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BICULTURAL SELF-EFFICACY, STUDENT ACHIEVEMENT, AND PERSISTENCE OF MEXICAN AMERICAN COLLEGE STUDENTS

A Dissertation

by

RICHARD KIRK

Submitted to the Graduate School of the
University of Texas –Pan American
In partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

May 2014

Major Subject: Educational Leadership

BICULTURAL SELF-EFFICACY, STUDENT ACHIEVEMENT,

AND PERSISTENCE OF MEXICAN AMERICAN

COLLEGE STUDENTS

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by
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May 2014

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ABSTRACT

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This mixed methods study will explore the relationship of bi-cultural self-efficacy with student achievement and persistence for first generation Mexican American students enrolled at a two year college. The Bicultural Self Efficacy Scale for Minority Adults (BISES-MA) will be used to collect quantitative data from a study group and control group. The study group will participate in a student success course using high engagement strategies developed by Advancement Via Individual Determination for Higher Education (AHE). Analysis of variance will be conducted to determine the degree of difference between the study and control groups on bicultural self-efficacy and student achievement and persistence. Qualitative data will be collected through focus group interviews of study group participants. Employing a grounded theory approach, responses will be analyzed to surface themes that explain the relationship of bicultural self-efficacy with academic achievement and persistence as measured by the BISES-MA survey.

DEDICATION

The completion of my doctoral studies would not have been possible without the encouragement and support of my wife, Isabel. Thank you for your encouragement, love and patience.

ACKNOWLEDGEMENTS

I would like to thank the students who participated in this study. Their stories were invaluable in the writing of this dissertation. I am deeply grateful to Dr. Karen M. Watt, chair of my dissertation committee, for her expert advice and guidance in directing the research and writing of my dissertation. Many thanks go to my dissertation committee: Dr. Francisco Guajardo, Dr. Miguel Nevarez, and Dr. Marie Simonsson. Their availability to me and their questions and comments on my dissertation helped to shape the quality of my research.

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Finally, I want to express my gratitude to my dad and Uncle Carmen. They taught me to value learning.

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CHAPTER I

INTRODUCTION

This dissertation addressed the important connection between culture and education (Gandara, 1995; Gandara & Contreras, 2009; Valenzuela, 1999). Specifically, it sought to join the social cognitive theory of self-efficacy with cultural identity to explore college student bicultural self-efficacy and its role in student achievement and persistence (Coleman, Lafromboise, & Saner, 1992; David, Okazaki, & Saw, 2009; Ruiz, 1990; Torres, 2003; Torres & Delgado-Romero, 2008). This study examined the experiences of first generation Mexican American college students, a population with high attrition rates in post-secondary education (Cavazos & Cavazos, 2010; Fry, 2011; Knapp, Kelly-Reid, & Ginder, 2010; Teranishi, Suarez-Orozco, & Suarez-Orozco, 2011). The economic consideration related to the lack of educational attainment by Hispanic groups (Murdock, 2003) is an important impetus to discover ways to increase college completion rates for Hispanics.

Significant in addressing the high attrition rates of Mexican Americans in post-secondary education is the role that a bicultural reality plays in the determination of efficacy for success in attaining a post-secondary credential. As Hipolito-Delgado (2010) contended, cultural identity influences academic achievement. A perceived difference in cultural influence on college achievement reflects the consequence of internalized oppression on Mexican American students. Research (Hipolito-Delgado, 2010; Padilla, 2011) has indicated that ethnic groups, especially

Hispanics, have been victims of cultural devaluation by dominant White society. The concept known as “White privilege” (McIntosh, 1988; Schwalbe, 2008), structurally ingrained in our social institutions, has created an accepted social reality that to act White is the norm. According to Hipolito-Delgado (2010) this form of meritocracy becomes internalized by Hispanic groups on college campuses, and as a result of the negative messages, creates a form of internalized oppression. Based on Hipolito-Delgado’s (2010) assessment, low numbers of Mexican Americans completing a college education can be attributed to a self-efficacy that is culturally determined in ways that devalue Mexican cultural values and replaces them with a perceived esteem value in White America. Angela Valenzuela (1999) wrote about the impact of devaluing culture and educational achievement by capturing this practice in the form of subtractive learning present in the educational system. She refers to this type of system as one that ignores the benefits of culture and language in facilitating the learning process. Valenzuela (1997), and others (McNeil, 2000, Noddings, 1992; Trueba, 1988) who support her view that cultural negation deteriorates learning, asserts that subtractive education is a persuasive cultural critique for what hinders educational achievement for non-White ethnic groups. Such cultural critiques, when applied to educational achievement, highlight the importance of viewing student achievement within the context of culture, specifically the bicultural reality of Mexican American college students. Crucial in understanding bicultural influence on student achievement is the impact that college completion has on the practical consequences for the U.S. economy (Murdock, 2003).

The attainment of a college credential is critical for development of the U. S. economy. The poor completion rates of Hispanic groups, the fastest growing minority in the country, will have a significant impact on the economic development in the years ahead (Murdock, 2003).

Sociologist Robert K. Merton (1968) observed that functions of social institutions are necessary for the stability of society. For example, institutions of higher education have the intended function to educate a workforce that promotes and sustains a stable and productive economy. The implication is that society places a high value on an educated workforce to meet the demands of economic institutions that are being shaped by changes in technology, demographics, and global markets. The need for an educated workforce corresponds to the mission of postsecondary institutions to produce technicians, engineers, health professionals, educators and others (Dougherty & Townsend, 2006; Rappaport & Creighton, 2007)

Cuseo (2012), in his survey of college completion data, provided a compelling argument for the existence of a crisis in students completing college. He argued that while the "percentage of high school graduates enrolling in college is increasing for all racial and income groups, [these groups are not] being matched by gains in college *success* rates" (p. 5). This is especially true for Hispanic college completion rates. He reports that "among white students seeking a baccalaureate degree, 60 % graduate within six years after college entry; in contrast . . . 49 % of Hispanics do so" (Knapp, Kelly-Reid, & Ginder, 2010 cited in Cuseo, 2012, p. 8). Data from the Pew Hispanic Center (Fry, 2011), posits that13% of Hispanic populations ages 25 and older have a bachelor's degree or higher. *Excelencia In Education* (Santiago, 2012) reported that "21 % of Hispanics had an associate's degree or higher, compared to 57 % of Asians, 44 % of Whites, and 30 % of Blacks" (p. 1). Among the lowest achieving Hispanic groups are Mexicans with a 9 % college completion rate for ages 25 years and older when compared to the Pew Hispanic Center's overall rate of 13 % for all Hispanic groups (Fry, 2011).

The implications of low completion rates for Hispanics become more serious when we consider that "Hispanics will account for three-quarters of the growth in the nation's labor force

from 2010 to 2020" (Fry, 2011). As a result of their rapid population growth and youth, we can expect that by 2020, 25% of the 18-29 year-old population will be Hispanics in the United States (Santiago & Callan, 2010). In light of this evidence, a focus on Hispanic college completion rates for economic viability at local, state, and national levels is required. As stated in a report entitled, *Benchmarking Latino College Completion* (2010), "Since Latinos will make up a greater percent of the U.S. Population by 2020, increasing Latino college completion is critical for the U.S. to meet its future societal and workforce needs" (Santiago & Callan, 2010, p. 4).

Given the current economic environment, the mission of post-secondary education of preparing the next generation for workforce and career demands takes on new urgency, especially in Texas and in the lower Rio Grande Valley. According to reports from the *Texas Workforce Commission Advisory Committee* (2006) and *Education Week* (2007), the Texas education system is failing to meet the workforce demands of the state (Maldonado, 2008). One area that needs to be addressed if Texas is to be a leader in fostering economic stability is college student completion rates for graduation. Particularly in the Rio Grande Valley, postsecondary completion rates for Hispanics will be a major advantage to boosting the response to workforce demands in the 21st century (*Bronc Country – The Engaged University*, 2012). In 2006, labor statistics showed Hispanics made up 64.9 % of the workforce, higher than other ethnic and racial groups. Hispanics are projected to grow in the workforce by 24 % in ten years, with an annual growth rate of 2.4 % (Bureau of Labor Statistics, 2009). However, the projected employment growth for Hispanics and their college completion rates are disproportional, thereby sustaining low wage jobs and establishing an incidental contribution to economic and political change (Santiago & Callan, 2010).

Data from the Pew Hispanic Report (Santiago & Brown, 2004) affirms that "young Latinos are just as likely as other youths to say a college education is important for success in life" (p. 4). However, Hispanics have a higher rate for non-college enrollment when compared to college going populations of non-Hispanic groups (Fry, 2012). Hispanic students enrolled in college are more likely to enroll part-time than full time, further delaying completion of a college degree (Santiago & Brown, 2004). Further evidence from the Pew Hispanic Report showed college completion for Hispanic students pursuing a traditional path (enroll within one year of high school graduation, and attain the bachelor's degree within six years) was only 4 %, compared to 15 % of whites (Santiago & Brown, 2004). When considering the number of degrees conferred on Hispanics, the evidence points to a lag behind other groups. Fry (2011), reported that the percent of bachelor's degrees conferred upon Hispanics in 2010 was 9% compared to 71% for whites and 21% for other non-Hispanic groups (Fry, 2012). He also reported the percentage of associate degrees was lower for Hispanics when compared to White and other non-Hispanic groups (Fry, 2012).

In addition to lower completion rates, Hispanics are taking longer to complete either a traditional two or four-year degree (*Complete College America*, 2011). College persistence for Hispanic students toward degree completion is a major concern. Research has been consistent in demonstrating that Hispanic participation in college has been characterized by high dropout rates and low college completion rates (KewalRamani, A., Gilbertson, L., Fox, M.A., & Provasnik, 2007; Lopez, 2009, p. 2). Hispanic persistence in college is reflected in what Gandara and Contreras (2009) identified as "underachieving at high and consistent rates" (p. 18). They observed:

"At a time when college has become the new critical threshold for entry into the middle class, the overwhelming majority of Latinos do not attend degree-granting colleges – and those that do attend, often don't graduate. Thus Latinos remain the most undereducated major population group in the country" (p. 18).

Studies from *Excelencia in Education* (Santiago, 2009), support Gandara's (2009) observation that certain socio-cultural and economic conditions make persistence toward a college degree problematic. For example, Santiago (2009) noted that 58% of Hispanic students were more likely to be first generation college students. As a result, "the systemic knowledge and support systems" for first generation Hispanic students "may be more limited than others (p. 7). Furthermore, 51% of Hispanic students were more likely to attend college as part-time students, making it more difficult for them to complete a degree in a timely manner (Santiago, 2009). Also, 42% of Hispanic students are more likely to attend community colleges than public colleges (Santiago, 2009). Community colleges are funded at lower levels when compared to funding for public colleges. Because of lower funding levels, concern for adequate student services programs, diversity in degree offerings, quality of instruction, and available financial aid surfaces for sustaining Hispanic commitment for degree completion or transfer. Finally Santiago (2009) stated that "a significantly higher proportion of Hispanics (34%) had low family incomes and thus significantly lower Expected Family Contributions (EFCs) to pay for college than other students (25%)" (p. 7). This economic disparity between Hispanic student family contribution and other student family contribution forces Hispanics to rely more on financial aid resources to sustain and complete their education, resources that are quickly shrinking.

In addition to the socio-cultural and economic conditions that impact persistence toward graduation, the lack of persistence among Hispanics is also demonstrated in different age groups.

For example, as Santiago (2009) observed, “Latino young adults were less likely to have earned an associate degree or higher than other young adults. In 2008, 8 percent of Latinos 18-24 years-of-age had earned a degree, compared to 14 percent of all young adults” (p. 8). This reality is also reflected in adults 25 and over. Again, Santiago (2009) reported that Hispanic “adults were also less likely to have earned an associate degree or higher than other adults. In 2008, 19 percent of Latinos, 29 percent of blacks, 29 percent of whites, and 59 percent of Asians ages 25 and over had earned an associate’s degree or higher” (*U. S. Census Bureau*, 2009 in Santiago, 2009, p. 8).

Attention to Hispanic persistence rates is vital when considering college completion rates for Hispanic populations. The factors described above that affect persistence for completion are shown in degrees awarded to Hispanic students. For example, Planty et al (2009) noted that “in 2008, 12 percent of associate degrees and 8 percent of bachelor degrees awarded were earned by Latino students” (p. 8). This compares to Fry (2011) who cited that in 2010, nine percent of bachelor degrees and 13% of associates degrees were awarded to Hispanics. The ever so slight increase in degrees awarded to Hispanics from 2008 to 2010 continues to call attention to the low rate of persistence that enables low rates of Hispanic college completion. In states like Texas, with a growing Hispanic population, the lack of persistence that yields low graduation rates and extends the duration for those who do graduate, has serious consequences for Texas’ economy and future development. Steve Murdock, former State Demographer for Texas, predicts in the Texas Higher Education Coordinating Board’s *Closing the Gaps* initiative (2006) that, at the current rate of educational achievement for Hispanics in Texas, the Hispanic population will be unprepared to move into demanding and emerging high tech and other growth area jobs. If college graduation rates for Hispanic students in Texas remain low, by 2030 the average

household in Texas will be $4,000 poorer than it was in 1990, leading to a 3% increase in the poverty rate (Acevedo, 2009; *Closing the Gaps*, 2006).

