6)</td>
<td>10 (71.4)</td>
</tr>
<tr>
<td>Q3 Repayment of undergrad loans</td>
<td>1 (7.1)</td>
<td>13 (92.9)</td>
</tr>
<tr>
<td>Q9 Full tuition</td>
<td>1 (7.1)</td>
<td>13 (92.9)</td>
</tr>
</tbody>
</table>
Thirteen (92.8%) of the participants perceived that orientation programs had an influence on degree completion. Nine (64.2%) of these institutions had orientation programs and four (28.6%) did not. The four institutions where participants agreed that orientation programs influenced degree completion at their institutions but did not have orientation programs, reported they had one of the following forms of orientation-like programs: academic departments that hosted their own orientations, in-progress graduate orientation programs, or a program where current graduate students work with incoming graduate students. A participant from one of these four institutions stated, “I believe access to faculty and community building with college and each other is extremely important” during orientation programs. Unlike the rest of the participating institutions, the one participant who disagreed with the perception that orientation programs influence degree completion did not have an orientation program of any type and had no plans to develop an orientation program.

Nine (64%) out of the 14 institutions had formal cohorts. Of the remaining five that did not have formal cohorts, three (60%) still agreed formal cohorts are important. One of three participants at an institution without formal cohorts claimed that even without formal cohorts, doctoral students still find value in the cohort group structure, albeit in an informal sense. She stated, “incoming students see themselves as informal cohorts,” and as such these “first year students do coursework together and take the same classes together.”

An administrator at one institution stated, “We have a large number of outreach programs and faculty mentoring for students to succeed.” Faculty mentoring programs create a support system that provides guidance and feedback, and that creates networking
systems to negotiate and navigate the political climate graduate school can create. Hispanic students often experience more isolation and have less access to Hispanic mentors and Hispanic role models on campus than their non-minority peers, so these support systems offer critical tools for advice, career development, counsel, and helpful direction for Hispanic students to complete their doctoral degree.

Thirteen (93%) of the survey participants disagreed or strongly disagreed that full tuition or repayment of undergraduate loan programs influence degree completion for Hispanic doctoral students. Of those 13, none have either of those programs at their institution, so their level of disagreement must be understood in this context.

**Perceived frequency of Hispanic doctoral students’ use of programs at participating institutions.** It is important to understand how the most economically disadvantaged Hispanic student can achieve his/her academic goals in order to complete the doctoral degree. Understanding institutional programs would help in this endeavor. Programs, policies and services that are designed to improve effectiveness of graduate education, and to enhance and enrich learning are important to the students.

Survey participants reported on their perception of how frequently students use the programs included on the survey (see Table 5). Findings show that orientation programs and social organizations are perceived to be the most frequently used. Nine (64%) of the institutions reported having orientation programs while five (36%) indicated they did not have orientation programs. Of the nine institutions that reported having orientation programs, six indicated Hispanic students frequently use orientation programs, one indicated Hispanic students always use orientation programs, and two indicated Hispanic students sometimes use orientation programs. Of the two participants
who reported their students sometimes used programs qualified their answers by one stating she was not sure and the other stating she could not answer due to state legislative issues.

Of the nine institutions that reported having orientation programs, one was awarded a $2.8 million Title V grant from the Department of Education to improve campus climate for Hispanic students, and thereby increase persistence and graduation rates. One of the components of the grant focuses on improvement of student engagement to promote academic support through programs such as orientation.

Of the five (36%) participants who stated their institution does not have orientation programs for Hispanic students, three participants reported Hispanic students never use orientation programs. Two of the three participants qualified their answers by

Table 5

<table>
<thead>
<tr>
<th>Perceived Program</th>
<th>Always (N, %)</th>
<th>Sometimes (N, %)</th>
<th>Never (N, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5 Orientation programs</td>
<td>8 (57.1)</td>
<td>3 (21.4)</td>
<td>3 (21.4)</td>
</tr>
<tr>
<td>Q6 Social organizations</td>
<td>8 (57.1)</td>
<td>5 (35.7)</td>
<td>1 (7.1)</td>
</tr>
<tr>
<td>Q4 Formal cohorts</td>
<td>7 (50.0)</td>
<td>3 (21.4)</td>
<td>4 (28.6)</td>
</tr>
<tr>
<td>Q8 Targeted funding programs</td>
<td>5 (35.7)</td>
<td>4 (28.6)</td>
<td>5 (35.7)</td>
</tr>
<tr>
<td>Q1 Dedicated scholarship</td>
<td>4 (28.6)</td>
<td>2 (14.3)</td>
<td>8 (57.1)</td>
</tr>
<tr>
<td>Q10 Dedicated funding programs</td>
<td>4 (28.6)</td>
<td>3 (21.4)</td>
<td>7 (50.0)</td>
</tr>
<tr>
<td>Q2 Faculty of color</td>
<td>3 (21.4)</td>
<td>5 (35.7)</td>
<td>6 (42.9)</td>
</tr>
<tr>
<td>Q7 Faculty mentoring</td>
<td>3 (21.4)</td>
<td>1 (7.1)</td>
<td>10 (71.4)</td>
</tr>
<tr>
<td>Q3 Repayment of undergrad loans</td>
<td>1 (7.1)</td>
<td>0 (0.0)</td>
<td>13 (92.9)</td>
</tr>
<tr>
<td>Q9 Full tuition</td>
<td>1 (7.1)</td>
<td>0 (0.0)</td>
<td>13 (92.9)</td>
</tr>
</tbody>
</table>
stating they did not have orientation programs. The third participant qualified that Hispanic students never use orientation programs by stating the university did not have orientation programs, but departments host their own orientation and the graduate college hosts a “welcome” for all students every fall semester. Of the remaining two institutions out of the five that answered Hispanic students never use orientation programs, one qualified his no response by stating students “always” use orientation programs because, “they do a yearly welcome done by the central planning committee, which are current graduate students, and they are developing a campus wide orientation for new graduate students that will cover all campus information.” The other participant qualified his answer of Hispanic students sometime using orientation programs because orientation programs are department specific and he is not sure how frequently Hispanic students use programs.

Social organizations are also reported as frequently used. Of the 11 (79%) participants who stated their institution had social organizations that foster Hispanic student growth with other Hispanic students and faculty, eight (57%) participants reported frequent use of social organizations by Hispanic students, and three reported sometime use of social organizations. Two qualified their answers by stating they were not sure and one participant stated it “varies, some may and some may not like all organizations.”

Three (21%) participants reported no frequent use of social organizations for Hispanic students. Of three participants who stated Hispanic students do not frequently use social organizations, two qualified their answers by stating students “sometimes” use them, one stating, “Although there are no formal groups on campus for graduate students,
they have a student government geared toward all students as a whole, but not geared toward Hispanic students, and they also have informal groups amongst campus.” This institution has a large number of Hispanic students due to its location so the participant did not know how many students involved in student organizations were specifically Hispanic. The participant from the other institution did not elaborate on why he answered that sometimes students frequently use social networks. The participants from the remaining institution that answered his institution did not have social networks qualified his answer by stating he could not answer due to state legislative issues.

Thirteen (93%) of the participants responded there is no frequent use of programs that have a full tuition program thru doctoral degrees and formal programs that repay undergraduate loans for minority students who want to pursue a doctoral degree. Of those 13, none have that program at their institution, therefore agreed that the program is not frequently used at their institutions.

**Perceived importance of programs at participating institutions to Hispanic doctoral students.** Hispanic doctoral students face many challenges when it comes to higher education. Barriers of cultural, social, familial, and economics are just some of these obstacles they may face. The experience students have in a college setting is closely related to important factors that create persistence. These experiences may be closely tied to the college environment and its effect on the Hispanic student. In general, whether or not institutions had one of the programs included in the survey, participants perceived that the programs were important to Hispanic students (see Table 6).
Table 6

Participants’ Perceptions of Importance of Program for Hispanic Ph.D. Degree Completion at Participating Institutions

<table>
<thead>
<tr>
<th>Important</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>Q2 Faculty of color</td>
<td>14 (100.0)</td>
</tr>
<tr>
<td>Q3 Repayment of undergrad loans</td>
<td>14 (100.0)</td>
</tr>
<tr>
<td>Q5 Orientation programs</td>
<td>14 (100.0)</td>
</tr>
<tr>
<td>Q6 Social organizations</td>
<td>14 (100.0)</td>
</tr>
<tr>
<td>Q8 Targeted funding programs</td>
<td>14 (100.0)</td>
</tr>
<tr>
<td>Q9 Full tuition</td>
<td>14 (100.0)</td>
</tr>
<tr>
<td>Q10 Dedicated funding programs</td>
<td>14 (100.0)</td>
</tr>
<tr>
<td>Q4 Formal cohorts</td>
<td>13 (92.9)</td>
</tr>
<tr>
<td>Q7 Faculty mentoring</td>
<td>13 (92.9)</td>
</tr>
<tr>
<td>Q1 Dedicated scholarship</td>
<td>13 (92.9)</td>
</tr>
</tbody>
</table>

All participants perceived that access programs are important to postsecondary education for Hispanic students graduating with a doctoral degree. All of them also perceived that dedicated funding programs are important or very important to Hispanic students at their institutions. Full tuition, orientation programs, social organizations, targeted funding programs, faculty of color, and repayment of undergraduate loans were the remaining six institutional programs that were reported as important or very important at 14 (100%) of the institutions.

The remaining three programs of faculty mentoring, formal cohorts, and dedicated scholarship programs were perceived by 13 participants (93%) as being important. Four (29%) participants reported their institution had a formal faculty mentoring program for doctoral students, while 10 (71%) reported their institution did not have a formal faculty
mentoring program. Despite the lack of formal faculty mentoring among the majority of institutions, all participants but one reported faculty mentoring is important for Hispanic students.

Although nine (64%) participants reported having formal cohorts, five (36%) reported not having formal cohorts at their institutions. However, 13 participants reported the importance of cohorts for Hispanic students, while one participant reported formal cohorts are not important.

Five (36%) of the participants indicated their institutions had dedicated scholarship programs for doctoral students, while nine (64%) indicated their institutions did not have dedicated scholarship programs. However, 13 of the participants indicated the importance of dedicated scholarship programs. The remaining participant, indicated dedicated scholarship programs are not important at his institution and qualified his answer by stating, “Being Hispanic is no big deal, Hispanics do not stand out because the institution is close to the Mexican border.”