Self-efficacy, the belief we have in ourselves to accomplish tasks (Bandura, 1997), has been a focus of research for understanding college student achievement and persistence among ethnic and first generation groups (Majer, 2009; Vuong, Brown-Welty, & Tracz, 2010). These studies support the claim that self-efficacy is a critical cognitive capability for successful completion of a college credential at two and four-year colleges. Self-efficacy was found to be especially helpful for first generation student persistence at community colleges. Majer (2009) found that baseline rates of self-efficacy for first generation immigrant students attending a community college predicted an increase in student GPA one year later. Vuong, Brown-Welty, and Tracz (2010) studied self-efficacy on academic success of first generation college sophomore students and found that self-efficacy beliefs affected GPA and persistence rates.

Bandura (1997) posited that beliefs and expectations about self-efficacy are derived from four sources: "performance accomplishments, vicarious experience, verbal persuasion and physiological cues" (p. 191). Cultural systems play an important role in mediating these efficacy sources to individuals. For example, cultural self-efficacy of Mexican American college students was found to have positive effects on college self-efficacy for college performance (Aguayo, Herman, Ojeda, & Flores, 2011). A study on persistence and mentoring of students attending Hispanic Serving Institutions (Crisp, 2011) demonstrated that self-efficacy and cultural influences combine to influence student achievement.

Hispanic student persistence toward completion of a college credential and the self-efficacy needed to achieve this goal are the intended consequences of many college-readiness programs. However, research has challenged the effectiveness of these programs. Research has

shown that students go from high school to college ill prepared to do college work (Bok, 2006; Conley, 2007, 2010). This raises questions about traditional activities intended to promote and sustain positive student achievement toward college completion. At the high school level, these activities include a college readiness program that directs students to graduate from high school completing the recommended academic program, a Tech Prep curriculum that shapes students' career interests, college access programs that provide secondary students with relevant information on college admissions and financial aid procedures, and early college programs that provide dual credit opportunities. At the college level, students enrolled in technical and academic programs are provided advisement, tutoring, supplemental instruction, financial assistance, career counseling, and information on learning strategies through a student success course. There is evidence (*Texas Higher Education Accountability System*, 2010) that the traditional safety net of student support strategies designed to assist students in gathering knowledge and skills to successfully transition from high school to college as college-ready students is failing.

Over the past four decades, studies on post-secondary graduation rates and student achievement have been a topic of intense research (Astin, 1975; Pascarella & Terenzini, 1991; Seidman, 2005; Terenzini, 1987; Tinto, 1993, 2012). Included in this research has been the importance of self-efficacy as a predictor of student success (Choi, 2005; Devonport & Lane, 2006; DeWitz, Woolsey & Walsh, 2009**).** The outcome of these self-efficacy studies demonstrates a significant relationship between self-efficacy and academic achievement as shown by increased GPA and persistence from one semester to another. Increased student success and self-efficacy scores are also demonstrated for ethnic and racial groups, with Hispanics being a major focus of studies (Greene, Marti, & McClenney, 2008; Pidcock, Fisher &

Munsch, 2001). Related to efficacy studies and student achievement for Hispanic students is research that highlighted the importance of bicultural elements of acculturation, ethnic identity, and resiliency for college completion (Berry, Phinney, Sam, & Vedder, 2006; Cavazos & Cavazos, 2010; Cavazos, Johnson, Fielding, Cavazos, Castro, & Vela, 2010; Torres & Delgado-Romero, 2008).

The broader context of culture and education that frames the discussion of student efficacy, cultural influences, and college achievement has been presented with a view toward integrating college completion with workforce demands. The demographic changes supported by recent census data, and interpreted in research, sheds an undeniable spotlight on the impact Hispanic populations will have on education and the U.S. economy. However, the current discussion presented challenges in the way of high attrition and low retention of Hispanic students completing a college credential. This will have dramatic consequences on economic realities. Mexican Americans represent a unique subgroup of Hispanics who account for the largest number of Hispanics participating in American educational and economic structures. They participate in these structures as mostly first generation students and workers profoundly shaped through their bicultural experience (Gandara and Contreras, 2010). The immediacy of this bicultural reality for Mexican American college students seeking a career and place in today's global economy presents a research opportunity that joins their biculturalism with the concept of self-efficacy. This opportunity will help discover new knowledge and understanding concerning Hispanic college achievement and persistence.

Statement of the Problem

This dissertation explored the relationship between bicultural self-efficacy and the problem of low Hispanic college student achievement and persistence, as evidenced by a

Mexican American population attending a community college. Also, this dissertation sought to address the absence of a theory that grounds an understanding of bicultural self-efficacy to explain Hispanic student achievement and persistence.

As identified in the introduction section of the proposal, research on student retention has reflected a comprehensive approach in understanding non-white achievement and persistence rates. These rates are low for Hispanics in general, and for Mexican Americans in particular (Fry, 2011). The college completion rate for Hispanics at the national level is not encouraging. The same trend of low graduation rates is also evident at the state level. For example, in 2008 for the state of Texas 64 % of Hispanics completed a bachelor's degree in six years as compared to 76% for Whites (*Texas Higher Education Accountability System*, 2010). To further demonstrate the low achievement of Hispanic students, we can localize the data and see the trends for postsecondary institutions in the Rio Grande Valley. The data is represented in table 1.

Table 1: Hispanic Six-Year Graduation Rates for 2-Year and 4-Year Colleges in the Rio Grande Valley

Institution	Graduation Rate
University of Texas Brownsville	25%
University of Texas Pan American	36%
South Texas College	12%
South Texas Tech	28%

Note. National Center for Educational Statistics (NCES), 2010

Best practices for student retention of Hispanic and Mexican American students have been studied in previous research (Gandara, Cavazos, 2010). One practice receiving in-depth study at the secondary school level is the Advancement Via Individual Determination (AVID) approach to student learning (Watt, Huerta, & Alkan, 2011). The emphasis of AVID learning on non-white students in public education reflects a unique dedication to curbing high school drop-out rates and increasing the non-white college going rates. Recently, AVID inaugurated a higher

education component. While initial Postsecondary AVID research with two year and four year colleges (Mendiola, Watt, & Huerta, 2010; Watt, Huerta., & Alkan, 2012)) shows promise for Hispanic and Mexican American student retention, it does not address whether or not participation in an AVID class supports an understanding of bicultural self-efficacy.

Purpose of the Study

The purpose of this study was to explore the relationship between bicultural self-efficacy and college student achievement and persistence for Mexican American first generation students. As a concept within social cognitive theory, Bandura (2009) described perceived efficacy as "one's capabilities to organize and execute the courses of action required to produce levels of attainment" (p. 53). Bandura characterizes efficacy as a self-regulatory component of human agency that significantly contributes to one's ability to control events. He stated that "People's beliefs that they can produce desired effects by their actions influence the choices they make, their aspirations, level of effort and perseverance, resilience to adversity, and vulnerability to stress and depression" (Bandura, 2009, p. 62). Bandura's argument that personal agency, mediated through efficacy beliefs, operates "within a broad network of sociostructural influences" (Bandura 2009, p. 62), an aspect of which is culture.

Equally important to the purpose of this study was the articulation of a process that builds a theory to assist in understanding how bicultural efficacy explains educational achievement and persistence. Using grounded theory (Strauss & Corbin, 1998) as the framework for explaining the relationship between bicultural self-efficacy and student achievement and persistence, the study constructed a theory grounded in empirical and experiential data to "offer insight, enhance understanding, and provide a meaningful guide to action" (Strauss & Corbin, 1998, p. 12).

The study used a mixed methods approach to explore the relationship between bicultural self-efficacy with student achievement and persistence. The study established the extent to which a relationship exists between bicultural self-efficacy with student achievement and persistence. It also explored how participation in an AVID Higher Education (AHE) course grounds a theory of bicultural self-efficacy.

Research Questions

The following research questions were used to guide the researcher in the proposed study:

1. What is the relationship among bicultural self-efficacy student achievement, and persistence for Mexican American students attending a two-year college?
2. What is the difference between bicultural self-efficacy of Mexican American students enrolled in an AHE course and those who are not enrolled in an AHE course?
3. How does participation in an AHE course promote an understanding of bicultural self-efficacy for Mexican American student achievement and persistence at a two year college?

Methodology

QUAN-Qual mixed methods design was used for the study (Gay, Mills, & Airsian, 2009). Creswell, Plano, and Clark (2007) defined a mixed methods design as a "methodology in which the researcher collects, analyzes, and mixes both quantitative and qualitative data in a single study" (p. 1). Guba and Lincoln (1994), strong proponents of qualitative research, have acknowledged the value of mixed methods design. They observed that "both qualitative and quantitative methods may be used appropriately with any research design" (p.105). The reason for choosing this design was to give emphasis to the strength of the correlation between

bicultural self-efficacy and student achievement and persistence. Based on these results, follow up qualitative data was obtained to elaborate and further explain the quantitative information. As Creswell, Fetters, and Ivankova (2004) stated: "When used in combination, both quantitative and qualitative data yield a more complete analysis, and they complement each other" (p. 2). Also, Creswell, Plano Clark, Gutmann, and Hanson (2003) contended "when quantitative data precede qualitative data, the intent is to explore with a large sample first to test variables and then to explore in more depth with a few cases during the qualitative phase" (p. 217). Ivankova, Creswell and Stick (2004) understood the rationale for data collection and analysis in a QUAN-qual design as an approach in which "the quantitative data and their subsequent analysis provide a general understanding of the research problem. The qualitative data and their analysis refine and explain those statistical results by exploring participants' views in more depth" (p. 4).

Using a purposeful sampling procedure (Creswell, 2013) Mexican American students attending a Hispanic Serving Institution were administered a demographic survey and the *Bicultural Self Efficacy Scale Minority Version for Adults* (BISES-MA) (Soriano and Bandura, 2005). Students were enrolled in either an AVID for Higher Education (AHE) structured student success course or in a non-AHE course. Students from the AHE structured student success course made up the focus group participants for the qualitative component of the study.

The research design compared two groups of students. One group was the study group participating in an AHE structured student success course. The comparison group was a group not enrolled in an AHE structured student success course. To answer the first research question, bicultural self-efficacy was measured using Soriano and Bandura's (2005) BISES-MA. These results were correlated with student term grade point average (GPA) and pre-registration for summer or fall semesters. A correlation analysis was performed to determine the strength of the

relationships between bicultural self-efficacy and student achievement, and bicultural self-efficacy and student persistence. The second research question required the use of a t-test to determine the significance of the difference between responses on the BISES-MA survey for the study group and comparison group.

The third research question was addressed through focus group interviews. As Gay, Mills and Airsian (2009) explain, “Focus groups are particularly useful when the interaction between individuals will lead to a shared understanding of the questions posed by the researcher” (p. 372). The identification of the group’s shared understanding of the cultural influences on self-efficacy provided experiential data that assisted in grounding a theory of bicultural self-efficacy for student achievement and persistence. Strauss and Corbin (1998) observed that grounded theory acknowledges that “combining methods may be done for supplementary, complementary, informational, developmental, and for others reasons” (p. 12) to provide a rich explanation of the phenomenon as experienced by the participants.

Definition of Terms

Essential terms defined for the purpose of this research dissertation are:

Academic Achievement. For purposes of this study, academic achievement is defined as student term grade point average (GPA).

Bicultural Self Efficacy. Defined by Lafromboise, Coleman, and Gerton (1993) as the “belief, or confidence, that one can live effectively, and in a satisfying manner, within two groups without compromising one’s sense of cultural identity” (p. 404).

First Generation Student. A student is considered first generation if neither parent has obtained college credit (Warburton, Burgarin., & Nunez, 2001).

Hispanic Serving Institution. A postsecondary institution is considered a Hispanic Serving Institution (HSI) if full-time Hispanic enrollment is 25 percent or more of the total institution's full time enrollment (Higher Education Act, 1965).

Mexican American. A person who is of Mexican descent. Self-reported as indicted on demographic survey in appendix A. The categories are based on 2010 U. S. Census form (Ennis, Ríos-Vargas, & Albert, 2011).

***Persistence*.** This term is defined as pre-registration for either the summer or fall semesters.

***Self-Efficacy*.** The belief we have in ourselves to accomplish tasks (Bandura, 1998, 1997).

Other terms that pertain to the research proposal are defined in the review of the literature section. These definitions are discussed within the context of the articles in the literature review.

Significance of the Study

There is little recent evidence that shows if a sociocultural cognitive approach, such as cultural self-efficacy, can be useful to understand the educational achievement and persistence of Hispanic students at post-secondary institutions, especially as it pertains to the bicultural context of Mexican American students. While studies exist that combine self-efficacy with career commitment and achievement at the postsecondary level (Hsieh, Sullivan & Guerra, 2007; Wolf & Betz, 2004), there are few that do the same with cultural self-efficacy, student achievement, and persistence (Lafromboise, Coleman, & Gerton, 1993; Lafromboise & Rowe, 1983; Phinney, 1997). More specifically, since Mexican Americans are below the college completion rate for Hispanics (Fry, 2011), there is a need to study the relationship between cultural self-efficacy with achievement and persistence to determine if a relationship exists among these variables that affect student retention rates. Studies on bicultural self-efficacy that explore Mexican American college students and their achievement and persistence are non-existent in recent literature. The

possible bicultural predictors influencing Mexican American achievement and persistence are not readily evident in studies that investigate the overall Hispanic educational experience (Fry, 2011; Gandara, 2009).

This study sought to contribute to the literature on biculturalism and diversity as it related to Hispanic, and in particular Mexican American, college student achievement and persistence (Cavazos & Cavazos, 2010; Escobedo, 2007; Fiebig, Braid, Ross, Tom & Prinzo, 2010; Roche, Ghazarian, & Fermamdez-Esquer, 2011; Teranishi, Suarez-Orozco & Suarez-Orozco, 2011; Torres, 2003, 2004; Torres & Hernanedez, 2007). As noted earlier, increase in college completion for Hispanic groups is vital for growth at all levels of the economy (Murdock, 2006; Fry, 2011). In an article in the *Chronicle of Higher Education* (October, 2009), concern over budget cuts affecting bicultural and diversity programs on college campuses was discussed as a major concern adversely affecting postsecondary institutions. The study would lend support for continuing college-to-career transition components of diversity programs that strengthen the development of career commitment, especially in areas of science, technology, engineering and mathematics (STEM). Also, this study would demonstrate to industry that the education and work-force readiness of the next generation of technicians and professionals needs to be concerned with diversity and bicultural issues in the workplace (Forbes, 2011) The study would give credence to the importance of developing educational theory and practice that prepares workers for diversity in the workplace (King, Gulick & Avery, 2010).

The findings of the study argue for assessing the diversity and bicultural curriculum areas in college orientation and student success courses. By strengthening these programs to include diversity and bicultural themes, a student's college experience will be enhanced (Boening & Miller, 2005; Hickman, Bartholomae, & McHenry, 2000; Hu, Shouping, & Kuh, 2003).

Finally, students will gain an insight into themselves that informs them about their own efforts to achieve academically and to pursue a career pathway (Hu, Shouping, & Kuh, 2003; Laird, 2005). Providing this sense of direction early in the student's college experience will help raise essential questions concerning degree programs and career options that may affect whether or not a student completes college (Gordon, 2007)

Limitations

Generalization to populations other than the research participants will not be possible. However, transferability (Guba & Lincoln, 1981) may be possible to other two-year Hispanic Serving Institutions. The results of this research are limited to students in the study and can only be useful in understanding their relationship to self-efficacy and student achievement and persistence. This population is also constrained by location and identity as a Mexican American subgroup within the larger classification of Hispanic populations.

Sampling limited the study since the sample population was selected with a purposeful method. This involved small numbers since participation depended on student availability and meeting selection criteria. The study is limited because participating students are from a two-year college. Selecting students from two year colleges limited the study in terms of fully uncovering the impact of bicultural self-efficacy on student educational goals.

Chapter Summary

Chapter one has provided the context for studying the relationship between bicultural self-efficacy with student achievement and persistence. This chapter presented the rationale for the study in the introduction. It articulated the problems addressed by the study and identified the research questions. The methodology to be used in the study was outlined in terms of design, population, and instrumentation.

Chapter two will present recent research connecting aspects of self-efficacy studies with areas of student achievement and persistence.

CHAPTER II

REVIEW OF LITERATURE

As noted earlier, with Hispanic college completion rates at 13% for a bachelor's degree and 9% for an associate's degree (Fry, 2011), persistence toward degree completion becomes an important concern to address when researching Hispanic college student achievement. Gandara and Contreras (2009) and others (Yosso & Solorzano, 2006) argued that while in high school Hispanic students are disproportionally tracked into remedial and vocational classes instead of advanced placement courses. The effects of tracking in public education renders Hispanic students less prepared to succeed in college, thus affecting persistence toward completion (Yosso & Solorzano, 2006). A study done by Horn and Kojaku (2001), confirmed a "consistent advantaged experienced by students who completed rigorous high school curricula" (p.72) when persisting toward a college credential.

Another factor that suggests reasons for low Hispanic persistence and completion rates is the first generation status of Hispanic college students (Kochhar & Lopez, 2009). When asked how much further in school do you want to go, only 29% of first generation Hispanic youth answered a bachelor's degree (Kochhar & Lopez, 2009). This is compared to 64% of second generation Hispanic youth. The majority of first generation Hispanic youth, 36%, opted not to continue their education. (Kochhar & Lopez, 2009). Warburton, Burgarin, and Nunez, (2001) found that first generation students not completing a rigorous high school curriculum were less likely to attend a four-year institution when compared to students whose parents had completed

college. Also, first generation students were less likely to complete college (Warburton, Burgarin, & Nunez, 2001). Warburton, Burgarin, and Nunez, (2001) concluded that parental education levels were significant in determining first generation persistence and completion in college.

The influences of educational tracking and educational expectations support a foundation for the development of self-efficacy for Hispanic college students. Bandura (1997) articulated that the requirements for self-efficacy are rooted in individual and cultural agencies regulating beliefs on one's ability to accomplish tasks. The review of the literature will address the relationship between self-efficacy and Hispanic college student achievement and persistence. The subsections of the literature review will include a summary of the research on efficacy factors that influence persistence and completion in college. A review of self-efficacy studies on student achievement and career goals will provide an overview of the importance self efficacy has in shaping student aspirations for success. A review of the research on bicultural self-efficacy will highlight areas that have linked culture and efficacy, but have limited the application. While the literature talks about the need to apply self-efficacy to cultural identity there is evidence that shows related concepts to bicultural self-efficacy, such as acculturation and ethnic identity, are helpful when studying bicultural self-efficacy. A review of this literature will be included to support the development of a construct of biculturalism. A discussion pertaining to the review of the literature on the effects of AVID programs on student achievement and persistence is included.

Efficacy Factors Influencing Persistence and Completion

A review of research on Hispanic student persistence and achievement uncovers various factors that contribute and maintain the existing achievement gap between Hispanic and non-

Hispanic students. Recent reports from the Pew Hispanic Center (2011) and *Excelencia in Education* (2010) documented the low achievement rate of Hispanic populations when compared to non-Hispanic groups. For instance, *Excelencia in Education* (Santiago, 2010) reported nearly a 14% gap in graduation rates between Hispanic and White students graduating within 150% of program time in 2007-2008. The Pew Hispanic Center (Fry, 2011) reported that while young adult Hispanic college enrollment increased by 24% from 2009 to 2010, they continue to be the "least educated major racial or ethnic group" (p. 1) earning a bachelor's degree. Understanding the challenges that face Hispanic groups in terms of college persistence toward completing a post-secondary credential is important before effective responses can be developed to close the achievement gap.

In an early study, Allen (1999) looked at the motivational factors linked to persistence using the Noel-Levitz College Student Inventory (2013). He found that three out of five background variables – precollege academic ability, parents' education, and financial aid – had an impact on academic performance and persistence for Hispanic participants in the study.

Hernandez and Lopez (2004) discussed the determining influence that precollege academic ability had on Hispanic student completion in college. Research showed when comparing Hispanic students who completed a bachelor's degree with those who did not persist toward completion, prior college attributes played a significant role for the two groups (Flores, 1992; Hernandez & Lopez, 2004). These pre-college factors included high school grade point average (GPA), test scores, class ranking, academic self-concept, support from the family, and finances.

Hernandez and Lopez (2004) debunked the apparent predictability for college student success that is associated with high school GPA and test scores. They used previous research that

suggested that “there is considerable evidence that these traditional measures [for college success] are not valid for students of color as they might be for White students” and that “evidence exists that test scores may not predict early college grades for Latinos as well it does for White students” (p. 39). According to these authors, the strongest argument emerging from research for not considering traditional measures for Hispanic student success in college is that these measures have “little systematic connection with students’ academic skills or with their motivation to succeed in college” (p. 39). In other words, the cognitive measures associated with college student completion are not determining factors for Hispanic students. The “systematic connection” that has a greater impact for Hispanic student college completion is non-cognitive variables associated with academic self-efficacy along with cultural and family systems (Allen, 1999; Bandura, 1997; Gandara and Contreras, 2009; Hernandez & Lopez 2004).

Academic self-efficacy can be described as the belief and realization of possessing the potential to succeed in college (Bandura, 1997; Hernandez, 2000). Rodriguez (1996) compared Mexican American college students with White college students in predicting academic success. He found that Mexican American students had a greater chance of increasing their GPA if they had greater confidence in their academic abilities. Hernandez, (2004) observed that support systems need to be in place to assist first generation and academically under prepared Hispanic students to develop the confidence they need to persist until completion of a college credential.

Hernandez’s (2000) qualitative study examined experiential and environmental factors that sustained Hispanic student persistence until graduation. He noted that the importance of support systems, such family and peer influence, faculty and staff cultural competency, opportunities for co-curricular involvement, and finding ways to address financial concerns,

played an important role in building up academic self-confidence. The lack of these systems can contribute to sustaining the achievement gap for Hispanic college students.

In the opening pages of their assessment of Hispanics and education, Gandara and Contreras (2009) wrote: “Today the most urgent challenge for the American educational system has a Latino face” (p. 1). More than fifty percent of Hispanics fail to graduate from high school and after three decades of gradual increases in college graduation rates for non-Hispanic ethnic groups, Hispanics “have almost seen no such progress” (p. 2). The pictured painted by Gandara and Contreras (2009) is similar to the one that is reflected in other reports concerning Hispanic student achievement at the secondary and post-secondary educational levels (Fry, 2011; Ryu, 2009: Santiago, 2010,).

In their chapter on “Beating the Odds and Going to College”, Gandara and Contreras, (2009), agree with the earlier arguments made by Hernandez and Lopez (2000, 2004) that test scores and GPA are not fair and accurate predictors of Hispanic student performance in college. Gandara and Contreras (2009) argued that grades are contextual: “It is well established that grading standards vary considerably by teacher, school, and other factors” (p. 213). These other factors include race and ethnic background (The College Board, 2004).

Low academic measures for Hispanic students can be traced to “poor educational experiences” (Ganadara & Contreras, 2009, p. 214). Consequentially, academic self-efficacy for Hispanic students can be adversely affected “when Latinos are less likely than white and Asian students to have access to high-quality teaching and rigorous coursework” (p. 214). When lower expectations for Hispanic students are held by teachers and in-grained in educational systems, then students will lower expectations for themselves (Gandara & Contreras, 2009). The educational consequence for Hispanic students is being placed in lower educational tracks. The

self-fulfilling prophecy of Hispanic students' perceived inability to succeed in secondary school carries over to the college experience.

The negative impact of educational tracking is associated with economic class (Betts, Rueben, & Danenberg, 2000; Solorzano & Ornelas, 2004). Gandara and Contreras (2009) noted that "schools in more affluent neighborhoods and that serve more socioeconomically advantaged students, have been shown to provide more rigorous college preparatory and honors courses than schools in lower-income communities that largely serve populations of underrepresented students" (p. 98). This becomes an important consideration when tracking persistence and academic success in college. Cliff Adleman (1999, 2006) has argued that the rigor of curriculum is a strong predictor of academic outcomes from secondary schooling to college completion.

Gandara (1995), in her study on Hispanic college achievement, stressed the negative effects school tracking had for the college aspiration of Hispanic students. Her study underscored the existence of two academic tracks. One track prepared students for college; the other did not. Students who were tracked away from college also had low expectations of ever attending, let alone, graduating from college (Cavazoz, Cavazos, Hinojosa, & Silva, 2009; Nora, 2003; Immerwahr, 2003; Martinez, 2003; Zalaquette & Feliciano, 2004). The fact that practices existed to discourage college enrollment for Hispanic students did not go unnoticed by students (Davison-Aviles, Guerrero, Barajas-Howarth, & Thomas, 1999; Gandara, 1995, 2009).

Tracking away from college also affects the type of college students attend. Attending a highly selective college increases the likelihood of completing a degree for all ethnic groups (Bowen and Bok, 1998; Golden, 2006). A majority of Hispanic students who go to college start their "postsecondary careers in community colleges, and few of these students will ever get a degree" (Gandara, 2009). However, the role of community colleges in providing post-secondary

educational opportunities is essential, especially as an initial step into higher education for minority groups.

The pervasiveness of the community college experience is reflected in community college student enrollment. According to *The College Board* (2008), almost 12 million students enrolled for either credit-bearing or noncredit-bearing courses at community colleges. This makes community colleges the largest post-secondary option for students entering higher education. As a result, minority students have taken advantage of community college opportunities. For example, 47% of community college enrollment is African American and 55% is Hispanic (*The College Board*, 2008). As Gandara (2009) noted, the majority of community college enrollment is Hispanic. However, research has shown that while community colleges provide an entrance into higher education, completion rates for Hispanic students seeking a certificate or two degree is low (Santiago, 2012). Also, Hispanic students are less successful in transferring to a four year university to earn a bachelor's degree (Cohen, 1995; Gonzalez, 2004; Suarez, 2003).