Although only one institution had a formal program that financed the repayment of undergraduate loans for minority students who wanted to pursue a doctoral degree, 14 (100%) of the participants deemed the importance of having such a program. Although one program at an institution had historically been for underrepresented cultural background students, it is geared toward Hispanic students since their student population is mostly Hispanic. At this private independent university all Hispanic Ph.D. students are fully funded. A significant amount of funding comes from a Provost Fellowship, which has historically been for underrepresented cultural background students. Ph.D. students
get a stipend of $32,000 annually to attend school, plus $35,000 annually which covers tuition and an additional $10,000 per year to pay for health insurance coverage.

While 13 (93%) of the participants indicated that full tuition programs and 9 (64%) indicated that targeting programs funds were not frequently used at their institutions, 14 (100%) were convinced of the importance of these programs.

**Qualitative Data**

In addition to the descriptive statistics and correlational analysis, qualitative data from the interviews conducted with the 14 university representatives were examined. Analyzing this qualitative data, in addition to the descriptive statistics discussed earlier in this chapter, provide additional insights that offer a better understanding of the findings in the study.

To analyze the data, quotes from the interviews were sorted and put into themes. The coding process began with two a priori themes: (a) geography and (b) public versus private institutions. Additional themes emerged by analyzing the meaning of these quotes. I then listed the commonalities of these quotes and separated the commonalities into sections, which became the themes.

This coding of the data produced five major themes in addition to the two a priori themes. These seven themes are as follows: (a) geographic differences, including between-state and within-state comparisons; (b) differences in public and private universities; (c) differences due to whether the university used general diversity programs versus Hispanic focused policies and programs; (d) adequate versus inadequate funding, (e) institutional programs, (f) decentralized versus centralized programs, and (g) comparisons of the top five universities in the sample.
**Theme 1: Geographic location.** The relationship was explored between an institution’s geographic location and the percent change in the number of graduating Hispanic doctoral students, as well as the policies and programs employed by the institution. Both in-state and between-state differences were examined. Table 7 presents the percent change of Hispanic Ph.D. graduates sorted by state and illustrates that California and Texas have the largest Hispanic populations among the states in which the universities included in this study are located. Four of the respondents talked about the role of Hispanic climate and the Hispanic population on their universities and that their high number of Hispanic Ph.D. graduates was due to the location of the universities in the high Hispanic population states of California and Texas. Of the five California universities in this study, three experienced percent change increases. The percent change in the number of Hispanic doctoral students graduating in the five California universities ranged from a high of 1.75% to a low of -0.53%. While universities in Texas had some of the highest percent change increases (4.3% and 2.64%) in Hispanic Ph.D. completions, other states had similar percent change increases (e.g., Arizona, 4.38% and 1.61%; New Mexico, 2.23%) in Hispanic degree attainment. All of the universities in the study that were located in the states of Texas, Arizona and New Mexico experienced percent change increases.
Table 7

Percent Change in Hispanic Ph. D. Graduates from 2002-2008 by State

<table>
<thead>
<tr>
<th>State</th>
<th>Institution</th>
<th>Hispanic population N</th>
<th>Hispanics in the state (%)</th>
<th>% change Hispanic Ph.D. grads (2002-2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Institution H</td>
<td>13,160,978</td>
<td>(36.1)</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td>Institution E</td>
<td></td>
<td></td>
<td>1.75</td>
</tr>
<tr>
<td></td>
<td>Institution F</td>
<td></td>
<td></td>
<td>-0.46</td>
</tr>
<tr>
<td></td>
<td>Institution G</td>
<td></td>
<td></td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>Institution D</td>
<td></td>
<td></td>
<td>-0.53</td>
</tr>
<tr>
<td>Texas</td>
<td>Institution M</td>
<td>8,556,395</td>
<td>(35.9)</td>
<td>4.30</td>
</tr>
<tr>
<td></td>
<td>Institution I</td>
<td></td>
<td></td>
<td>2.64</td>
</tr>
<tr>
<td>Florida</td>
<td>Institution C</td>
<td>3,725,173</td>
<td>(20.5)</td>
<td>-13.84</td>
</tr>
<tr>
<td></td>
<td>Institution J</td>
<td></td>
<td></td>
<td>-5.13</td>
</tr>
<tr>
<td>Arizona</td>
<td>Institution A</td>
<td>1,877,267</td>
<td>(29.6)</td>
<td>4.38</td>
</tr>
<tr>
<td></td>
<td>Institution B</td>
<td></td>
<td></td>
<td>1.61</td>
</tr>
<tr>
<td>New Mexico</td>
<td>Institution L</td>
<td>873,171</td>
<td>(44.5)</td>
<td>2.23</td>
</tr>
<tr>
<td>Washington</td>
<td>Institution N</td>
<td>614,590</td>
<td>(9.5)</td>
<td>-1.01</td>
</tr>
<tr>
<td>Michigan</td>
<td>Institution K</td>
<td>406,214</td>
<td>(4.0)</td>
<td>-1.27</td>
</tr>
</tbody>
</table>

Note: State demographic data are based on 2008 estimates. Retrieved from the U.S. Census Bureau’s website: http://www.census.gov/population/hispanic/data/

One respondent felt the nearby city, and another respondent felt the geographic location in general, impacted the enrollment of Hispanic students at their institutions.

One participant suggested that geographic location and Hispanic population mass were important to the number of Hispanic doctoral students recruited and enrolled. The participant stated, “The city has a large population of Hispanics, therefore, most students are Hispanics.” From my interviews with the respondents, it appeared that a number of
the universities relied heavily on their location to increase the number of Hispanic students in their Ph.D. programs. However, while a few participants discussed the impact of the location and population demographics on enrollment numbers, none of the participants expressed how this might impact retention or completion rates.

**Within state differences.** Of the states included in this study, four had multiple universities that participated. Marketing is included as a program in this examination because although marketing is an action that a university takes and not a specific program a student may use, the respondents referred to it as a program. Table 8 itemizes the programs and policies for the two Florida universities. While both Institution C and Institution J have orientation programs and low income funding programs in common, Institution C had five programs that Institution J did not: (a) dedicated scholarship programs, (b) formal cohorts, (c) social organizations, (d) targeted funding, and (e) marketing.

Table 8

*Within State Differences of Florida Programs in Terms of Percent Change of Ph.Ds. Awarded to Hispanics from 2002-2008*

<table>
<thead>
<tr>
<th>Institution</th>
<th>% change</th>
<th># of programs</th>
<th>Programs provided</th>
</tr>
</thead>
</table>
| Institution C  | -13.84   | 7             | • dedicated scholarship programs  
• formal cohorts  
• orientation programs  
• social organization  
• targeted funding  
• low income funding  
• marketing |
| Institution J  | -5.13    | 3             | • orientation programs  
• faculty mentoring  
• low income funding |
However, Institution C (-13.84%) experienced more than double Institution J’s percent change decrease (5.13%), and the number of programs offered did not appear to be related to the percent change decrease of these institutions. This result was surprising because it was expected that large numbers of support programs offered to Hispanic doctoral students would translate to greater increases in percentage of degrees completed.

To further explore within state differences in the percent change of Hispanic Ph.D.’s awarded, I examined data from the institutions in the state of Arizona that participated in the study, I compared the different programs and policies offered by the two universities in this state (see Table 9). While both Institution A and Institution B have formal cohorts and social organization programs in common, Institution A had two programs that Institution B did not: orientation programs and additional policies.

Table 9

*Within State Differences of Arizona Programs Compared to Percent Change of Ph.D.s Awarded to Hispanics from 2002-2008*

<table>
<thead>
<tr>
<th>Institution</th>
<th>% change</th>
<th># of programs</th>
<th>Programs provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution A</td>
<td>4.38</td>
<td>4</td>
<td>• formal cohorts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• orientation programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• social organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• additional policies</td>
</tr>
<tr>
<td>Institution B</td>
<td>-5.13</td>
<td>3</td>
<td>• formal cohorts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• faculty mentoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• social organization</td>
</tr>
</tbody>
</table>

*This includes the Latino Graduate Student Association, which promotes academic achievement of Latino/Hispanic students; encourages interaction between Latino/Hispanic graduate students, faculty and the community; and promotes awareness of sociopolitical issues affecting the Latino/Hispanic community.
The third state out of the four states that had multiple institutions participating in this study was Texas. Table 10 summarizes the programs and policies for the two universities in this state. Comparing the number of Hispanic Ph.D. students to types of programs offered at Texas universities rendered the following findings: Institution M had more programs (n=8) than Institution I, which had no programs, yet the percent change increase of Hispanic student Ph.D. graduates were greater at Institution I (2.64%) as compared to Institution M (0.43%).

Table 10

<table>
<thead>
<tr>
<th>Institution</th>
<th>% change</th>
<th># of programs</th>
<th>Programs provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution M</td>
<td>0.43</td>
<td>8</td>
<td>• dedicated scholarship programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• formal cohorts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• orientation programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• social organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• faculty mentoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• targeted funding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• low income funding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• additional policies^a</td>
</tr>
<tr>
<td>Institution I</td>
<td>2.64</td>
<td>0</td>
<td>• none</td>
</tr>
</tbody>
</table>

^aThe Division of Vice Presidents have a diversity community policy called Project Males, geared toward recruiting Hispanic males to Ph.D. programs.

Finally, I examined the within state differences for five universities in California related to the different programs and policies offered. Table 11 summarizes the programs and policies for these California universities. This table shows that of the institutions in the state, Institution H had the most programs and policies (n=11) and had the second highest percent change increase (1.20%) of Hispanic Ph.D. graduates. Institution E,
which had only 5 programs, had the highest percent change increase (1.75%) in Hispanic Ph.D. graduates. However, the level of percent change increase did not hold true for the other three universities. For example, Institution G had the same number of programs as Institution E (n=5) but only had a 0.35% change increase as compared to Institutions E’s growth.

Table 11

*Within State Differences of California Programs in Terms of Percent Change of Ph.Ds. Awarded to Hispanics from 2002-2008*

<table>
<thead>
<tr>
<th>Institution</th>
<th>% change</th>
<th># of programs</th>
<th>Programs provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution H</td>
<td>1.20</td>
<td>11</td>
<td>• dedicated scholarship programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• faculty of color</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• formal cohorts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• orientation programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• social organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• faculty mentoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• targeted funding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• full tuition</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• low income funding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• marketing</td>
</tr>
<tr>
<td>Institution E</td>
<td>1.75</td>
<td>5</td>
<td>• faculty of color</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• orientation programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• social organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• low income funding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• additional policies(^a)</td>
</tr>
<tr>
<td>Institution G</td>
<td>0.35</td>
<td>5</td>
<td>• dedicated scholarship programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• formal cohorts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• orientation program</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• social organizations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• targeted funding</td>
</tr>
<tr>
<td>Institution F</td>
<td>-0.64</td>
<td>3</td>
<td>• faculty of color</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• formal cohorts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• marketing</td>
</tr>
</tbody>
</table>

\(^a\)Institution H also offers dedicated scholarship programs and has a faculty of color.