In addressing the reasons why Hispanic students have low persistence and completion rates at community colleges, Suarez (2003) reviewed the literature on community college transfer and attainment and identified institutional, environmental and individual barriers that affected Hispanic student completion and transfer. Her study highlighted individual efficacy factors such as personal drive, participation in a rigorous academic preparation program, and formulating academic and career goals as essential for student persistence until degree completion or transfer. In the interviews she conducted, "stakeholders stressed that an internal drive to succeed, born out of personal experiences was instrumental" for success (p. 107). Suarez (2003) echoes Gandara and Contreras's criticism on the practice of tracking students into high

and low academic preparation programs. The counselors, administrators and students interviewed for the study agreed that "more rigorous academic preparation . . . would have further facilitated" adjustment to the college experience (p. 107).

A review of the literature on Hispanic student persistence and completion of a college credential includes institutional and environmental factors. These factors include financial resources, availability of student information and minority support systems, and geographic proximity to higher education institutions (*American Community College Association*, 2012; Fry, 2011; Gandara & Contreras, 2009; Santiago, 2010; Suraez, 2003; Wild & Ebbers, 2002). However, the factors that emerge as most significant are the efficacy issues that pertain to the level of confidence one has in the ability to accomplish tasks (Bandura, 1996). As iterated in the research of Gandara and Contreras and others (Cavazoz, Cavazos, Hinojosa, & Silva, 2009; Nora, 2003; Immerwahr, 2003, Martinez, 2003; Zalaquette & Feliciano, 2004) the cultural, educational, and family influences on life experience shape the capacity for Hispanic students to believe in their aspirations for attaining a college credential. To what degree Hispanic students internalize this belief will reflect their commitment to persist. As Hernandez (2000) found: "Latino students who 'overcame barriers and obstacles' were more resilient, demonstrated an 'I want to do it' attitude, and this personal drive played a critical role in Latino students' decision to persist in college" (p. 579).

Self-Efficacy Studies

Bicultural self-efficacy is placed within the context of Albert Bandura's concept of self-efficacy. Bandura (1997) posits that self-efficacy is the belief we have in ourselves to accomplish tasks. It is the principle behind our motivation to achieve and perform that is facilitated by a

belief in our own capabilities. Bandura's theoretical formulation of self-efficacy has been useful in understanding various aspects of student achievement.

Research using academic self-efficacy along with academic self-concept to predict academic performance among college students demonstrated that the stronger one's self efficacy and self-concept were the higher one's academic performance (Choi, 2005). This study can be associated with research that focuses on self-efficacy and academic stress (Devonport & Lane, 2006). The stronger the student's self-efficacy the better are their coping strategies in dealing with academic stress that comes with testing and maintaining passing grades while in college. Zajacova, Lynch, and Espenshade (2005), in an earlier study, present a different view when comparing stress and self-efficacy. They observe that self-efficacy is a better predictor of student success than stress. The association between self-efficacy and stress was identified by supporting the study's hypothesis that higher levels of self-efficacy and lower levels of stress lead to better academic performance, as measured by grades and accumulation of credits.

In a study done by Dewitz, Woolsey and Walsh (2009), self-efficacy is associated with purpose of life issues among college students. The study combines the work of Bandura (1997) with that of Victor Frankl (1988). Dewitz et al. (2009) looked at how self-efficacy and purpose of life issues impact student retention. They make a case for strengthening student service programs that have a direct benefit for students by influencing their choice to stay instead of leave. The study adds a different perspective to the work done on student retention. Dewitz and his colleagues propose that student leaving is a result of human development issues. College programs, especially student development ones, urgently need to approach student retention using a framework that articulates a human development perspective. This perspective is supported by Margolis (2005) in a journal article on the value of teaching tutors the concept of

self-efficacy. By learning to maximize the tutoring session to promote self-efficacy to the struggling learner, the tutor will accomplish two tasks. One is to help the struggling learner master the course content; the other is to enable a belief that promotes confidence in the struggling learner's capabilities to achieve in a continuous manner. Margolis commented that ". . . tutors can help transform maladaptive 'I can't do it' beliefs into adaptive 'I can do it' ones that can serve learners for a lifetime. . ." (p. 236).

Self-efficacy studies have been applied to understand the motivation of student success by looking at the factors that distinguish academic probation students from students not on probation. For instance, in a study done by Hsieh, Sullivan and Guerra (2007) goal orientation was strongly influenced by how students perceived their engagement with attaining their goals. Probation students tended to avoid performance approach goals in favor of less challenging opportunities for success. Students not on probation had a higher rate of attending tutoring and other academic support services that increased their pursuit of performance approach goals.

Career decision making has been another important application of self-efficacy theory (Betz, 2004; Betz, Klein, & Taylor, 1996; Betz & Luzzo, 1996). Betz (2004) demonstrated in his study that a significant relationship exists between self-efficacy and career decision making. She adds a third factor, which is attachment. She showed that in order to understand career decision making attachment to family and peers needs to be part of the influences that impact self-efficacy and decision making ability. According to the study, low self-efficacy is a result of weak attachment to peers and family. Consequently, career decisions are approached with greater uncertainty and fear. This concern over career indecision is explained further in the study done by Kosine, Steger and Ducan (2008). In their study they remind us of the strong connection between self-efficacy and purpose in life. This was discussed earlier in the study done by Dewitz

and his colleagues. Kosine, Steger and Duncan extend the relationship between self-efficacy and purpose in life to career decision making. They argue that self-efficacy can be strengthened by offering students opportunities "to identify their academic and work related strengths" (p.3). The importance of strengthening self-efficacy is paramount in pursuing goals and overcoming obstacles. Betz (2004) contends that "effects of self-efficacy on persistence are essential for long-term pursuit of one's goals in the face of obstacles" (p.342).

Studies on Bicultural Self Efficacy

The literature pertaining to studies on self-efficacy and various aspects of student attainment has been presented. In addition, the importance of self-efficacy on career commitment has been covered. These preliminary summaries lead to a discussion of research, in practice and theory, on bicultural self-efficacy and its association with student achievement and persistence.

Starting with a theoretical construct, a review of the literature includes a framework for understanding bicultural socialization (De Anda, 1984; Galan, 1992). As discussed above, self-efficacy is greatly influenced by life experiences that include family, peer and educational networks. In addition to these agents of socialization, culture has its own impact on the development of self-efficacy. According to De Anda (1984), the bicultural model for socialization "holds the most promise for understanding the process by which an individual learns to function in two systems – the minority culture and the majority society" (p. 101). The framework that De Anda (1984) offered attempted to explain how dual socialization is either facilitated or impeded by cultural similarities and differences. Galan (1992) offers a more conflict style of bicultural socialization. He argues that socialization in two distinct cultures can promote bicultural conflict. This conflict is a necessary outcome of cultural adjustment. Both of

these approaches combine to form a theoretical understanding of bi-cultural self-efficacy. However, De Anda and Galan's theories first lay a foundation for articulating the meaning of biculturalism. This meaning is expressed in an earlier article by Rashid (1984) who contends that "biculturalism is an attribute that all Americans should possess because it creates a sense of efficacy within institutional structures of society along with a sense of pride and identification with one's ethnic roots" (p. 15). Rashid (1984) is explicit about the role that institutional structures play in the dynamics of developing cultural efficacy in society. Given this understanding of biculturalism, which includes the concepts efficacy and cultural socialization, Lafromboise, Coleman, and Gerton (1993) define bicultural efficacy as the "belief, or confidence, that one can live effectively, and in a satisfying manner, within two groups without compromising one's sense of cultural identity" (p. 404). Within the context of this research proposal, the extent to which a student develops a strong sense of bi-cultural efficacy will influence the degree of achievement and persistence for Mexican American college students.

The need for research that studies the relationship between bicultural efficacy and educational achievement was suggested by Coatesworth, Maldonado-Molina, Patin, and Szapocznik (2005). In their article they applied an ecological investigation to the psychological elements that affected the acculturation process of Hispanic immigrant youth. Specifically, they focused on family and peer elements as predictors of individual acculturation to American society. Similarly, a study done by Tamara (2008), using a phenomenological approach, discovered that psychological motivations for attending college were associated with "successful experiences in high school, a desire for improved socioeconomic status, a need to contribute to the well-being of others, a break with tradition, and the influence of respected role models in facilitating a desire for higher education" (p. 108). Lascher (2007) suggests in his research that

cultural considerations need to be accounted for in discerning the similarities and differences between Latino and non-Latino college students when tracking retention.

Exploring the research in bicultural identification adds insight into the different constructs that make up the bicultural world of Hispanics and other identifiable ethnic and racial groups. In a study conduct by Phinney and Devich-Navarro (1997) with high school adolescents, while not explicitly identifying bicultural self-efficacy as a component of bicultural identity, they concluded that two bicultural patterns exist: blended biculturals and alternating biculturals. The former base their biculturalism “on a strong sense of being American while affirming their ethnicity” (p.24). The latter group “describe themselves as distinctly more ethnic than American” (p.25). The authors are quick to say that further research needs to explore social-economic influences and career and educational aspirations of bicultural groups.

Two studies that come close to the purpose of this proposal were conducted by Gross (2004) and Lucer-Miller (1999). Both studies used Latino students; Lucero-Miller’s research specifically sampled Mexican-American students. The more recent study by Gross highlights the important value of creating shared curricular and co-curricular activities that invite students to reflect on their career and academic goals. Her study introduces the idea of collective efficacy in addition to self-efficacy. She observes that “Collective efficacy through career-oriented peer associations is especially salient for groups that have limited co-ethnic role models in college or in their intended profession” (p. 74). The key to comprehending the meaning that surfaces when cultural identity and educational goals intersect is the students’ ability to reflect on that intersection. She comments: “It is by engaging in the self-reflection that students are able to understand the dynamic components of their development process and create meaning for themselves within the context of their social and cultural worlds” (p. 76).

The second study conducted by Lucero-Miller (1999), attempted to examine the relationship between Mexican-American career behavior and level of acculturation. Surprisingly, her study did not find a significant relationship between the two variables. Her explanation for this lack of significance between the variables pointed to the high level of acculturation in the Mexican American student sample. She also found that family cohesion had no significant effects on the relationship between career and acculturation variables. Again, this finding disagrees with other research that support the idea that Hispanic families value the cohesive structure of their family ties (Rueschenberg & Buriel, 1989).

Related Efficacy Studies

Related to efficacy studies and Hispanic student achievement and persistence is research that highlights the importance of bicultural elements of acculturation, ethnic identity, and resiliency for college completion (Berry, Phinney, Sam, & Vedder, 2006; Cavazos & Cavazos, 2010; Cavazos, Johnson, Fielding, Cavazos, Castro, & Vela, 2010; Torres & Delgado-Romero, 2008). These studies emphasized the psychological and sociocultural knowledge and skills necessary for the acquisition of adaptation mechanisms that permit moving in and out of cultural worlds without the social pressure to assimilate (Schuh, Jones, & Harper, 2011).

Acculturation and ethnic identity studies (Frebig, Braid, Ross, Tom, & Prinzo, 2010; Phinney, Horenczyk, Liebkind, & Vedder, 2001; Roche, Ghazarahian, & Fernandez-Esquer, 2012; Torres, 2004; Torres & Hernandez, 2007) contribute to a broader understanding of bi-cultural self-efficacy when considering the behaviors and self-esteem issues related to the cultural adjustment of adolescent and college students. For example, Phinney and her associates (2001) developed an interactional model for ethnic identity. This model, when applied to school adjustment of immigrant students, helped to explain the inconsistencies in the research that

posited a bicultural orientation as "conducive to better school performance" (p.503) with other research that favored either a "national" or "ethnic" identity as supportive of increased academic performance.

Torres (1997) developed a bicultural orientation model that "sought to investigate a model of bi-cultural identity by examining acculturation and ethnic identity together" (Torres & Phelps, 1997, p. 58). The model focused on Hispanic American students (Torres, 1997). Her study validated the "construct of biculturalism" (1999). The results of her study "disprove[s] the notion of a linear acculturation model" (p. 294). The existence of a bicultural identity challenges the assumption present in a linear model of acculturation that supports the belief that strengthening mainstream cultural identity requires the weakening of ethnic identification (Torres & Phelps, 1997). In a later study, Torres (2003) applied this model to Hispanic college students in their first two years. This qualitative longitudinal study found that ethnic identity was first situated in "environments" where students grew-up. Identity change occurred from the first to the second year as a result of influences of "cultural dissonance" and "changes in relationships within the environment" (Torres, 2003). The construct of bicultural identity was associated with students who demonstrated an openness to explore different cultural values. Although they did not take on the values of the majority culture, they were also not seeking an ethnic identity (Torres, 2003).

Torres (2007), in another longitudinal study on the influences of ethnic identity on self-authorship, found that a bicultural identity play an important role in developing a holistic understanding of a bicultural self. The cognitive and interpersonal elements involved in bicultural identity formation promotes an "informed Latino/a identity (p. 571). Torres (2007) observes that "this informed identity acknowledges the choices made between two cultures and

the need to renegotiate relationships that are consistent with an informed Latino/a perspective" (p. 571).