\(^b\)Institution E also offers dedicated scholarship programs, orientation programs, and social organization.

\(^c\)Dedicated scholarship programs.
Theme 2: Private vs. public institutions. While examining colleges to attend for graduate school, Ph.D. Hispanic students may ask themselves if attending a private or public university has any similarities or differences that may make a difference in their degree completion. While there may be many differences and similarities among the two, one distinct difference between private and public universities is that public universities need to adhere to state legislative standards and private universities do not.

Table 12 represents the percent change of Hispanics that graduated with a Ph.D. sorted by private and public governance. The average percent change between public and private universities appears to be similar in the years between 2002-2008, with both types of control averaging percent change decreases.

Table 12

Public vs. Private Percent Change in Hispanic Ph.D. Graduates from 2002-2008

<table>
<thead>
<tr>
<th>Institution type</th>
<th>Institution</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>Institution B</td>
<td>1.61</td>
</tr>
<tr>
<td></td>
<td>Institution H</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td>Institution D</td>
<td>-0.53</td>
</tr>
<tr>
<td></td>
<td>Institution J</td>
<td>-5.13</td>
</tr>
<tr>
<td></td>
<td>Private average % change</td>
<td>-0.71</td>
</tr>
<tr>
<td>Public</td>
<td>Institution A</td>
<td>4.38</td>
</tr>
<tr>
<td></td>
<td>Institution I</td>
<td>2.64</td>
</tr>
<tr>
<td></td>
<td>Institution L</td>
<td>2.23</td>
</tr>
</tbody>
</table>
Institution E 1.75
Institution M 0.43
Institution G 0.35
Institution F -0.46
Institution N -1.01
Institution K -1.27
Institution C -13.84

Public average % change -0.48

**Theme 3: Diversity programs vs. Hispanic-focused programs.** The theme of whether or not a university had diversity-focused or Hispanic-focused programs emerged from the data. The participants tended to respond to questions about Hispanic-specific programs with examples of programs that serve a variety of students, not just Hispanics. As stated by the Institution F participant, “We do have diversity fellowships that are designated for underrepresented minorities as a whole such as first-generation students, socio-economic background, or hardships achieving in education; however it is not designated to Hispanic students due to Proposition 209.” The relationship of Proposition 209 to policies and programs will be described in detail later in this section.

University representatives who participated in the survey made a point of stating that the universities served Hispanics as part of their overall diversity efforts. Four participants provided evidence of their institution’s diversity focus by providing examples of programs that were offered. The participant at Institution G offered that her university has faculty advisor groups and is hiring a vice chancellor for inclusion and equity. Institution C had an upward bound and gear up program, Institution I had created a new position to recruit more Ph.D. minorities and promote diversity recruitment at its campus, and Institution H offered formalized and developed programs. These are all
broad diversity programs, open to all underrepresented groups, not just to Hispanic students.

Institution G can be identified as diversity focused because its practices focus on developing diversity in general, not just for Hispanics. The participant from Institution G explained that: “We have a Faculty Equity Advisor group that advises best practices to hiring committees to enhance diversity in hiring faculty. They are currently looking for a Vice Chancellor for Inclusion and Equity to enhance diversity efforts in hiring and student recruitment.”

Institution I can be identified as diversity focused based on the participant’s statement on increasing diversity among the staff: “We just hired a new person in May 2011 to recruit more Ph.D. minorities to gear up toward more diversity and recruitment.” This program relates to the survey question of institutions having a formal policy that addresses the underrepresentation of faculty of color. Although this institution was the only one in the sample that had a formal policy, 14 institutions (100%) indicated that faculty of color are important or very important to Hispanic students.

Institution H offered the most Hispanic-focused programs of all the sample universities. It offered more formalized, more developed, and funded programs and was distinctively different than other universities in the sample. Institution H had an extensive amount of programs that help promote student success. It offered campus programs that provide its Hispanic students with the resources necessary to complete their doctoral degree. The participant indicated that Institution H stood out from the others and provided an example of that distinction:
The university sponsors a program for graduate students. It is a 10-week summer program that targets students early in their Ph.D. program. The program focuses on how to do research, tips and strategies on writing skills, and promotes communication abilities. Each student is assigned a faculty mentor and assigned a graduate student advisor, which is an additional staff member. Then the graduate student gets an annual academic screening in their first and second year because we found that is the most critical times for doctoral students to drop out so this process helps reduce their dropout rate. During their fourth and fifth year, we focus more on careers, job markets, and help with CV, job talk, and cost of travel for interviews and post-doc practices and opportunities.

In addition, Institution H has community initiatives to encourage Hispanic youth to obtain a Ph.D. by providing the best financial package out of the sample universities, which gives talented students from low socio-economic backgrounds the chance to get a college education at a private college. The program is described by the representative who stated:

We go into middle schools and educate students, teachers and parents on Saturdays and after school in order to prepare them academically. Students must do good academically in middle school and high school. We go into distressed areas that have the lowest socio-economic community issues. Students must apply and be admitted while still in high school and they are accepted, they get full funding such as fully paid tuition, scholarships, and housing all through their doctoral degree.
As a result of this program, Hispanic students can graduate with a Ph.D. and have the freedom to pursue their careers without the burden of debt after graduation.

Institution H had the most programs out of all of the universities in the sample, and most of them are Hispanic-focused (see Table 13). Students who seek to get involved on campus can choose from several student resources such as programs related to dedicated scholarships, full tuition, faculty of color, faculty mentoring, formal cohorts, orientation, social organizations, targeted funding, low income funding, and marketing. Although it is located in a state that is bound by state legislative issues for public universities, it is a private university not bound by state laws in regards to funding, programs, and additional policies, which may be a reason it is the second highest percent change increase in its state.
### Table 13

**Institution H Programs**

<table>
<thead>
<tr>
<th>Programs</th>
<th>Diversity focused</th>
<th>Hispanic focused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated scholarship program</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Full tuition</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Faculty of color</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Faculty mentoring</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Formal cohorts</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Orientation programs</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Social organizations</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Targeted funding</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Low Income funding</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Additional policies</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Marketing</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Table 14 addresses the five public universities of the sample that were governed by state laws that prohibit the creation of programs based on race, gender, and ethnicity for purposes of admissions, and funding to students. As the table shows, no clear pattern regarding the percent change in Hispanic Ph.D. graduates emerged. Both increases and decreases in the percent of Hispanic graduates occurred in the 2002-2008 time frame, with roughly equivalent extremes.

California’s Proposition 209 was discussed by the Institution F participant who explained:

We are bound by Proposition 209 and cannot distinguish between scholarships based on ethnicity. Proposition 209 prohibits using race, ethnicity, for funding and admissions purposes in California. California has been governed under Proposition 209 since the late 1990s. The law went into effect in our state due to affirmative action lawsuits that occurred at U of M, and California because white
students were not getting into college because of minority quotas needing to be met and students began suing colleges due to privilege issues. Therefore, nothing in California public university campuses can be just for Hispanic students due to Proposition 209.

Institution F was governed by Proposition 209, and also had the lowest percent change decrease for Hispanic Ph.D. graduates (-0.46%) out of the three California state-law governed institutions, and only offered three programs.

Table 14

Types of Programs and Percent Change of Hispanic Ph.D. Graduates among Public Universities

<table>
<thead>
<tr>
<th>Institution</th>
<th># of programs</th>
<th>Program type</th>
<th>% change of Hispanic Ph.D. graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution E</td>
<td>5</td>
<td>Faculty of color</td>
<td>1.75%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Orientation program</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social organizations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low income funding</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Additional policies</td>
<td></td>
</tr>
<tr>
<td>Institution G</td>
<td>5</td>
<td>Dedicated scholarships</td>
<td>0.35%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Formal cohorts</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Orientation programs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social organizations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Targeted funding</td>
<td></td>
</tr>
<tr>
<td>Institution F</td>
<td>3</td>
<td>Faculty of color</td>
<td>-0.46%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Formal Cohorts</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marketing</td>
<td></td>
</tr>
<tr>
<td>Institution N</td>
<td>6</td>
<td>Faculty of color</td>
<td>-1.01%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Orientation program</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social organizations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low income funding</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Additional policies</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marketing</td>
<td></td>
</tr>
</tbody>
</table>
There are also a number of other universities that discussed how legislative issues prohibited them from creating programs based on race or other minority-focused programs. The affirmative action law in the state of Michigan, Proposal 2, also prohibits policies targeting race, gender, and ethnicity for purposes of admissions, and funding to students. The representative from the university explained by stating:

Proposal 2 is a state law enacted in the late 1990s because of the University of Michigan Law School and the challenges they faced about admission policies. People were given points based on race and significant points were given to people of color, it was ruled unconstitutional.

As the participant noted, Institution K was governed by Proposal 2, had the greatest percent change decrease of Hispanic Ph.D. graduates (-1.27%) out of the five law governed states, and only offered three programs as did Institution F. This decrease could be attributed to Proposal 2.

Initiative 200, otherwise known as the Washington State Civil Rights Initiative, was passed in 1998 due to the discrimination of women and minorities in government entities of the state. The representative from the Institution N explained how the law affects the university by stating, “[Institution N] operates under Initiative 200, which is a state law which prohibits allocations of scholarships based exclusively on race.”

Institution N is governed by Initiative 200, and had the fourth lowest percent change decrease of Hispanic Ph.D. graduates out of the five law governed states, but offered the most programs. The percent change decrease of Hispanic Ph.D. graduates
could be attributed to Initiative 200. All of the universities mentioned above had a percent change decrease and were governed by laws that prohibited policies targeting race, gender, and ethnicity for purposes of admissions, and funding to students. The only program all three universities had in common was a marketing program.

**Theme 4: Adequate vs. inadequate funding.** College administrators need to make sure their universities offer a good quality education that is affordable for their students. Offering graduate assistantships, teaching assistantships, and scholarships may be a way to relieve unexpected cuts in state and federal funding, which can limit the ability for all students including Hispanic students to graduate with a Ph.D.

While some universities faced budget cuts and funding difficulties, other universities seemed to have ample funds to support their programs. Two of the universities particularly were concerned with lack of funding. For example, the representative from Institution I stated, “I do not feel departments do a very good job at recruiting because they are losing some staff members due to cuts in state budgets. They are shorthanded, and therefore recruitment efforts are compromised.” Among the university sample, this university had the second highest percent change of Hispanic Ph.D. graduates.