Little attention has been given to research on resiliency as a way for Hispanic college students, who were tracked away from college preparatory programs, to persist in college (Cavazos, Johnson, Fielding, Cavazos, Castro, & Vela, 2010). Resiliency is defined as "the ability to cope with adversity and overcome most challenging circumstances" Hassinger & Plourde, 2005, p. 319).

Cavazos et al (2010) described resiliency within the context of combining interpersonal and cognitive factors for success. Resiliency is a product of high family expectations, formulation of academic and career goals, high levels of intrinsic motivation, internal locus of control, and high self-efficacy. Cavazos et al (2010) related that students in the study did not believe that being smart was the quality that enabled their achievement. Other qualities were more important, such as "effort, perseverance, and self-belief" (p. 182). These qualities were learned from family and parent interactions.

The conclusions reached in the study by Cavazos et al (2010) support Hernandez's (2000) earlier study that discussed student resiliency needed to overcome barriers. This same attitude is expressed by one of the participants in the Cavazos et al (2010) study.

> "My family struggled. They lived in a car for two years, to owning two houses . . . What do I have to lose by just trying? Just try and go out there and try to do what you want to do because if they [my parents] were able to achieve that, what makes me think I can't? It's possible. I think it's possible" (Cavazos et al, 2010, p. 182).

Resiliency reflects a belief in our own self-determination, an aspect of self-efficacy that relies on the accumulation of affirming life experiences. Resiliency is strengthened by the high

expectations of others and reduced by low expectations. The previous discussion on tracking provides an example on how low and high expectations affect resiliency and efficacy. A qualitative study conducted by Cavazos and Cavazos (2010) addressed tracking and teacher expectations as pre-college influences on Hispanic student college achievement.

This study interviewed 11 first time in college students about their high school perceptions of teacher expectations for their college success. High and low teacher expectations influenced student access to college information. Teacher expectations also influenced student confidence in how well they would perform once in college. Using a qualitative design, the researchers highlighted the stereotypes that were created and sustained by high school teachers who believed that Hispanic students tracked into non-advance placement courses would automatically struggle in college. Pre-college experience of teachers' low expectations of Hispanic student performance was identified in a study of two Hispanic based high schools (De Jesus & Antrop-Gonzalez, 2006). Cavazos and Cavazos (2010) referred to this study to illustrate that students do notice the stereotypical thinking that reflects teachers' low expectations of student performance. As cited in Cavazos and Cavazos (2010), "research has found that low expectations can have the following detrimental effects on the experiences of Latino/a students: internalization of failure, resignation on potential success, and fulfillment of negative self-fulfilling prophecy" (p. 98).

Tracking shapes teacher expectations that are either positively or negativity communicated to students. For example, in one student comment from Cavazos and Cavazos (2010), the message of teacher expectations was understood in two different ways.

> "I think I would say that they did have high expectations of me. I was an AP student, so I don't think they have high expectations of students that aren't in their AP classes. I

remember my Spanish teacher, and I think she always did have high expectations because I think she had a 90% passage rate on AP exams. She was always real pushy with us. She expected a lot from everybody, all of her AP classes, but not much from her regular classes based on the comments that she said before" (p. 101).

Another student reported that at an assembly of the top 10 percent of students in the senior graduating class it was said: "You are the students who are going to do well. You are the students who are going to attend college" (p. 102).

Resiliency, acculturation, and ethnic identity are elements that contribute to a sense of self-efficacy. Each reflects a unique dimension of the interaction between personal effort and environmental influences. Resiliency relies on expectations. Acculturation emphasizes behaviors. Ethnic identity is concerned with meaning. Bicultural self-efficacy is the integration and demonstration of all three.

Studies on AVID Approach to Learning

Advancement Via Individual Achievement (AVID) is a college readiness program that introduces students and faculty to high engagement learning strategies that prepare students to succeed in a rigorous college preparatory curriculum. AVID begins in middle school and continues through high school.

Incorporating AVID strategies as a means of influencing bicultural self-efficacy is one of the primary research question in this study. A majority of the research conducted on AVID was largely concentrated on middle school and high school AVID programs (Watt, Powell & Mendiola, 2004) showing that AVID had an improved effect on student test scores. Other, more pertinent research looked at the "AVID Effect" on student readiness for college (Lozano, Watt & Huerta, 2009; Mendiola, Watt & Huerta, 2011; Watt, Huerta & Alkan, 2011). Two studies by

Lozano, Watt and Huerta (2007, 2009) showed high aspirations for first generation college students. This finding indicates a possible motivation for first generation students to persist in college. Two postsecondary exploratory studies attempted to investigate AVID's impact on student persistence. One was a qualitative study using a case study method to examine the impact of AVID on community college freshman taking a student success course. This course implemented AVID learning strategies based AVID's 11 essentials for student learning and success (Watt, Huerta, & Alkan, 2011). One finding from the study showed while the 11 AVID essentials was appropriate for high school implementation, the use of these essentials at the college level needed to be reworked to reflect the college going experience. The second study was also a qualitative study that used a triangulation approach "to secure an in-depth understanding of the phenomenon" (p. 6). The population involved Mexican American students attending a four year university who were alumni of AVID high school programs. The major conclusions from this study supported the AVID experience from high school to college providing an "effective support system for students 'in the middle' with regards to entering college and persisting towards a college degree" (p. 13). This support system is both academic and social. The study did not assess whether or not participation in an AVID structure program had an effect on ethnic identity. A quantitative study compared the persistence rates between Mexican American students participating in an AVID structured student success course with students participating in a non-AVID structured student success courses (Watt, Butcher, & Ramirez, 2011). The study found that AVID participants had higher persistence rates than students not participating in an AVID structured student success course.

Chapter Summary

The literature review presented research on low achievement and persistence rates for Hispanic students in college. The research challenged the traditional measures for understanding the reasons for these rates and argued for a cultural understanding that shifts emphasis away from testing to social and economic considerations. These considerations are important for understanding expectations that shape successful or failing behavior, a behavior that starts prior to college.

Efficacy studies showed that student performance included academic, personal and career well-being. An integration of purpose in life goals with educational and careers goals has positive effects on student achievement. The role of bi-cultural self-efficacy adds to a deep sense of commitment to college achievement when family and cultural systems benefit.

Related components of self-efficacy – resiliency, acculturation, and ethnic identity – inform an understanding of bicultural self-efficacy by reflecting cognitive, behavioral and psychosocial dimensions of individual and cultural experiences. These components emphasize the importance for acquiring mechanisms to cope and adapt to changing circumstance.

The AVID research at the public school level showed promise as an effective intervention for students at the postsecondary level. The few studies that assessed AVID's success at community college and university setting gave initial credence to the expectation that AVID would be successful. What remains as a focus for this study is whether or not an AVID Higher Education (AHE) project can affect bicultural self-efficacy as an integral element for Hispanic student attainment. It can then be assessed for its impact on the construction of a bicultural narrative reflecting the foundational role of cultural experience in student achievement.

Chapter three will present a discussion on the methodology and research design. It will include descriptions of instrumentation, data collection procedures, and procedures for data analysis.

CHAPTER III

METHODOLOGY

This chapter addresses the study's methodology, which includes the research design, research questions, and site and participation selection. This chapter also includes a strategy for gaining access to participants, with a focus on obtaining necessary permissions and addressing issues of confidentiality and anonymity. Data collection procedures, instrumentation, and data analysis procedures are also discussed.

Research Design

This study employed a mixed methods approach to the question of examining the impact of bicultural self-efficacy on college student achievement and persistence. The mixed methods model of QUAN-qual, or explanatory, model was used (Ivankova, Creswell and Stick 2004). The model is often used to develop a typology from quantitative data to identify themes that emerge from qualitative procedures such as interviews or observations (Mays, Mills, & Airasian 2009).

The research design compared two groups, a study group and a comparison group of first generation Mexican American students. Each group took the *Bicultural Self Efficacy Scale Minority Adult* (BISES-MA) survey (Soriano & Bandura, 2005). The scale measures bicultural self-efficacy for minority adults using a likert model response format. The study group participated in an AVID for Higher Education (AHE) structured student success course, and the comparison group did not. Focus group interviews with participants from the study group were conducted for the qualitative purposes of the research. The interview questions were generated

from factors resulting from a factor analysis of responses to the BISES-MA survey (Soriano & Bandura, 2005).

Kamberelis and Dimitriadis (2005) note that the advantage of using interviews “allow the researcher to see complex ways in which people position themselves in relation to each other as they process questions, issues, and topics in a focused way” (p. 904). The interview process operates at a level that Clifford (1988) calls the “hermeneutics of vulnerability.” Kamberelis and Dimitriadis (2005) discuss this concept in terms of Clifford’s “tactic” of “self-reflexivity” (p. 905). This means that interaction between the researcher and participants “engage in acts of self-defamiliarization in relation to each other” (p. 905). In other words, “interaction is the crucial feature of focus groups because the interaction between participants highlights their view of the world, the language they use about an issue and their values and beliefs about a situation” (Kitzinger, 1994, p. 104). Focus group interaction “enables participants to ask questions of each other, as well as to re-evaluate and reconsider their own understandings of their specific experiences” (Kitzinger, 1994, p.104). The focus group interaction provides the substance for a grounded theory explanation of bicultural self-efficacy. As Kitzinger (1994) states: “Group work is invaluable for 'grounded theory development’– focusing on the generation rather than the testing of theory and exploring the categories which the participants use to order their experience (Glazer and Strauss, 1967)” (p. 108).

The quantitative component of the study investigated the amount of agreement participants had with factors on the bicultural self-efficacy scale. The results of both groups were compared to (a) end of term grade point average (GPA) to measure achievement and (b) pre-registration rates for either summer or fall semesters to measure persistence. The qualitative component explored the themes that emerge from the focus group interaction on questions about

participants' perceived understanding of bicultural self-efficacy based on their common experience of in AHE structured student success course. These elements of focus group interaction -- self-reflexivity of individuals' perceived understanding of bicultural self-efficacy and the group experience of the AHE structured student success course – helped to ground a theory in "data from participants who have experienced the process" of focus group interaction (Strauss & Corbin, 1998 in Creswell, 2013, p. 83). As Creswell (2013) wrote: "a grounded theory study has 'movement' or some action that the researcher is attempting to explain" (p. 85). As a result of the focus group interaction, this process yielded an explanation on how the influence of bicultural self-efficacy supports academic achievement and persistence for Mexican America students at a two year college.

Research Questions

The following research questions were addressed in this study:

1. What is the relationship among bicultural self-efficacy student achievement, and persistence for Mexican American students attending a two-year college?
2. What is the difference between bicultural self-efficacy of Mexican American students enrolled in an AVID for Higher Education (AHE) structured student success course and those who are not enrolled in an AVID for Higher Education (AHE) structured student success course?
3. How does participation in an AVID for Higher Education (AHE) structured student success course promote an understanding of bicultural self-efficacy for Mexican American student achievement and persistence at a two year college?

Site and Participation Selection

For purposes of this study, the selected college has been assigned a pseudonym, South Tech College. It offers certificates in technical education and associate of science and associate of applied science degrees in academic and technical fields of education. The college also provides transfer students with an academic CORE completion designation on student transcripts. The college is designated as a Hispanic Serving Institution (HSI), with an enrollment that is 87% Hispanic, of which 92% are Mexican American.

South Tech College requires all students enrolled in technical certificate programs or pursuing an associate of applied science degree to register for a student success course. The course, Human Relations in the Workplace (HRPO 1311), is a 3 hour credit course included in all certificate and degree curriculum plans. In 2009, the faculty responsible for teaching the course was trained in the use of AVID high engagement strategies. The course was redesigned as an AVID structured student success course and implemented in the fall of 2010. Specific AVID strategies integrated in the course included, reading for a purpose, marking the text, Cornell note taking system, and studying and test-taking skills.

The study consisted of two groups: a study group and a comparison group. A purposeful sampling method (Creswell, 2013) was used to select group participants for the study. A purposeful sampling method is appropriate when using a mixed methods design when the "goal is not to generalize to a population but to obtain insights into a phenomenon, individuals, or events" (Onwuegbusie & Collins, 2007, p. 7). The benefit of using a purposeful sample is to "maximize understanding of the underlying phenomenon" (p. 7). Grounded theory provided the qualitative framework that sought to explain how bicultural self-efficacy supports student

achievement and persistence. Creswell (2013) referred to Strauss and Corbin's (1998) observation that connects grounded theory with purposeful sampling:

> In a grounded theory study, the researcher chooses participants who can contribute to the development of the theory. Strauss and Corbin (1998) refer to theoretical sampling, which is a process of sampling individuals that can contribute to building the opening and axial coding of the theory (p. 155).

Creswell (2013) noted three considerations when selecting a sampling approach. They are, "the decision as to whom to select as participants for the study, the specific type of sampling strategy, and the size of the sample to be studied" (p. 155). The decision as to whom to select as participants for the study was based on "participants who can contribute to the development of the (grounded) theory" (Creswell, p. 155) and who meet the criteria of first generation, first time in college, and Mexican American. By meeting the criteria of Mexican American, participants met the criteria to respond to the BISES-MA survey. Purposeful sampling has been identified as the general sampling strategy in the proposal because criteria are selected for identifying the sample (Gay, Mills & Airasian, 2009). Creswell (2013) recommends that in grounded theory, a sample size of "20 to 30 individuals" be selected "in order to develop a well saturated theory" (p. 157). While purposeful sampling was used for both the quantitative and qualitative components of the study, participants for the focus groups were selected only from the study group.

Using a purposeful sampling method (Creswell, pp. 154-157), criteria for selection of participants for the study group were first time in college, first generation Mexican American students who were enrolled in a student success course utilizing AVID for Higher Education (AHE) strategies. The second group of students, the comparison group, was also selected from general education courses that included first time in college, first generation Mexican American

students not enrolled in an AHE structured student success course. General education courses from which comparison groups students were selected included general psychology, introduction to sociology, minority studies, and world religions. The difference between an AHE structured student success course and a non-AHE student success course is the intentional teaching of AHE learning strategies by AHE trained instructors to students in the AHE structured course (http://www.avid.org/hed_studentsuccess.html; Watt, Butcher, & Ramirez, 2012; Watt, Huerta, & Alkan, 2012). Students in the AHE structured student success course constituted the study group and students from the general education courses were the comparison group. The study group and comparison group totaled 132 students. The study group consisted of 60 students who met the criteria of first generation and Mexican American enrolled in an AHE structured student success courses. The comparison group consisted of 72 students who were first generation, Mexican American not enrolled in an AHE structured student success course.

Two focus groups were purposefully selected based on student volunteers from the study group. One group consisted of five participants. A second group was made up of two participants. The total number of participants for the focus group interviews was seven.

The process for soliciting focus group participants involved 10 class presentations made by the researcher to the AHE structured student success course. The presentations explained the purpose of the focus group interviews. Following the presentations, a sign-up sheet was passed around to class members. While students expressed interest, they were reluctant to commit to signing up as participants. A second approach was to ask the instructors for the AHE structured student success course to invite students to participate as focus group participants. One instructor approached five welding students and they agreed to participate in a focus group. The researcher met with the five students to schedule a time to conduct the group interview.

A presentation was also made to 18 students in the College Assistance Migrant Program (CAMP) who were first generation Mexican American students enrolled in the AHE structured student success course. Again, this presentation explained the purpose of the study and rationale for using focus groups. Two students in the allied health programs agreed to participate in the focus group.

Gaining Access

In research, gaining access is a relational process (Creswell, 2013). Cultivating relationships in varied contexts were considered. For this study, access to the student population was achieved through contacting the president at the selected community college to obtain permission to conduct the study. Institutional Review Board (IRB) approval was sought and obtained from University of Texas Pan American and the community college research site. The approvals were presented to the president of the community college study site along with a one-page description of the research project. Once approval was granted, contact was made with the chairperson of the AHE structured student success course and appropriated general education faculty. Approval was obtained from them to administer the BISES-MA surveys to students who met the criteria set out above. The researcher provided a one page description of the project to the chairperson of the student success course and selected general education course instructors.

Student access was obtained through collaboration with faculty by presenting the research study to students in the classrooms. During these presentations students were informed of the purpose of the research. After the purpose of the project was clearly explained, and questions addressed, students were asked to volunteer as participants in the study. Students indicating a willingness to participate in the project completed an informed consent document, with a notification that they may be selected to participate in a follow-up focus group (see

appendix E). They were informed of a debriefing exercise that was made available to answer any questions at the conclusion of the study.

Data Collection Procedures

Prior to data collection required IRB permissions were obtained from South Tech College and the University of Texas Pan American. After obtaining the required permissions to conduct the study, a study group and comparison group were created. Assignment to groups was conducted using a purposeful sampling method (Creswell, 2013). Purposeful sampling criteria for the study group were defined as students who were first-time in college, first generation enrolled in an AHE structured student success course. The comparison group excluded the AHE criteria. Survey data were collected from 170 students: 70 students in the study group and 100 students in the comparison group. Survey data were obtained from April 4 through April 18, 2013. The total survey population (N=170) was reduced 132 because 38 respondents did not meet the criteria for either first generation or ethnicity.

The twenty-two item BISES-MA survey was administered to 70 students in the study group (AHE structured student success course) and to 100 students in the comparison group (General Education courses) during the first two weeks of April. Course instructors granted permission to administer the survey in the courses. The survey was coded to distinguish between group responses. The method of survey distribution was conducted through personal administration by the researcher. Gay, Mills and Airasian (2009) suggest that personal administration of a survey is “efficient when respondents are closely situated” (p. 183). Personal administration of the survey by the researcher allowed for respondents to have access to the researcher if questions arose about the survey instrument.

Data analysis procedures for the quantitative component of the study included converting raw scores from the BISES-MA survey to t-test scores to observe significance among bicultural self-efficacy student achievement, and persistence for Mexican American students attending a two-year college, as stated in research question one. Similarly, raw scores from the BISES-MA survey were converted to t-test scores to observe significance between bicultural self-efficacy of Mexican American students enrolled in an AHE course and those who were not enrolled in an AHE course, as stated in research question 2.

During the first three weeks in June 2013, two focus group interviews were conducted with student participants from the AHE structured student success course. The first focus group interview consisted of 5 male students enrolled in a welding program. They ranged in ages from 22 to 41years old. Three students were enrolled in the certificate program and upon graduation were going to enter the workforce; one student was completing his associate degree; and one student was completing his certificate and returning in the fall 2013 semester to start his associate degree. All participants graduated at the end of the summer 2013 semester.

The second focus group interview consisted of two students, one 19 year old male and one 20 year old female, enrolled in allied health programs. The 19 year old male was enrolled in the dental hygiene program and the 20 year old female was a medical assistant student. The students were also CAMP students.

A third interview was conducted on July 22, 2013 with three participants from the first interview. All were male and enrolled in the welding program. The purpose of the third interview was a follow-up to the first interview to obtain additional information about the influence of bicultural self-efficacy on motivations to achieve and persist in college. The participants from the second interview were not available for a follow-up interview.

All interviews were semi-structured with a list of open-ended questions asked by the researcher (Creswell, 2013). Focus group interviews were audiotaped and transcribed.

The focus group interview questions were designed to allow participants to express their experience as first generation college students, and the influences that had a positive and negative impact on their college experience. The overall purpose of the focus group interview approach was to elicit from participants how influences affecting their college experience, in particular their AHE structured student success course, were relevant to an understanding of bicultural self-efficacy, student achievement, and persistence, as stated in research question three.

Data analysis procedures for the qualitative component of the study followed the protocol suggested by Kvale and Brinkmann (2009). They suggest a seven stage procedure for collecting and analyzing qualitative data from interviews. The stages include identifying the focus for the study, conducting the interviewing, transcribing the interview, analyzing the data, and addressing concerns for validity, reliability and generalization of findings.

Instrumentation

The proposed study used a QUAN-qaul mix methods approach (Gay, Mills, & Airasian, 2009). Various means for collecting quantitative and qualitative data were used. The quantitative component of the study consisted of *Bicultural Self Efficacy Scale Minority Adult* (BISES-MA) survey measuring bicultural self-efficacy (Soriano & Bandura, 2005). Term grade point average (GPA) and pre-registration status of cohort groups were obtained through archival data. A form for participants to confirm their first generation status based on the definition of first generation previously described in this proposal was provided. Included in this form were responses that

allowed participants to self-report ethnic identity as Mexican American based on U.S. Census criteria. Finally, two focus groups were established to collect qualitative data.

A one page assessment instrument was created to obtain data in the following areas: Confirmation of first generation status, ethnic identity, enrollment status in a student success course type as AHE structured or not, and demographic information on gender and age (see appendix A).

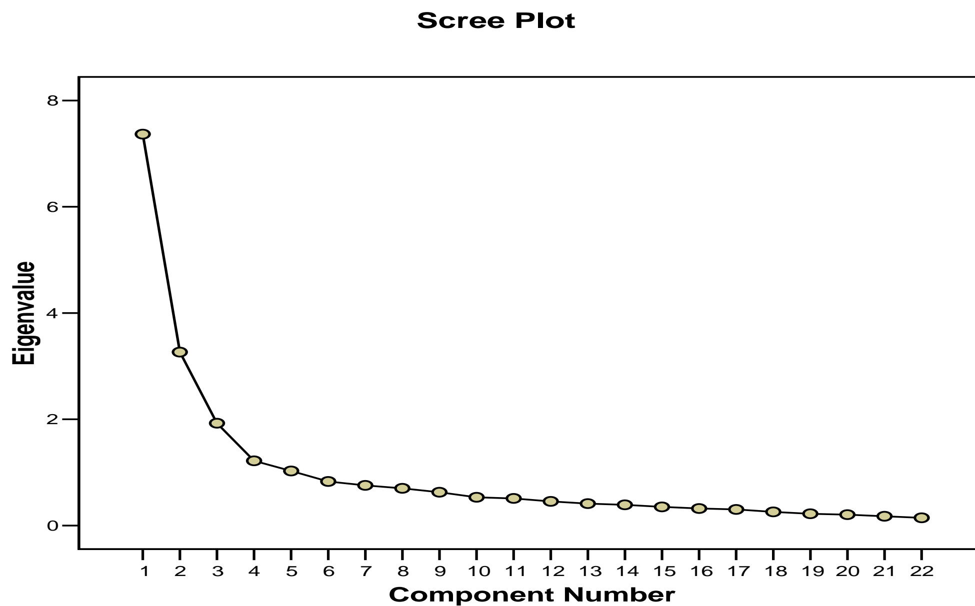
Bicultural self-efficacy was measured using Soriano and Bandura's (2005) *Bicultural Self-Efficacy Scale Minority Version for Adults* – BISES-MA (see appendix C). The BISES-MA has 22 items arranged on a five-point Likert Scale with responses ranging from "not well at all" to "very well," with "somewhat well" as a middle response. An example of an item is: *Stick up for my culture with peers and friends*.

The BISES-MA was constructed from the original *Bicultural Self Efficacy Scale* (BISES) for minority adolescents (Soriano & Bandura, 2005). Reliability and validity measures were conducted for the original BISES version using a factor analysis comparing two administrations of the BISES: one administration to minority and White non-minority adolescents (survey one); and one administration to adolescents on probation (survey two) (Soriano, 2005). Alpha reliabilities for BISES minority version were .91 for survey one; and .98 for survey two. Alpha reliabilities for BISES-White non-minority version were .96 for survey one, and .99 for survey two. Validity of the BISES instrument was demonstrated through a confirmatory factor analysis that reduced 104 items to 72 items. The 72 items were further reduced to 39 items that loaded on ten factors for the BISES minority version and 39 items that loaded on eight factors for the BISES White non-minority version (Soriano, 2005)

The 22-item BISES-MA version repeats 17 items found in the BISES minority version of the scale. Examples of similar items are: *Get friends of my culture to appreciate White culture* and *Get White friends to appreciate my culture*. Examples of items that differ between the two versions are: *Act and talk like Whites in order to fit in* and *Stick up for my culture with peers and friends*. The psychometrics for the BISES-MA version were uncertain; therefore, an exploratory factor analysis (Anastasi, 1997)) including Cronbach's Alpha (Warner, 2008) was run using the data from participants meeting the criteria for the study (N=132). However, 8 cases were excluded for missing responses to survey items. The total number of cases used for the factor analysis for the complete 22-item BISES-MA survey was 124. The reliability measure for the scale using Cronbach's alpha was .88. The factor analysis of this study on responses from an adult minority population complemented the factor analysis done by Sorinao (2005) on the original BISES survey of an adolescent youth population. In addition to reliability measures, possible factors that emerged were reported on overall items.

A factor analysis was conducted on the 22-item BISES-MA survey whereby a principle component analysis was conducted using a Varimax rotation method to extract the components or factors of the survey. Though the first 5 components had eiganvalues greater than 1.0 (Figure 1), the scree plot indicates that the eiganvalues begin to flatten out with the sixth component or factor.