Institution G also faced funding difficulties as the representative stated, “The University needs a long list of things to be trained on, but the university is fiscally challenged right now, so this [mentor the mentor] program is on the back burner.” However, other universities discussed having adequate funding, or even “War Chests” to support their programs as the representative from Institution M discussed:
We have a best practice called the War Chest which is a pool of money the President set aside just in case a prospective diverse faculty member is teetering between working at our university or a different university. If the deciding factor for the prospective faculty member is money, then the President pulls money out of the War Chest to get the candidate to come here. The President realizes the university needs more Hispanic faculty and is doing all he can to hire more Hispanic faculty.

The participant from Institution H also gave an example of adequate funding:

A significant amount of funding comes from a Provost Fellowship, which has historically been for underrepresented cultural background students. Ninety percent of Ph.D. students are fully funded. Ph.D. students get a stipend of $32,000 annually to attend school, plus $35,000 annually which covers tuition and an additional $10,000 per year to pay for health insurance coverage. It is money that makes students come to us. Students are always looking for the best financial deals.

As both participants (Institutions M and H) claimed, funding and financial support are important factors Hispanic Ph.D. students, like all students, consider. Without adequate funding and financial support, a prospective Hispanic doctoral student may attend a doctoral program elsewhere or not at all.

Table 15 provides funding source information of sample universities that reported on funding. Although there were a total of 14 universities in the sample, only five universities were able to respond with funding information; the other university representatives did not know the answers to the funding questions on the survey. Within
Table 15, one private university with two funding programs had the greatest percent change (1.61%) of Hispanic Ph.D. graduates while the university with the most funding programs (n=4) had the lowest percent change (-1.01%) of Hispanic Ph.D. graduates.
Table 15

*Available Funding Sources at Institutions that Receive Funding as Reported by Participants*

<table>
<thead>
<tr>
<th>Institution</th>
<th>Fellowships</th>
<th>Full funded</th>
<th>General fees</th>
<th>Grants</th>
<th>Research</th>
<th>Student fees</th>
<th>TA</th>
<th>Tuition</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution B</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Institution D</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Institution G</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Institution M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Institution N</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>11</td>
</tr>
</tbody>
</table>
Of the five participants who reported receiving funding from their institutions located in Table 15, research funding was reported as the most frequent source of funding as identified by three of the six participants. Of the same five participants, tuition, grants, and student fees followed as the second most frequent funding source, with fellowships, and general fees the least frequently used. Fully funded options were not used at their institutions.

Of the five institutions in the sample that responded, two are private universities with Institution B having the greatest percent change increase (1.615) of Hispanic Ph.D. graduates of these five, and Institution D having the second lowest percent change decrease (-0.53%). Of the remaining three universities, Institution G had the second greatest percent change (0.35%) increase, Institution M had the least lowest percent change decrease (-0.43%), while Institution N had the greatest percent change decrease (-1.01%).

**Theme 5: Institutional programs.** The survey conducted included questions about existing student programs that serve underrepresented minorities drawn from the literature review. The survey encompassed programs and policies related to scholarships, diverse faculty, funding, faculty mentoring, social networks, formal cohorts, and orientation programs.

Institutions in the sample recognize the importance of connections to Hispanic students and have created student programs to maintain these connections. Of the 14 universities researched, 11 had formal institutional programs and described them as providing a supportive campus culture. They all had the commonalities of having student success programs for Hispanic students. Although representatives from these universities
could not pinpoint a single institutional program that increased Hispanic student success, the programs the universities offered did reflect the universities’ strategies for providing multiple avenues for Hispanic student support.

Table 16 illustrates the total number of programs at sample universities. Of the 14 universities, 13 had programs and one university had none. The university that had the most programs (n=11) was a private university and also had the sixth greatest percent change increase of the universities in the sample. The university that had the second highest number of programs (n=8) also had the eighth highest percent change increase in Hispanic Ph.D. graduates in the sample.

Table 16

<table>
<thead>
<tr>
<th>Institution</th>
<th># of programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution H</td>
<td>11</td>
</tr>
<tr>
<td>Institution M</td>
<td>8</td>
</tr>
<tr>
<td>Institution C</td>
<td>7</td>
</tr>
<tr>
<td>Institution N</td>
<td>6</td>
</tr>
<tr>
<td>Institution E</td>
<td>5</td>
</tr>
<tr>
<td>Institution G</td>
<td>5</td>
</tr>
<tr>
<td>Institution A</td>
<td>4</td>
</tr>
<tr>
<td>Institution B</td>
<td>3</td>
</tr>
<tr>
<td>Institution D</td>
<td>3</td>
</tr>
<tr>
<td>Institution F</td>
<td>3</td>
</tr>
<tr>
<td>Institution J</td>
<td>3</td>
</tr>
<tr>
<td>Institution K</td>
<td>3</td>
</tr>
<tr>
<td>Institution L</td>
<td>3</td>
</tr>
<tr>
<td>Institution I</td>
<td>0</td>
</tr>
</tbody>
</table>
A commonality shared by these universities is that they are located in states in the sample that have the highest state population of Hispanics (see Table 5). The university with the largest percent change increase (4.38%) was the only university that offered four programs out of the entire sample. The universities that offered four or more university programs had two programs in common; (a) faculty mentoring, and (b) social organizations. No trends or commonalities existed between the number of programs offered by universities in relationship to the percent change of doctoral degrees awarded to Hispanics students from 2002-2008.

Of the six universities that had three programs, only two private institutions had common programs: (1) formal cohorts, and (2) social organizations. There were no commonalities amongst the remainder of the universities. However, there are commonalities in Hispanic student social organizations present on their campuses, which survey participants readily discussed. For example, Institution K had over eight social clubs organized under a Latino student organization umbrella. The participant stated:

The Latino Student Organization (LSO) is a Latino student umbrella organization for following organizations: Alma, Latino Sororities and Fraternities, Hispanic Heritage month, La Salud, which focuses on Hispanic cultures, Social work coalition, which focuses on specific individual groups of Columbian students, Puerto Rican students, etc. and the Latin Law Association.

Social organization programs were also found at Institution M, Institution A, and Institution D. The representative from Institution M described the program, “Hispanic Staff Association is a Hispanic organization that encourages mentoring, socialization, and introduction between staff and students.” Another example of student organizations was
described by the Institution D representative who stated, “We have a Hispanic center which is a student club that has Hispanic social events and cultural events and also has an organization within it that focuses on graduate students.” An example of a student organization where the university develops partnerships between the graduate students, faculty, and the community was described by the Institution A representative:

The Latino Graduate Student Association is an organization for Hispanic student graduate students who joined together to promote academic achievement of Hispanic students to encourage interaction between Hispanic graduate students, faculty, and the community at large. They also promote socio-political issues affecting the Hispanic community.

The last commonality is that none of representatives from the universities offered additional information in regards to Hispanic graduate student organizations having a relationship to Hispanics obtaining a Ph.D., increasing Ph.D. degree completion rates, or that these programs relate to positive outcomes for assisting Hispanics in a Ph.D. program.

**Theme 6: Decentralized vs. centralized.** Whether programs to help assist Hispanic Ph.D. students are centralized or decentralized can vary from college to college within the same university. Regardless of who is responsible for the programs, university programs exist to assist students.

Table 17 presents the universities that offered information on if their programs were department run, college run, or institution run. Of the 5 participants who offered information, none of the programs were institution run. Two of the universities were located in Texas, which had the second largest population of Hispanics of the states
included in the sample. One department-based program at a Texas university had the second greatest percent change increase of Hispanic Ph.Ds. out of the five universities that described the initiators of their programs and it also offered the least amount of programs (see Table 17). Institution M had the most programs out of the participants who stated they had decentralized programs along with having the third lowest percent change decrease in the sample of Hispanic Ph.D. graduates.

On the opposite spectrum, Institution A had the greatest percent change increase, while offering the second highest number of programs. Institution D was the only private university that offered information on its decentralized programs, with the participant stating it has only three programs, and had the fourth largest percent change increase among the five institutions. The only program commonality of the five universities in Table 17 was that they offered social organizations, with four out of the five universities offering a department-run program and the remaining one offering a college-run program.

Table 17

<table>
<thead>
<tr>
<th>Institution</th>
<th>Department based</th>
<th>College based</th>
<th>% change of Hispanic Ph.Ds.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution A</td>
<td>X</td>
<td>4</td>
<td>4.38</td>
</tr>
<tr>
<td>Institution I</td>
<td>X</td>
<td>0</td>
<td>2.64</td>
</tr>
<tr>
<td>Institution M</td>
<td>X</td>
<td>8</td>
<td>0.43</td>
</tr>
<tr>
<td>Institution D</td>
<td>X</td>
<td>3</td>
<td>-0.53</td>
</tr>
<tr>
<td>Institution K</td>
<td>X</td>
<td>3</td>
<td>-1.27</td>
</tr>
</tbody>
</table>
Most of the representatives from the universities presented in the table, discussed how Ph.D. programs are decentralized and vary in procedures and programs, from college to college, and department to department as described by the Institution D representative who stated, “Every department manages itself differently. In addition, each department has their distinct differences. There are distinct differences in how dissertation committee chairs operate.”

The participant from Institution I described how each college is now responsible for how it uses its allotted money for its Ph.D. programs:

Doctoral student tuition fellowships are available to all students, not just Hispanic students. Each college was allocated their own monies to decide who to allocate money to and how much is allowed for each employee. The university paid out over $10 million in student tuition in 2010, now they put it into each college to make each college more accountable.

Given that practices differ from department to department it is possible that the quality of these programs also varies. For example, the Institution M representative stated, “Orientation programs are department specific. Some departments do a great job and some not so good. Every top has its own bottle, and is not always a good idea for the college.” Based on the comments of the interviewees, it is difficult to determine for certain if department-based programs have any greater relationship with Hispanic Ph.D. degree completion than college-based programs.

**Theme 7: Comparisons of top five universities.** The top five universities based on percent change increase in the sample were examined for program trends,
commonalities, and differences. Although Institution I had no programs, four of the top five had the commonality of social organizations.

There may be some explanations of why some universities had one of the top five greatest percent changes as listed in Table 18. The two Arizona universities in the study were among the top percent change increases in Hispanic Ph.D. graduates and were also located in the state that had the fourth largest Hispanic population. Both Arizona universities had programs of formal cohorts and social organizations in common. Institution I, which ranked second, may have experienced a percent change increase in Hispanic Ph.D. attainment because it is located in the state with the second largest Hispanic population (Texas), while the California university that had the largest Hispanic state population was listed as having the fourth largest percent change increase of Hispanic Ph.D. graduates in the sample (Institution E). Institution E was the only university in the top five that was bound by state legislative laws regarding policies based on race.