Figure 1. Scree Plot for 22-item BISES-MA Survey



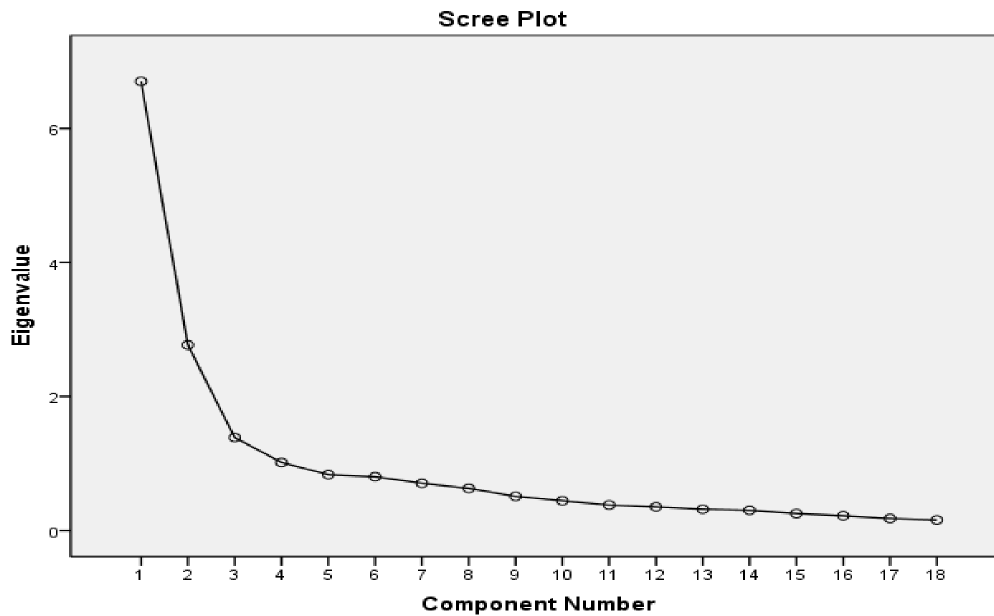
The interpretation of the rotated factor items was based on the following criteria. First, an item was considered to load significantly on a given factor if the loading value was equal to .45 or higher. A complex item, one that loads significantly on more than one factor, was retained if one of the loadings was appreciably higher than the other. Finally, an item was removed if it did not load significantly on any of the factors (Huerta, 2008; Warner, 2008).

The first 5 factors account for 67% of the variance; however, interpretation of the rotated factors showed that on factors 4 and 5 only two items on each factor indicated high correlation or loadings. Warner (2008) stated that “data analysts typically want a minimum of three indicator variables for each factor, and more than three indicator variables is often considered preferable” (p. 772). Consequently, items 14 and 17 on factor 4 were eliminated and items 15 and 18 on factor 5 were eliminated (see table 6 in appendix D) and a second factor analysis was conducted

A second factor analysis was run on the revised 18-item BISES-MA survey. The total number of valid cases was 127. There were 5 cases excluded from the original 132 due to

incomplete survey responses on all items. Cronbach's alpha was .895. A Varimax rotation method was run on the 18-item BISES-MA survey and yielded 3 factors with eiganvalues greater than 1.0 (Figure 2). The first three factors account for 63% of the variance. The scree plot indicates that the eiganvalues begin to flatten out with the fourth component or factor.

Figure 2. Scree Plot 18-Item BISES-MA Survey



The three components or factors resulting from the factor analysis had the following reliability (Cronbach's alpha) measures: Factor 1 (Identify with Mexican culture): .906; Factor 2 (Identify with White culture): .892; Factor 3 (defend culture): .678. To allow for interpretation of the 3 factors, each one was named according to the intent of each loading on the individual factors (see table 7 in appendix D).

As a follow-up to the quantitative component of the study, a focus group method was used. The focus group is an interview method that allows participants to share their experience of common phenomena through "a shared understanding of the questions posed by a researcher' (May, Mills& Airasian, 2009, p. 372). This method of interviewing is concerned with

understanding participants' "lived experience from their own position" (King & Horrocks, 2010). Questions for the focus group were created from the factors generated from the factor analysis of the BISES-MA and with a concern for revealing student experience of the AHE structured student success course. Data from the focus groups were collected using field notes and audio recordings.

Data Analysis Procedures

For the quantitative component of the study, a bivariate correlation coefficient (Warner, 2008) was run to address research question 1; and an independent samples t-test (Warner, 2008) was run to address research question 2. An alpha level of .05 was set to determine significance (Warner, 2008). The statistical procedures were run using SPSS. Tables are used to represent the statistical relationship between the variables.

A qualitative procedure further explained the quantitative results and addressed research question 3. Kruger and Casey (2009) wrote: "A key principle (in data analysis) is that the depth or intensity of analysis is determined by the purpose of the study" (p. 114). The purpose of the study can be understood in the context of the mixed methods, QUAN-qual approach. This approach seeks interpretation of the statistical data of the study (Creswell, Plano Clark, Gutman & Hanson, 2003; Gay, Mills & Airasian, 2009). Focus groups (Kamberelis & Dimitriadis, 2005) were used as the qualitative method for interpreting the statistical data related to bicultural self-efficacy, student achievement, and persistence of Mexican American students. The aim of the interpretative component of the study was to establish an explanation that grounds a theory of bicultural self-efficacy for student achievement and persistence for Mexican American students attending a two year college.

Kruger and Casey (2009) stated that there are four qualities of focus group analysis: “it is systematic, verifiable, sequential and continuous” (p. 115).

Analysis of focus group data followed a “systematic protocol” (Kruger and Casey, 2009, p. 115). The protocol enabled the researcher to follow a “prescribed, sequential process” that ensures “that findings reflect what was shared in the groups” (p. 115). Following a systematic protocol benefits the study by reminding the researcher “of upcoming steps, but it also communicates to the users of the study that the (researcher) attempted to be logical and orderly” (p. 115) in data collection and analysis.

Kruger and Casey (2009) noted that “to verify findings there must be sufficient data to constitute a trail of evidence” (p. 115). This was accomplished as described in the previous section on the procedures for data collection, using field notes and audio recordings. Verifying data necessitates the establishment of the trustworthiness in the qualitative component of data collection. As a QUAN-qual mixed methods approach, two methods were used to establish the trustworthiness of the qualitative data: external audit and member checks. An external audit (Creswell, 2013) was conducted “to examine both the process and the product of the (data), assessing their accuracy” (Creswell, 2013, p. 252). Group member verification (Creswell, 2013) was used recruiting available participants to member check “data, analyses, interpretations, and conclusions for . . . accuracy and creditability of the account” (Creswell, 2013, p. 252); Gay, Mills & Airasian, 2009).

Analysis of the data followed a sequential process (Kruger & Casey, 2009, p. 116). First, focus groups were created that adhere to the research problem and purpose of the study. Questions were generated that connect the factor results from the BISES-MA survey with focus group participants’ ability to explain their individual and common experience of bicultural self-

efficacy. The questions flowed in a sequential way with most general ones at the beginning, followed by questions that ask for participants to provide deep description of their understanding of bicultural self-efficacy, and ending with participants sharing a short verbal summary of their experience of the focus group.

Kruger and Casey (2009) stated that “data collection and analysis are concurrent” (p. 116) in a focus group process. The advantage of continuous analysis as data is collected helps the researcher to identify gaps in the data that may arise because the question is problematic, participants have not provide sufficient information, or follow-up questions need to be asked. In the present study this was accomplished through employing member-check (Creswell, 2013) sessions and utilizing an external auditor (Creswell, 2013) to critically review and question process of data collection and analysis.

Data analysis followed the classic approach (Kruger & Casey, 2009). This approach presents data analysis in a visual and concrete fashion (Kruger & Casey, 2009). Based on notes and audio recordings transcripts were generated. Content from the transcripts was categorized according to four questions (Kruger & Casey, 2009):

- Did the participant answer the question that was asked?
- Does the comment answer a different question in the focus group?
- Does the comment say something of importance about the topic?
- Is it like something that has been said earlier?

Kruger and Casey’s (2009) delineation of protocol procedures provided a workable framework for collecting and analyzing qualitative data for the current study. First, a systemic protocol was followed that established criteria for the creation of the focus groups and guided the adherence of what was shared in the group to the transcribed data. Two students focus groups

were created as a result of personal invitations made by the researcher, AHE structured student success instructor, and CAMP counselor. One focus group consisted of 5 male welding students, ranging in age from 22 to 41. All students were completing their program in welding and graduating in August 2013. A second smaller group of 2 allied health students, one male and one female, was established. The 20 year old female student was in the medical assistant program and 19 year old male student was completing his prerequisite requirements for the dental hygiene program. All student participants met the overall criteria of first generation, Mexican American, enrolled in an AHE structured student success course. Focus group interviews were conducted at South Tech College. The first two interviews were conducted in June 2013. A follow-up interview was conducted in July 2013 with 3 welding students from the first interview who were available at that time to participate in the follow-up interview. All focus group interviews were audiotaped and detailed notes were taken during the interviews and continued during the transcription process. Students signed a consent form to be audiotaped (see appendix E)

Second, the protocol followed a script that included introductions, explanation of the purpose for the focus group, five general questions to elicit general responses to enable follow-up with more probing questions, an invitation for participants to summarize their focus group experience, and a conclusion thanking students for their participation (see appendix F). The protocol script for the follow-up focus group interview included four specific questions on cultural identity (see appendix F).

Third, to verify findings and establish the trustworthiness of the focus group data, four member check sessions were conducted with participants. The first two member checks were conducted a week after the focus group interviews with the five welding students and the two allied health students. Member check with the welding students consisted of a transcription of

the audio recording given to the students. Four out of the five students were available for the member check session. The transcription was read out loud by the researcher and members were encouraged to comment on the accuracy of the transcript. The same procedure was followed for the focus group involving the two allied health students. A week later, a third member check session was conducted involving a *writ large* (Creswell, 2013) document of overarching themes and sub-themes. Participants were invited to assess the themes and sub-themes for accuracy and meaning. A final member check was held with two of the welding students who participated in the follow-up interview. These students were given a typed transcription of the follow-up focus group interview along with a listing of overarching themes and sub-themes that emerged from the interview. Again, the students were invited to comment on and assess the accuracy of the interview transcription and the creditability of the themes as reflecting the meaning that emerged from the interview.

An external audit (Creswell, 2013) was employed as a second method to establish trustworthiness in the study. The chair person for South Tech College's program in education and training was asked to review the study's method, qualitative findings and interpretations. He holds a doctorate in curriculum and instruction from the University of Houston.

The researcher and external auditor met four times from June to September. Focus group questions were reviewed for initiating general discussion. Follow-up questions within the transcripts were discussed as they pertained to the purpose of the research question posed in the study. The external auditor critically evaluated the themes and subthemes as proposed by the researcher as emerging from the transcripts of focus group interviews. This process sought to maintain an objective perspective in the qualitative portion of the study and challenged the

researcher to be mindful of interpreter bias in identifying emergent themes and subthemes from the analysis and interpretation of focus group interviews.

Analysis of the categories from the focus groups began with descriptive summaries. These summaries described focus group member characteristics, highlighted the purpose of the focus group questions, briefly discussed the process of interviewing and transcribing data, and identified general themes and subthemes that emerged from analysis of the transcripts.

Themes were coded manually. Themes were identified by comparing and contrasting responses within categories across the two groups. This was achieved through identifying common statements that reflected adherence to the research question. Also, the uniqueness in responses that revealed a specific experience or concept that were germane to the purpose of the research question was included in the data analysis. In the final identification of themes, specific attention was given to assessing them according to frequency, specificity, emotion, and extensiveness (Kruger & Casey, 2009). The final report was written based on the themes and subthemes that emerge from the data analysis.

A final consideration for this section on data analysis procedure is on the analytic framework for data analysis (Kruger & Casey, 2009). The analytic framework that complements the QUAN-qual mixed methods approach described in the proposal is one that Kruger and Casey (2009) identifies as the "constant-comparative" framework (p. 125). This framework is used when the objective of the study is to "identify patterns in the data and discover relationships between ideas or concepts (for theory development)" (p. 125). The framework allows for a comparison analysis of quantitative date from the BISES-MA survey with qualitative data from the focus groups to identify "similarities and differences" (Kruger & Casey, 2009, p.125) that

explain theory of bicultural self-efficacy to support a process of student achievement and persistence for Mexican American students at a two year college.

Chapter Summary

Chapter three presented the essential elements of the study's methodology. The mixed methods approach of a QUAN-qual design was explained. The rationale for using a purposeful sampling technique was discussed. The chapter outlined the statistical applications to be used in the study and listed the four research questions. A strategy and timeline for identifying the study site, selecting the population, gaining access and collecting data was provided. Finally, the use of specific instrumentations for collecting data was identified and the procedures for data analysis were described.

The next chapter presents the quantitative results of the study. These results are discussed in light of the first and second research question, the use of hypothesis testing, and the specific statistical methods used to analysis the data. A summary of the quantitative results is also included in the next chapter.

CHAPTER IV

QUANTITATIVE RESULTS

This chapter addresses the two research questions that focused on the quantitative component of THIS mixed methods study. The two research questions relevant to the quantitative portion of the study are:

1. What is the relationship among bicultural self-efficacy, student achievement, and persistence for Mexican American students attending a two-year college?
2. What is the difference between bicultural self-efficacy of Mexican American students enrolled in an AVID for Higher Education student success course and those who are not enrolled in an AVID for Higher Education student success course?

Specifically, this chapter presents the statistical analyses and findings used to test the null hypothesis of each research question.

Findings Related to Research Question One

The purpose of research question one was to determine if there were significant differences and/or relationships among bicultural self-efficacy, student achievement, and persistence. Research question 1 asked, "What is the relationship among bicultural self-efficacy, student achievement, and persistence for Mexican American students attending a two-year college?" To best address this question, three null hypotheses were tested:

H_0: There is no mean difference in bicultural self-efficacy between Mexican American students attending a two-year college who persisted and Mexican American students attending a two-year college who did not persist.