Table 18

Program Commonalities of the 5 Universities with Greatest Percent Change in Awarding Hispanics with a Ph.D.

<table>
<thead>
<tr>
<th>Institution</th>
<th>% change 2002-2008</th>
<th>University program</th>
</tr>
</thead>
</table>
| Institution A | 4.38 | • Formal cohorts  
|              |       | • Orientation programs  
|              |       | • Social organizations  
|              |       | • Additional policies  |
| Institution I | 2.64 | • None |
| Institution L | 2.23 | • Dedicated scholarships  
|              |       | • Formal cohorts  
|              |       | • Social organizations  |
Table 19 represents the trends, commonalities, and differences in the universities that had a percent change decrease in Hispanic Ph.D.s. with no program commonalities found at all six universities. The two Florida universities have orientation programs and low income funding in common. The Florida university that had the largest percentage decrease of all institutions also offers the most programs (Institution C). Both Florida universities have the two largest percentage decreases of all institutions while being in the third largest Hispanic populated state.

Table 19

*Program Commonalities of Universities with Negative Percent Change in Awarding Hispanics with a Ph.D.*

<table>
<thead>
<tr>
<th>University</th>
<th>% change</th>
<th>University programs</th>
</tr>
</thead>
</table>
| Institution C | -13.84\(^a\) | - Dedicated Scholarships  
- Formal cohorts  
- Orientation programs  
- Social organizations  
- Targeted funding  
- Low income funding  
- Marketing |
| Institution J | -5.13 | - Orientation programs  
- Faculty mentoring  
- Low income funding |
| Institution K | -1.27 | - Orientation programs  
- Social organizations  
- Marketing |
<table>
<thead>
<tr>
<th>Institution</th>
<th>Percent Change</th>
<th>Programs</th>
</tr>
</thead>
</table>
| N           | -1.01         | - Faculty of color  
|             |               | - Low income funding  
|             |               | - Orientation programs  
|             |               | - Social organizations  
|             |               | - Marketing  
|             |               | - Additional policies\(^b\) |
| D           | -0.53         | - Formal cohorts  
|             |               | - Targeted funding  
| F           | -0.46         | - Faculty of color  
|             |               | - Formal cohort  
|             |               | - Marketing  

\(^b\)Despite the decrease in percent change, the number of Hispanics graduating with a Ph.D. increased, and almost doubled, in size.
\(^b\)The office of the provost works on faculty advancement, faculty recruitment tool, and institutional policy issues to promote diverse faculty.

Of the two California universities in Table 19, one is private and the other is public, with one university being the only public California state university having a percent change decrease (Institution F). The only common program offered at these California universities was formal cohorts. Both California universities have the two lowest percent changes decreases of all institutions in the sample.

Of the two private universities in Table 19, the California university (Institution D) located in the largest populated Hispanic state also had the fifth highest percent change decrease. There were no common programs within the two private universities (Institutions D and J).

Three of the universities in Table 19 are governed by state laws which prohibit programs based on race, gender and ethnicity for purposes of admissions, and funding to students. None of these three universities were located in the same states, although one was located in a state that had the lowest Hispanic population while one university was located in a state that had the largest Hispanic population in the study. Two of the three
had a common program of faculty of color, and marketing was a common program at two
different universities amongst these three.

Results of Correlation Analysis

The purpose of this research is to examine the dependent variable of the percent change from 2002-2008 in doctoral degrees awarded to Hispanics and the relationship between degree attainment and institutional policies and practices. Understanding Hispanic Ph.D. student graduation and retention rates may become clearer by the research question that refers to the correlation analysis which is:

What is the relationship if any between independent variables related to institutional programs, policies, and practices (listed in Appendix C) and the percent of change in number of Ph.Ds. awarded to Hispanics from 2002-2008?

A correlational analysis was run with the dependent variable of the percent change in Hispanics graduating with a doctoral degree showing no significant relationship between the independent variables of the survey questions and their sub question breakdown of influence, frequency of use, and importance of programs. The correlational analysis was run by inputting each specific institution that participated in the survey and inputting the dependent variable.

Conclusion

After researching Hispanic serving programs at participating institutions, for the perceived influence of programs, the perceived frequency of use, and importance of programs, and primary sources of funding programs, the data showed that there are several programs offered at institutions that are used by students. Data also revealed that, in many cases, participants could not respond due to legislative laws that prohibit funding
for colleges that target racial and ethnic groups in their policies, practices, and programs. Data showed that less than half of the institutions could report out on their forms of funding.
Chapter Five

Discussion

This dissertation research addressed doctoral degree attainment of Hispanics and the policies and practices related to retaining and graduating Hispanic Ph.D. students. This chapter provides a summation of the study, a review of the methodology used, and a synopsis of the research findings. This chapter also includes a discussion of the results, limitations of the findings, practical implications of the findings, conclusions, and recommendations for future research.

The purpose of this study was to examine the percent change of doctoral degrees awarded to Hispanics and determine the relationship, if any, between degree attainment and institutional policies and practices related to retaining and graduating Hispanic doctoral students.

The study was guided by the following research questions:

1. What is the percent change of doctoral degrees awarded to Hispanic students at each of 24 identified institutions from 2002-2008?
2. What institutional policies and practices, if any, are related to doctoral degrees awarded to Hispanic students?
3. What is the relationship if any between independent variables related to institutional programs, policies, and practices (listed in Appendix C) and the percent of change in number of Ph.D.s. awarded to Hispanics from 2002-2008?

Although there was no significant relationship between the independent variables in the study and the percent change of doctoral degrees awarded to Hispanic Ph.D. students, the interview discussions with the participants provided rich descriptive data on
the influence of programs that might inform future research. Through these discussions, valuable information was received about the independent variables.

Both qualitative methods and quantitative methods were used to gather data. The survey conducted included questions about existing programs that serve Hispanic doctoral students and also allowed participants to identify their own programs not identified in the survey. The survey encompassed programs and policies related to scholarships, diverse faculty, funding, faculty mentoring, social networks, and admissions.

Swail’s Geometric Model of Student Persistence and Achievement, the conceptual framework used for this study, places the focus of institutional programs on the student experience. The Geometric Model is based on the premise that when the institution provides both institutional and social support systems for the student, the student has a better chance to successfully graduate (Swail et al., 2003). The Geometric Model includes three factors (cognitive, social, and institutional), but this study focused on only the institutional factor because colleges and universities have the most control over this factor. Moreover, in the model, the institutional factor sets the foundation upon which the other factors can build. The institutional factor is comprised of five components which, among others, include financial aid services, student services, and academic services. The components of the institutional factor provided the framework for developing both the research and survey questions.

In this study, 24 institutions that awarded the greatest number of doctoral degrees to Hispanic students in 2008 were invited to participate. Of the institutions that were invited, only 14 agreed to participate. The 14 participants were comprised of 10
administrators from graduate schools, one from a multicultural affairs office, one associate dean of diversity, one associate vice provost, and one associate director of diversity.

Telephone interviews were conducted with survey participants, which were analyzed through coding as described by Creswell (2006). The coding process began with two a priori codes: geographic location and institutional control (i.e., public or private). The analysis of the data identified five additional codes: the focus of the programming (i.e., diversity in general or Hispanic-specific), the adequacy of funding, the types of programming, organizational structure, and percentage of growth in the number of Ph.Ds. awarded to Hispanics.

Further analysis of the two a priori codes and the five additional codes produced four major themes discussed in depth in this chapter and three minor themes which are briefly explained. The major themes were as follows: (a) geographic location and population; (b) differences in general diversity programs versus Hispanic-focused policies and programs; (c) public versus private control and funding; and (d) issues of adequate versus inadequate funding. Three minor themes emerged, but are not emphasized, because upon deeper analysis, they lacked explanatory power in terms of addressing the overall research questions. These three minor themes were (e) institutional programs; (f) decentralized versus centralized programs; and (g) comparisons of the top five universities in the sample. Quotes from the interviews were selected to illustrate themes.

A Pearson correlational analysis was used to look at the relationship between the dependent variable of the percent change in doctoral degrees awarded to Hispanics and
each of the independent variables related to institutional policies and programs. The
correlational analysis determined that none of the independent variables were
significantly related to the dependent variable.

**Survey Questions**

The survey participants were asked about their perceptions of the influence of
their programs, the frequency of use of their programs, and the importance of their
programs for Hispanic doctoral students. While there was no significant relationship
between degree completion and the perceived influence of programs, perceived
frequency of use of programs, and perceived importance of programs for Hispanic
doctoral students, the interviews with the participants provided additional qualitative data
that added depth to the quantitative findings.

**Perceived influence of programs.** No significant relationship between perceived
influence of programs and degree completion was found; however, the participants felt
strongly that their programs influence degree completion. The four programs that nearly
all participants perceived had an influence on degree completion for Hispanic doctoral
students were orientation programs, faculty mentoring, formal cohorts, and social
organizations. These programs represent support systems that theoretically provide
guidance for students to succeed. According to the prevalent perceptions among the
participants, programs can positively influence the experience of Hispanic doctoral
students by removing cultural conflict and institutional, social, and cultural barriers.
Believing that “access to faculty and community-building with the college and each other
is extremely important” in promoting Hispanic student success, Institution M has
implemented some programs intended to eliminate institutional and social barriers by
building community through access to diverse faculty. Likewise, the participant at Institution E claimed diversity programs positively influence doctoral students by bringing students of various backgrounds together in order to reduce cultural conflict. The belief in the positive influence of such programs on Hispanic doctoral students extends beyond the participants in this study. Post-graduate program administrators and professors such as Palmer and Williams-Greer (2006) are among those who also express a strong belief in the influence of support programs on Hispanic doctoral student success. Noting how increasing numbers of Hispanic, African-American, and American Indian students accepted into doctoral programs have not necessarily led to proportionate completion rates, Palmer and Williams-Greer argued programs to address the unique needs and barriers of such students are an essential part of the solution:

> College leaders have failed to build bridges between under-represented students’ sociological and cultural factors and their doctoral programs. Just accepting more minority candidates is not the solution; working to understand cultural conflicts, remove institutional barriers and increase the quality of diversity initiatives are essential. (p. 2)

If, as Palmer and Williams-Greer have claimed, administrators need to build bridges (e.g., offer programs) and if, as survey participants suggest, some programs in particular influence degree completion, the lack of a significant relationship between the perceived influence of programs on doctoral degree completion is surprising. It is possible administrators want programs to positively affect graduation rates and so perceive it as such, when in fact the actual relationship between the programs and graduation may be weak. From this discrepancy between perception and fact, two questions for further
research arise: why do administrators believe support programs are effective regardless of the evidence to the contrary and what factors (e.g., financial, career, family situations) actually influence whether Hispanic students complete their doctoral program? In other words, it is possible the programs that have been implemented are not the correct programs to help achieve higher graduation rates of Hispanic doctoral students and, perhaps, other programs need to be explored, implemented, and assessed. In particular, it would be worth investigating the effect of financial, family, and career support programs in greater depth.

**Perception of frequent use of programs.** No significant relationship between the perceived frequency of use of programs and degree completion for Hispanic doctoral students was found. The programs perceived as most frequently used among the majority of participants were orientation programs, social organizations, and formal cohorts. These same three programs were among the programs perceived as most influential. The fact that these programs are perceived as frequently used by students (and influential) suggests the institution and/or the students find value in the programs. Institution H found its cohort program in particular has remained frequently used and popular because of the purported value it has in retaining students and providing academic guidance. Called the EDGE program (Enhance Diversity in Graduate Education) for incoming students, it includes a 10-week summer institution program that targets students early in their Ph.D. program and a follow up screening during the doctoral students’ first and second years, which administrators have found are the most critical times for doctoral students to drop. According to the participant, it is arguably the frequency of use and persistence over time that makes EDGE successful. The students are at risk for becoming isolated or lost in the
shuffle without frequent participation. As explained by the participant, the EDGE program meets the three factors of a successful mentorship program as identified by Boyle and Boice (1998), which are early involvement, a well-structured mentor selection structure, frequent interaction, and socialization with professors.

The lack of correlation between perceived frequency of program use and percentage change in degree completion was unexpected, but such a result does not preclude the possibility of other benefits of frequently using programs. It might be worthwhile to focus on these programs perceived as most frequently used in greater depth to determine specific reasons why they are used and what benefit the students gain from them.

**Perceived importance of programs for Hispanic students.** The perception of importance of programs for Hispanic students was asked of survey participants and all of the participants perceived the programs for Hispanic students as important. However, no significant relationship between degree completion and the perceived importance of programs for Hispanic doctoral students was found.

Despite the lack of a relationship, the participants perceived their programs as valuable for variety of reasons besides completion, including social and academic support, and integration. The participant from Institution N noted that having a dissertation writing group sponsored by the graduate school “brings together” dissertation fellowship recipients to “provide a network of support” during the writing stages of the dissertation process. Additionally, a survey participant from Institution L perceived support services as important towards improving the campus climate for Hispanic students. Similar to the participants, the literature highlights a number of social benefits
to programs including widened support networks, an improved sense of belonging, and
closer integration into the institutional fabric. Rosales (2006) claimed offering student
support groups, retention committees, and research and writing teams for Hispanic
doctoral student can improve their sense of comfort in the campus culture. Moreover,
having special programs for minority students can enhance student success and can
reinforce social capital of knowledge gained by belonging to the group (Engle &
O’Brien, 2006).

Some of the programs that exist at the participating institutions attempt to foster a
sense of belonging. One participant reported doctoral students at Institution H have a
sponsored tea and coffee seminar that fosters community amongst students, where they
can focus on the economics of being Hispanic, on the importance of research and
publication, and on outreach to the community. This same university offers a summer
program for its graduate students that focus on research, tips, and communication skills.
Integrating students into the fabric of the institution seems to be what most of the
participants perceive as important in academic programs geared either directly towards
Hispanic students or indirectly through generalized diversity programs. Thus, even
though the perceived importance of programs did not correlate with degree completion
rates among Hispanic doctoral students, the participants’ responses and much of the
literature suggest these programs have value in terms of support, belonging, and
integration. These results indicate a need to investigate how these programs relate to
feelings of support, belonging, and integration and perhaps measure their relationship to
outcomes other than graduation rates, such as long-term alumni commitment and/or
future donations to an institution.
Discussion of Themes

 Qualitative data from the interviews conducted with the 14 university representatives were examined and provided insights that offered a better understanding of the findings in the study. The major themes were as follows: (a) geographic location and population; (b) differences in general diversity programs versus Hispanic-focused policies and programs; (c) public versus private control and funding; and (d) issues of adequate versus inadequate funding. Three minor themes emerged, but are not emphasized, because upon deeper analysis, they lacked explanatory power in terms of addressing the overall research questions. These three minor themes were (e) institutional programs; (f) decentralized versus centralized programs; and (g) comparisons of the top five universities in the sample. Upon analysis, these three minor themes did not provide enough information to warrant in-depth discussion, but they are worth mentioning in order to acknowledge they were considered and might be the subject of future research.

Geographic location. The theme of geographical location arose in relation to some of the participants’ comments about the population makeup of their surrounding area. The participant from Institution M, in response to the question about marketing to Hispanics, delved into the topic of the institution’s location and its surrounding population. The point of the participant’s comment was that the institution recruits and graduates many Hispanic doctoral students because of the large proportion of the local area’s population comprised of Hispanics.

An institution’s geographic location and the surrounding demographics may lead to the creation of social circles due to the critical mass of Hispanics both at the institution and in the surrounding community, leading to higher numbers of Hispanic graduates. A
response from an administrator at Institution I indicates a belief in the power of numbers in creating environments conducive to learning for Hispanic students. This participant stated, “There are a large number of doctoral graduates from this institution because of the unusual amount of Hispanic students due to the university’s locality.” In a different state, one respondent felt the nearby city, and another respondent felt the geographic location in general, affected the enrollment of Hispanic students. Realizing the importance of tapping into its Hispanic population in order to have a student body more representative of the region’s population, Institution M participates in what is called the “South Texas Swing,” which is a big recruiting effort to give out geographical fellowships to West and South Texas areas that also happen to have predominately Hispanic populations. The participant from Institution M suggested that it was important to the successful graduation of Hispanic doctoral students to have a critical mass of Hispanics both at the institution and in the community.

What is the educational importance of a critical mass in a population? Having a significant number of students of a similar culture to help each other and increase support and commonalities can lead to greater academic success for members of that culture. For example, one of the biggest Hispanic populations in the US is in Texas, which, according to Cooper (2011), showed the greatest growth of both Hispanic undergraduate and graduate degree earners among all states during the 2010-2011 school year. Cooper added that although Texas boasted the greatest percentage of Hispanic degree earners (including Ph.Ds.), Florida graduated the greatest number of Hispanics. As the participant from Institution I asserted, perhaps the sheer number of Hispanic students has created a critical mass among universities in geographical regions with large Hispanic populations.
(e.g., Texas and Florida). In other words, the numbers and proportions of Hispanic doctoral students among the student population in these states might somehow relate to an increased bonding among Hispanic students of similar backgrounds, what McPherson et al. (2001) define as homophily, and as a result foster a more hospitable and supportive learning environment among these students’ peers, administrators, and professors. This speculation aligns with findings from Yuan and Gay (2006), who claim a homophilous environment with its hospitable learning climate (based in part on commonalities) leads to greater learning. In light of Gittell and Vidal’s (1998) argument for the value of social bonding in forming social capital and the way homophily in particular predicts the types of bonds made (McPherson et al., 2001), it would not be surprising if geographic location and population demographics affect the achievement of Hispanic doctoral students, just as participants at Institutions I, M, and G believed. Therefore, the effect of location and surrounding population of these institutions on degree completion of Hispanic doctoral students may be of interest for future research.

**Diversity programs vs. Hispanic-focused programs.** Most of the participants responded to questions about Hispanic-specific programs with examples of programs that serve a variety of students, not just Hispanics. University representatives who participated in the survey made a point of stating that the universities served Hispanics as part of their overall diversity efforts. Only Institution H, a private school not bound by legislation prohibiting targeting particular populations, had Hispanic-focused programs. Among the majority taking a general approach to increasing diversity, the participant from Institution C explained, “We have a program sponsored by the student support services department that focuses on all underrepresented students, which include
Hispanic students.” Institution C’s belief that a general diversity focus will sufficiently include Hispanic student needs was expressed at most of the other institutions as well. The participant at Institution I also claimed to address Hispanic doctoral student needs by focusing on diversity in general rather than Hispanics in particular.

Yet some in the literature single out Hispanics as exceptional. In particular, Rosales (2006) claimed Hispanic graduate students are exceptionally lonely and at risk, suggesting they require programs tailored to their specific needs. The experience at Institution H might shed some light on whether Hispanic students do benefit from a tailored approach. This institution was one exception to the general trend of focusing on diversity in general. This institution offered the most Hispanic-focused programs of all sample universities and it also had a positive growth in the percentage of Hispanic doctoral students completing its program. According to the participant, this institution had an extensive amount of programs that help promote Hispanic student success, such as those related to dedicated scholarship programs, full tuition, faculty of color, faculty mentoring, formal cohorts, orientation programs, social organizations, and targeted funding. Based on the literature, particularly Solorzano et al. (2005), Segura-Herrara (2006), and Rosales, one would have expected to have seen the greatest percent change increase in the institution with the most Hispanic-focused approach, but in the case of Institution H, the percentage increase was not the greatest.

Though Rosales (2006) claimed Hispanic graduate students are often the “lonely only” (p. 208) and need programs geared towards them and Solorzano et al. (2005) claimed most of the responsibility for lack of educational attainment and progress among Hispanics falls on the institution’s structures, policies, and practices that work against
these students, the results of this study throw doubt on this claim. In fact, the only institution in the sample with programs catering directly to Hispanics (Institution H) did not have the largest increase in the percentage of doctoral degrees completed by Hispanics. Although the percentage of Hispanic doctoral students receiving a degree at Institution H increased slightly from 2002 to 2008, five institutions with a general diversity focus showed greater percentage increases in the same time span. Based on this finding, it is possible that there is nothing particularly unique about the experience of Hispanic Ph.D. students that places them in need of specifically targeted programs. Rather, a general approach to program support and a commitment to doctoral completion for all students could benefit everyone, Hispanic students included, which is exactly what Huneke (2010) argues. Therefore, it is necessary to explore the needs of Ph.D. students in general, particularly in regards to the strongest predictor of whether or not they will complete their program.

Public vs. private universities. While there may be many differences and similarities among private and public universities, one distinct difference between the two is that public universities need to strictly adhere to state legislative standards prohibiting the direct targeting of specific groups in recruitment and programming. In other words, a private university can create some Hispanic-specific programs and enrollment strategies because these particular state laws govern only public institutions. However, although a private institution can have group-specific policies, procedures, and programs, not all of them do. In fact, of the four private institutions in this study, only one (Institution H) actually had Hispanic-focused programming at the time of the study.
The relevant laws in existence at the time of this study and referenced by the participants were Proposition 209 in California, Proposal 2 in Michigan, and Initiative 200 in Washington. All of these state laws prohibit public institutions from establishing policies and procedures targeting race, gender, and ethnicity for purposes of admissions, providing funding to students, and programming. A number of participants discussed first-hand how state legislation prohibited them from creating minority-focused programs. The participant from Institution F explained the general approach to funding and programming for diverse populations, noting:

We do have diversity fellowships that are designated for underrepresented minorities as a whole, such as first-generation students, [students from a] low socio-economic background, or [students who encounter other] hardships achieving an education; however, it is not designated to Hispanic students due to Proposition 209.

Given the call among some activists that it is in the best interest of the nation’s colleges and universities to recruit and graduate more Hispanic students (see, for example, Cooper, 2011), in light of state laws legislating equal access in public institutions, the question future research needs to address is: what is the appropriate approach to improve Hispanic enrollment in and graduation from Ph.D. programs? The public institutions in the current sample are legislated to take a general approach to address minority disparity in admissions, programming, and graduation. All public and many private schools are prohibited by law from having an Hispanic-focused approach, so how can institutions heed the call from scholars such as Cooper (2011) and others who claim such initiatives are imperative? On one hand, according to his summary of recent research on this issue,
Huneke (2010) concluded the answer is a concerted institutional commitment to college completion overall, which “drives higher graduation rates for all students, including minorities” (para. 2). Huneke’s claim aligns with the experience at Institution M. As the participant there noted, Institution M has successfully graduated more Hispanic students since being legislated to take a general approach than before the current legislation, when it targeted Hispanic populations specifically. On the other hand, if an Hispanic-specific approach to recruitment, funding, and support programming were to have a greater influence on degree completion, one would expect private universities that are able to have such an approach would outperform public universities that must target minorities in general. Yet no clear pattern in regards to this issue emerged from the data, as the only private institutions with Hispanic-focused programs and initiatives had only a moderate increase (sixth highest out of the 14 that experienced percentage change increase) in the percentage of Hispanic students attaining Ph.D. degrees between 2002-2008.

**Adequate vs. inadequate financial aid/funding.** Although there were 14 universities in the sample, only five participants knew the answers regarding financial aid and funding for their universities. Therefore, while the responses provided some insight into program funding and financial support, it was impossible to compare funding issues across all universities in the sample. Of the participants who reported receiving program funding from their institutions, research funding was reported as the most frequent source of funding. Tuition, grants, and student fees followed as the second most frequent funding source. According to the results of the survey, fellowships and general fees were reported as the smallest portion of funding for doctoral Hispanic students.
The response from the participant at Institution M stated funding quite simply “It is money that makes students come to [Institution M]. Students always look for the best financial deals.” This response from the participant at Institution M suggests that institutions use a variety of financial supports to contribute to the decisions of students to persist towards a doctoral degree. The speculated function of financial aid and funding at the doctoral level is removing some of the entry barriers for students to enroll in doctoral program. The variety of financial support used among the participating institutions to help fund tuition along with providing salaries/stipends attests to the central role individual funding plays in one’s decision to pursue a doctoral degree or not. This response aligns with Nettles and Millett (2006) who found money issues are an important factor all doctoral students (including, but not limited to, Hispanic doctoral students) calculate in their decision process. According to their findings, one of the key predictors of success in a doctoral program is the receipt of financial aid and funding, particularly fellowships and assistantships. The response from the participant at Institution M and the findings of Nettles and Millet add support to the geometric model assertion that funding plays is central to student persistence (Swail et al., 2003).

Removing financial barriers of entry into a doctoral program is especially important for Hispanic students. Hispanic students tend to disproportionately start their college education with fewer funds and are more likely than their non-Hispanic peers to come from low income families, thereby affecting their higher education opportunities (Padilla, 2007). However, only private institutions or privately funded financial aid initiatives at public universities can directly target the needs of this population. The participant at Institution E stated, “I’d say I strongly agree that targeted funding programs
influence Hispanic degree completion at all institutions,” but qualified the statement by emphasizing, “we cannot target awards” because of state laws. Given the inability to target financial aid because of legislation, the participant concluded the point by stating such support is “very important to all students who receive them,” regardless of whether they are Hispanic or not. This belief in the collectively positive impact of adequate financial support is reinforced by evidence that providing fellowship programs that finance the repayment of undergraduate loans for minority students who want to pursue doctoral degrees is correlated with doctoral degree completion among all minority students, including Hispanic doctoral students (Drewry, 1993). Likewise, Hill (2008) adds that dedicated scholarship programs assist students in graduate school and that increased financial aid to minority graduate students positively affects minority enrollment in graduate school. Similarly, both Lovitts and Nelson (2000) and Stewart et al. (1997) cite financial support as a primary issue in minority enrollment and completion. While my study did not find any relationship between financial support and the percentage of doctoral degrees attained by Hispanic students, the findings of others in regards to minorities in general suggests a relationship may exist in the case of Hispanics in particular. Future research focusing on financial aid issues and their impact on Hispanic doctoral students is needed to determine if this relationship exists.

Limitations

Some limitations existed within the research. The first limitation was a small sample size, which limits the ability to generalize the results to other institutions. The small sample size also limited the statistical analysis. It was because of the small sample
and the lack of a clear correlation in the quantitative data analysis that led to returning to the data for additional qualitative analysis.

The second limitation was the particular geographical locations of the institutions from which the sample was drawn. Most of the institutions in this study are located in the Southwest and the West Coast, while the other institutions were in Florida, Texas, Michigan, and the Northwest. Many of these regions and states have large Hispanic populations that likely create a different population mix than what one would find at a university in the Northeast or Midwest. Therefore, these results cannot be generalized out of the regions in question.

The third limitation to this study was the lack of knowledge the participants had about financial aid and funding, which limited the amount of data available for the financial aid/funding analysis. As a result, it is possible the beliefs of the participants were mistaken or misinformed, misleading the conclusions based on those responses. Along these same lines, the financial aid and funding questions in the survey did not include all the relevant options of funding for doctoral students, particularly neglecting fellowships and assistantships.

A fourth limitation was lack of actual data on frequency of use and influence of programs. Instead, the research depended on perceived frequency of use, influence, and importance of the programs. This limitation is compounded by the third limitation mentioned above, which is that some of the participants may have given an inaccurate impression of the actual numbers and dollar amounts at their institutions. Because of the dependence on perceptions, it is impossible to say whether the programs themselves (and not the perception) correlated with any change in degree completion percentages.
Fifth, the participation rate among the institutions recruited was low, with 14 of 24 (58.3%) agreeing to participate. According to Yang and Miller (2008), a response rate between 50-59% is questionable, but acceptable. However, Yang and Miller’s definition of an acceptable response rate is based on sample sizes larger than the current study, so the rate still falls in the questionable range.

Last, not all Hispanics may have been counted if Hispanics did not report themselves under the Hispanics ethnicity category in IPEDS. IPEDS data includes only those students who self-identify as Hispanic. Therefore, it is possible that some Hispanic doctorate recipients were not counted as such in the data set, leading to an inaccurate representation of their completion rates.

**Implications**

The lack of relationship between any of the independent variables and degree completion is the most significant finding administrators should take from this study. That finding, coupled with the pervasive belief among the participants in this study that such programs have a positive influence and are important to academic success among minority students, particularly Hispanic students, suggests graduate program administrators need to reassess what their programs are achieving. A lack of strong relationship between programs and policies and degree completion rates, may mean new programs need to be designed that target other factors besides social and academic support (e.g., greater financial, career, and family support). Alternatively, other dependent variables (e.g., donations and alumni involvement) might relate more strongly with these programs than completion rates. Examining these other potential relationships is necessary in order for administrators to determine whether their programs are doing
what they claim to be doing, or whether they are wasting money under misguided assumptions.

Because of legal issues, it is advisable for all public institutions and most private institutions to take a general approach to diversity programming rather than a Hispanic-focused approach. Not only does this avoid legal problems, but it might be more effective. In fact, evidence cited by Huneke (2010) indicates programs and policies that benefit everyone and make a concerted effort to improve completion rates for all students have the most positive impact on doctoral degree completion among Hispanic students nationwide.

The issue of financial support for Hispanic doctoral students is of particular importance to higher education administrators, as indicated by the response of the participant at Institution M and multiple sources in the literature (Drewry, 1993; Hill, 2008; Lovitts & Nelson, 2000; Padilla, 2007; Stewart et al., 1997). Understanding the importance of financial aid in graduate school could encourage institutional administrators to promote more dedicated scholarship and targeted funding programs for all underrepresented doctoral students. College administrators need to make sure their universities offer a good quality education that is affordable for students getting the education. As suggested by the participant at Institution I, increasing the availability of privately funded assistantships, fellowships, grants, and scholarships for students may be a way to counteract unexpected cuts in state and federal funding that can limit the ability for all students including Hispanic students to graduate with a Ph.D.
Recommendations for Future Research

One recommendation emerging from this study is to follow-up with additional research that draws from a larger sample size to collect data with more generalizability and explanatory power. A national survey with more participants drawn from all regions of the US would produce more representative results and determine if support programs for Hispanic doctoral students in fact do not impact graduation rates. Another recommendation is to collect data that show actual frequency of program use and dollars spent in financial aid and funding rather than to rely on perceptions, which are subject to mistakes and inaccuracies. If these concrete numbers were compared to the percentage of doctoral degrees awarded to Hispanic students, the results would be a more accurate indicator of degree completion. Another recommendation is that future researchers may want to look at the academic and cognitive factors of Swail’s model. Finally, future studies should consider the impact of doctoral programs on Hispanic students for variables other than graduation rates, such as alumni activity and willingness to donate to and support a doctoral alma mater.

Although the Pearson correlational analysis of the quantitative data showed no relationship between the administrators’ perceived frequency of program use, influence, and importance and the percentage change in the number of degrees awarded to Hispanic students, the qualitative data provided deeper insight into this unexpected result. Indeed, the lack of a correlation is an interesting result in itself, and requires further investigation into possible reasons why no significant relationship exists and whether such programs need to be redesigned and their perceived influence, importance, and usage reconsidered.
Conclusions

The findings from this study show that despite what some models suggest and what many administrators believe about programs for mentorships, fellowships, socialization groups, networking, and so on, perhaps such programs do not actually correlate with a change in the percentage of doctoral degrees completed by Hispanic doctoral students. This could be because the experiences of graduate students in general or doctoral students in particular might not directly align with the experiences of undergraduate students, on whom Swail’s Geometric Model and some of the other literature focus (Swail et al., 2003). Other individual factors (e.g., work pressures, family obligations, difficulty completing dissertation research/writing) may have a stronger relationship to graduation rates than the institutional programs outlined in this study. Research productivity, for example, is a factor Wong and Sanders (1983) found to be an important indicator of the value individuals place on their programs and therefore might be a better predictor of graduation. Such individual factors need to be identified and distinguished from institutional factors addressed by programs (e.g., community, guidance, shared experiences, etc.) to determine the more specific role they play.

That is not to say, however, that such programs do not have value; it just means perhaps, that their importance lies elsewhere and that influence can be seen on measures other than graduation rates. The responses from the participants point towards a variety of possible benefits that need to be analyzed further to determine what value these programs do provide. Given the perceived importance of various support programs on what Palmer and Greer-Williams (2006) call bridge-building, it is possible these programs impact a
sense of belonging and investment in the college or university, measurable in terms of future involvement, donations, and alumni activity.
References


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Appendix A

Clarification of Research Question Three

1. What is the relationship between dedicated scholarship programs and percent of change in number of Ph.D.s awarded to Hispanics?

2. What is the relationship between underrepresentation of faculty of color and women faculty and percent change in number of Ph.D.’s awarded to Hispanics?

3. What is the relationship between fellowship program and percent of change in number of Ph.D.s awarded to Hispanics?

4. What is the relationship between cohorts and percent of change in number of Ph.D.s awarded to Hispanics?

5. What is the relationship between bridge/orientation programs and percent of change in number of Ph.D.s awarded to Hispanics?

6. What is the relationship between social networks and percent of change in number of Ph.D.s awarded to Hispanics?

7. What is the relationship between faculty mentoring and percent of change in number of Ph.D.s awarded to Hispanics?

8. What is the relationship between funding programs and percent of change in number of Ph.D.s awarded to Hispanics?
Appendix B

Survey Questions

1. Do you have a dedicated scholarships program for doctoral students that begin in undergraduate programs and that transfers to graduate school? Yes or No
Name of program (s):

   A. Are these programs specific to doctoral Hispanic students? Yes or No
   B. How much do you agree the dedicated scholarship has influenced Hispanic degree completion at your institution?
      Strongly disagree, disagree, agree, strongly agree
   C. How frequently do Hispanic students use dedicated scholarship programs? Always, Frequently, Sometimes, Infrequently, Never
   D. How important are dedicated scholarship programs for Hispanic students?
      Very important, Important, Not important, Extremely important, Not important
   E. Additional comments by participant:

2. Do you have a formal policy that addresses the underrepresentation of faculty of color and women as a vehicle to increase the pool of Hispanic doctoral students? Yes or No
Name of policy (s):

   A. Is the policy specific to Hispanic doctoral students? Yes or No
   B. How much do you agree the formal policy has influenced Hispanic degree completion at your institution?
      Strongly disagree, disagree, agree, strongly agree
   C. How frequently does the institution utilize faculty of color to help recruit Hispanic doctoral students? Always, Frequently, Sometimes, Infrequently, Never
   D. How important are faculty of color role models for Hispanic students?
      Very important, Important, Not important, Extremely not important
   E. Additional comments by participant:

3. Do you have a formal program that finances the repayment of undergraduate loans for minority students who want to pursue a doctoral degree? Yes or No
Name of program:

   A. Is the program specific to Hispanic doctoral students? Yes or No
   B. How much do you agree the formal undergrad repayment loan has influenced Hispanic degree completion at your institution?
      Strongly disagree, disagree, agree, strongly agree
   C. How frequently do Hispanic students use the repayment program?
      Always, Frequently, Sometimes, Infrequently, Never
D. How important are formal repayment undergrad programs for Hispanic students?  
Very important, Important, Not important, Extremely not important
E. Additional comments by participant:

4. Does your institution have formal cohorts that use faculty and staff to improve 1st year experience of doctoral students?  Yes or No  
Name of program(s): __________________________________________

A. Is the cohort specific to Hispanic doctoral students?  Yes or No
B. How much do you agree formal cohorts or that has influenced Hispanic degree completion?  
   Strongly disagree, disagree, agree, strongly agree
C. How frequently do Hispanic students use cohort programs?  
   Always, Frequently, Sometimes, Infrequently, Never
D. How important are cohorts for Hispanic students?  
   Very important, Important, Not important, Extremely not important
E. Additional comments by participant:

5. Does your institution have orientation programs to enhance student success for low income minority students such as faculty mentorship and tutoring?  Yes or No  
Name of program: __________________________________________

A. Is the orientation program specific to Hispanic doctoral students?  
B. How much do you agree the orientation programs have influenced Hispanic degree completion at your institution?  
   Strongly disagree, disagree, agree, strongly agree
C. How frequently do Hispanic students use special bridge or orientation programs?  Always, Frequently, Sometimes, Infrequently, Never
D. How important are special bridge or orientation programs for Hispanic students?  
   Very important, Important, Not important, Extremely not important
E. Additional comments by participant:

6. Does your institution have social networks and organizations that foster Hispanic student growth with other Hispanic students and Hispanic faculty to create social capital?  Yes or No  
Name of networks and organizations (s): __________________________________________

A. Do you agree social networks and formal organizations influence Hispanic degree completion at your institution?  
   Strongly disagree, disagree, agree, strongly agree
B. How frequently do Hispanic students use social networks and formal organizations?  Always, Frequently, Sometimes, Infrequently, Never
C. How important are social networks and formal organizations for Hispanic students?
   Very important, Important, Not important, Extremely not important

D. Additional comments by participant:

7. Does your institution have a formal faculty mentoring program for doctoral students? Yes or No
   Name of program(s):
   A. Is the mentoring program specific to Hispanic doctoral students?
      Yes or No
   B. How much do you agree that faculty mentoring influences Hispanic degree completion at your institution?
      Strongly disagree, disagree, agree, strongly agree
   C. How frequently do Hispanic students use faculty mentor programs? Always, Frequently, Sometimes, Infrequently, Never
   D. How important is faculty mentoring for Hispanic students?
      Very important, Important, Not important, Extremely not important
   E. Additional comments by participant:

8. Does your institution have targeted funding programs exclusive to minority students to ensure minority students receive the greatest amount of financial aid funding to increase retention and graduation rates? Yes or No
   Name of program(s):
   A. Is the targeted funding program specific to Hispanic doctoral students?
      Yes or No
   B. How much do you agree targeted funding programs influence Hispanic degree completion at your institution?
      Strongly disagree, disagree, agree, strongly agree
   C. How frequently do Hispanic students use targeted funding programs?
      Always, Frequently, Sometimes, Infrequently, Never
   D. How important are targeted funding programs for Hispanic students?
      Very important, Important, Not important, Extremely not important
   E. Additional comments by participant:

9. Does your institution have a dedicated program that enrolls income eligible students as high school freshman and provides full tuition all the way to doctoral degree if they follow program guidelines? Yes or No
   Name of program(s):
   A. Is the dedicated program specific to Hispanic doctoral students?
      Yes or No
   B. How much do you agree the dedicated program has influenced Hispanic degree completion at your institution?
      Strongly disagree, disagree, agree, strongly agree
C. How frequently do Hispanic students use the dedicated program? Always, Frequently, Sometimes, Infrequently, Never
D. How important are dedicated programs for Hispanic students? Very important, Important, Not important, Extremely not important
E. Additional comments by participant:

10. Does your institution have funding to increase access to postsecondary education for low income and underrepresented backgrounds? Yes or No
Name of program(s):

A. Is the funding specific to Hispanic doctoral students? Yes or No
B. How much do you agree dedicated funding to increase access to postsecondary education has influenced Hispanic degree completion at your institution? Strongly disagree, disagree, agree, strongly agree
C. How frequently do Hispanic students use these access programs? Always, Frequently, Sometimes, Infrequently, Never
D. How important are access programs to postsecondary education for Hispanic students? Very important, Important, Not important, Extremely not important
E. Additional comments by participant:

11. Does your institution have any additional policies, programs or practices that enhance Ph.D. completion rates for Hispanic students? Yes or No
Name of program/policy:

12. What percent of primary sources of funding for your institution come from the following (must add up to 100%): General fee, Grant funded, Student fees, Tuition fees, Paid subsidy

13. What is the percent success rate of matriculation rates versus graduation rates of Hispanic students receiving a Ph.D. over the six year span of 2002-2008 at your institution?

14. Does your institution have a marketing program geared toward specifically marketing to Hispanic students in a Ph.D. program? Yes or No
A. Name of Program:
B. Additional comments by participant:
Appendix C

Email to Participants

June 2, 2011

Dear Directors and Educators,

My name is Rosalinda Dunlap. I am a Doctoral student in Higher Education Administration at The University of Toledo in Toledo, Ohio conducting a research under the direction of Dr. Penny Poplin Gosetti, Interim Vice Provost for Academic Innovation and Associate Professor of Higher Education at The University of Toledo.

As part of my research, I am conducting a survey to identify if there is a relationship between programs, policies, practices and institutional trends in the awarding of doctoral degrees to Hispanic students. Results from this survey will be useful and beneficial to examine the relationship between percent change in Hispanic doctoral degree attainment and institutional policies and practices. You are one of the institutions that has been selected to participate. I am interested in your response as an administrator who is involved in the higher education of Hispanic students.

The telephone survey includes 14 questions and should take approximately 20 minutes to complete via telephone with me. Your participation is voluntary and there is no anticipated risk involved in your participation of this study, which includes the completion of this survey. If you participate, you may choose to omit answering any of the questions asked of you without worrying about the results. The decision to participate will have no impact on your relationship with The University of Toledo. All information gathered will be kept confidential and will only be used to collect the data needed to complete my research. You will not be identified by name in my dissertation, or any report or publication resulting from this study.

If you have any questions regarding this study, would like to be informed of the results when the study is complete, or have any questions or concerns about this research, please feel free to contact me at 419-297-1625, (rosalinda.dunlap@mercycollege.edu) or my dissertation Chair, Dr. Penny Poplin Gosetti, Interim Vice Provost for Academic Innovation and Associate Professor of Higher Education at The University of Toledo Office: 419.530.5570 Fax: 419.530.2395 email address (penny.poplin.gosetti@utoledo.edu).

By signing the consent form attached, you are indicating your consent to participate in the survey via telephone and verifying you are 18 years of age or older. The signed consent form can be scanned and emailed to me at “rosalinda.dunlap@mercycollege.edu” or can be faxed to me at: 419-843-3640. Thank you for taking the time to help me gather valuable information on degree attainment and institutional policies and practices for Hispanic Doctoral students.
This consent form will be kept by the researcher for at least one year beyond the end of the study and was approved by the IRB.