H_0: There is no relationship between bicultural self-efficacy and student achievement for Mexican American students attending a two-year college.

H_0: There is no mean difference in student achievement between for Mexican American students attending a two-year college who persisted and Mexican American students attending a two-year college who did not persist.

In testing the null hypotheses for the first research question, data from all participants in the study and comparison groups were aggregated (n=132). Bicultural self-efficacy was measured using the 18-item BISES-MA scale generated by a factor analysis of the original 22-item BISES-MA survey. The full sample exhibited a mean of 68.02 (SD=10.51) on the scale which ranged from 18 to 90. Student achievement was measured using students' end of term grade point average (GPA) after the Spring 2013 semester (M=2.60, SD=1.00). Persistence was determined by students' enrollment status for either the Summer 2013 semester or the Fall 2013 semester. Students who persisted were those who either graduated or continued into the summer or fall semesters. Students who did not persist were those not graduating or continuing for either the summer or fall semesters.

To examine whether there is a relationship between bicultural self-efficacy and persistence, a t-test was conducted on the BCSE scale mean for students who persisted and those who did not persist. The sample size was 132 students; however, as a result of the statistical analysis, 6 cases were eliminated because of incomplete responses to some items. The statistical conclusion showed that the researcher failed to reject the null hypothesis. There was no

significant difference in the BCSE scale means of students who persisted (M=68.45, SD=10.56) and students who did not persist (M=67.16, SD=10.60): t(126)=-0.654, p>.05. However, those who persisted exhibited a slightly higher mean than those who did not persist.

Additional t-tests were conducted to determine whether differences in factor / subscale means existed between the students who persisted and those who did not persist. Group means, standards deviations, and t-test results displayed in Table 1 show that no significant differences in factor / subscale means exist between these groups. However, worth noting are the means for subscale / factor 3 which show a difference that is near significant (p<.10). Using Cohen's *d* to determine the magnitude of the effect for factor three (Defend Culture) a small effect size (*d* = .3159) is demonstrated.

Table 2. Comparison of Bicultural Self-Efficacy Factors / Subscale Means for Mexican American Students who Persisted and did not Persist

	Persisted *M* (*SD*)	Did Not Persist *M* (*SD*)	Significant Differences *t* (*p* value)
Mexican Culture	36.80(6.06)	37.35 (6.11)	.495 (p=.62)
White Culture	21.35 (4.50)	21.13 (5.12)	-.252 (p=.80)
Defend Culture	10.10 (2.81)	9.22 (2.82)	-1.724 (p=.09)

To determine whether there is a relationship between bicultural self-efficacy and student achievement, a correlation was run. The statistical conclusion showed that the researcher failed to reject the null hypothesis. No significant relationship was found between these two variables (r=.06, p>.05). Correlation analyses were also conducted between BCSE factor / subscale means and student achievement. Results are displayed in Table 2 and show no significant correlation between BCSE factor / subscale means and student achievement. However, the analyses

highlight that Mexican Culture correlates moderately with White Culture and Defend Culture, and that White Culture correlates with Defend Culture, but not as strongly.

Table 3. Pearson Correlation Matrix for Mexican Culture, White Culture, and Defend Culture

	GPA	Mexican Culture	Anglo Culture	Defend Culture
GPA	-			
Mexican Culture	.031	-		
White Culture	.016	.405*	-	
Defend Culture	.052	.439*	.283*	-

*Significant at the 0.01 level

To examine whether there is a relationship between student achievement and persistence, a t-test was conducted on the mean GPA of students who persisted and those who did not persist. The sample size was 132 students. There was a significant difference in the mean GPA of students who persisted (M=2.83, SD=0.83) and students who did not persist (M=2.17, SD=1.15): $t(85, 47)=-3.476$, $p<.01$. Students who persisted exhibited a significantly higher GPA than students who did not persist. An effect size of .660 was calculated using Cohen's *d* indicating a moderate practical significance (Warner, 2008) of student achievement and persistence. The null hypothesis is rejected for the relationship between student achievement and persistence.

Findings Related to Research Question Two

The purpose of research question 2 was to determine what difference, if any, in bicultural self-efficacy exists between students enrolled in an AVID Higher Education (AHE) structured student success course and students not enrolled in an AVID Higher Education (AHE) structured student success course. Research question 2 states: "What is the difference between bicultural self-efficacy of Mexican American students enrolled in an AHE structured student success

course and those who are not enrolled in an AHE structured student success course?" To address this question, the following null hypothesis was tested:

> H_0 : There is no difference between bicultural self-efficacy of Mexican American students enrolled in an AHE structured student success course and those who are not enrolled in an AHE structured student course.

In testing this null hypothesis, the full sample was separated into two groups, those who were enrolled in an AHE course (the study group, n=60) and those who were not enrolled in an AHE course (the comparison group, n=72). A t-test was conducted to determine whether a difference in BCSE scale means exists between the study group and the comparison group. The sample size was 132 students; however, as a result of the statistical analysis, 6 cases were eliminated because of incomplete responses to some items. No significant difference was found. Students in the study group had a mean of 68.08 (SD=10.08) and students in the comparison group had a mean of 67.97 (SD=10.96): $t(126)=0.060$, $p>.05$. The slight difference of .1132 between the mean scores for the two groups, while not demonstrating significance, points in the direction that the study group has a higher level of bicultural self-efficacy than the comparison group.

Additional t-tests were conducted to determine whether differences in the subscale means existed between the study and comparison groups. Group means, standards deviations, and t-test results displayed in Table 3 shows that no differences exist between these groups. The statistical conclusion was to fail to reject the null hypothesis in determining a difference between the study group and comparison group subscale means.

Table 4. Comparison of Bicultural Self-Efficacy Factors / Subscale Means for Mexican American Students Enrolled (Study Group) and Not Enrolled (Comparison Group) in an AHE Structured Student Success Course

	Study Group *M* (*SD*)	Comparison Group *M* (*SD*)	Significant Differences *t* (*p* value)
Mexican Culture	37.00 (5.68)	37.01 (6.37)	-.013 (p=.99)
White Culture	21.43 (4.38)	21.13 (4.98)	-.368 (p=.71)
Defend Culture	9.65 (2.74)	9.93 (2.91)	-.563 (p=.58)

Other Findings

A related view would hold that the student success course is an intervention that has an effect on student persistence. To demonstrate this, an odds ratio (Warner, 2008) is presented. Students enrolled in a student success course are nearly 4 times more likely to persist than students not enrolled in a student success course.

Table 5: Odds ratio and GPA

	Persisted GPA M (SD)	Did not Persisted GPA M (SD)
Study Group	48	12
	2.98 (0.65)	2.01 (0.91)
Comparison Group	37	35
	2.64 (1.00)	2.22 (1.23)

Chapter Summary

The statistical procedures used to analyze research questions one and two were a t-test for independent samples, Pearson's correlation, and an odds ratio. While findings from the t-test for research question one did not demonstrate a significant difference among the variables, the difference between the means indicated higher bicultural self-efficacy for students who persisted in college. Students who persisted also had a higher mean GPA than those who did not persist. No significant relationship existed between bicultural self-efficacy and student achievement. Also, there was no significant difference in persistence when measured on the factors comprising the bicultural self-efficacy measure. Finally, there was no relationship between student achievement and the factors of bicultural self-efficacy.

The odds ratio result did show that the effect of enrolling in a student success course increased the probability of student persistence. This result is further explored in the qualitative section of the study.

Findings for research question two also showed that there was no significant difference between the study group and comparison group for bicultural self-efficacy; however, the slight difference in means between the two groups allows for considering that the study group, with higher bicultural self-efficacy, may influence persistence and student achievement. This suggestion is investigated in the qualitative section of the study. Finally, there was no significant difference identified between the two groups on the factors for bicultural self-efficacy.

The next chapter presents the results of the qualitative portion of the study. General themes and sub-themes are discussed as they emerged from focus group interviews. These themes are relevant to the understanding of research question three.

CHAPTER V

QUALITATIVE FINDINGS

This chapter addresses the third research question: How does participation in an AVID Higher Education (AHE) structured student success course promote bicultural self-efficacy for Mexican American student achievement and persistence at a two year college? Focus group interviews were conducted in the spring and summer of 2013 with students who were in enrolled in AVID for Higher Education structured student success course. Five welding students made up one focus group and two students in the allied health professions participated in the second focus group. The students in the second focus group belonged to the College Assistance Migrant Program (CAMP) and enrolled in dental hygiene and medical assistant degree programs. The focus groups were audio recorded and conducted on the South Texas Tech campus. The welding focus group was conducted in a classroom and the allied health focus group was held in the CAMP counselor's office. Major themes emerging from the group interviews included college success, struggles/challenges, and cultural/social capital.

College Success

The overarching college success theme included sub-themes of confidence, career goals, college completion, and college support programs. College success themes underscored the importance of providing an institutional framework to assist first generation Mexican American students with a means to transition into college life. This framework was the AVID Higher Education structured student success course. Students referred to the course as helping them with

“a lot of tricks to be able to do on the computer” (Freddy, welding student). It introduced them to “note-taking, reading and writing skills” (Juan, welding student). One student agreed that there “was a lot of critical thinking in that class” (Eric, welding student).

A majority of students participating in the group interviews were adult learners. They entered college after extensive experience in the workforce. For them, AHE the college success course was particularly important for helping them reflect on career goals.

> For myself, it helped me kind of basically think through short term goals and major goals and now I have like an idea. I knew I was going to come and weld, get a certificate and go out there and weld. But I did not actually think ahead. You know the future, in terms of what I could do. It (the course) helped me. (Juan, welding student)

The course also had an influence on building confidence for success in other courses. For example, one student was struggling in a speech class. He commented that the student success course helped him with his speech class. “It helped me to know how to take down notes and type assignments in Microsoft word” (Will, welding student). Another student observed that the critical thinking skills he learned in the student success course applied to his course on blue print reading. He said that the critical think applications were helpful in reading the prints, blueprints, and interpreting them. “We had to memorize symbols. Know their meaning on blueprints. Taking notes on the symbols helped me to memorize them and know their meaning” (Eric, welding student).

The theme of college success connected career goals with college completion. It was generally agreed that confidence increased as a result of completing their program. For example, welding students commonly shared the belief that graduating from their welding program gave them an advantage over welders who only had experience in the field. The educational benefit of

the student success course and working towards the goal of completing their program supported a belief that "confidence increases." This sentiment was summed up in this student comment:

> Most welders are a lot older. They are not straight out of school. You know they are usually in their forties. So it would be difficult to communicate other welding interests. Even my friends, they might know welding, but they go by past experiences because they have done it before. But when they run into a problem they have to go ask for help. I don't think they would make it in manufacturing. They basically know what to do if you tell them to do a ¾ arc weld, but if you actually give them a print, they would be lost. They might not have that confidence with them, but with their experience they might have it, but not a 100 percent. (Eric, welding student)

The college success theme was supported by statements that demonstrated relevancy to college completion and the attainment of a college credential. There was a sense conveyed by participants that the attainment of a college credential opened doors that would otherwise remain closed. Experience was not enough. A college education added value to experience. Juan, welding student, commented that by completing college "You have somewhere to go." Another student observed that graduating was a personal accomplishment: "I am going to have the same experience I received from welding at STT, but it means a lot more to me to have that accomplishment of a diploma" (Freddy, welding student).

A common view presented by several group participants on the advantage of completing college was reflected in this comment made by a medical assisting student: "When you have a degree you have more chances, more opportunities. If you don't have a degree you struggle to find a job . . ." (Cassie, medical assistant student). Attaining a college degree is a measure of future economic possibilities. Cassie added "we sure wouldn't have a degree if we didn't go to

college." She followed this statement up with the assertion that having a degree on a resume looks better than saying "I flipped burgers."

Several comments equated the acquisition of a college degree with enhanced self-esteem. For example, a college diploma makes "you feel better about yourself" (Leo, dental hygiene student). One student remarked that pursuing a college degree means "you are really going for it because you have to study for what you really are into and what you see yourself doing in the future. This accomplishment tells me I didn't give up" (Juan, welding student).

The college success theme was also reflected in student comments concerning the value in accessing college support programs. Three of these programs were of particular assistance. They were mentoring, tutoring and the College Assistance Migrant Program (CAMP).

Two students interviewed for this study were CAMP students. Their college success experience demonstrated the importance of connecting their CAMP participation with tutoring and mentoring interventions. As one student said:

> Like if you are not passing the class you could ask for help. If I was having trouble with a class my CAMP counselor would refer me to a mentor or tutoring. They always gave you something to help us." (Cassie, medical assistant student)

Another illustration of this connection is shown in a student's relationship with CAMP prior to becoming a CAMP participant. She commented that:

> I took college algebra and I would go to the library for tutoring because with the professor I would not understand it. So that helped me a lot. I got referred by Janet (CAMP counselor) so that helped me because even though I was not in the CAMP program they still referred me. (Cassie, medical assistant student)

CAMP played a significant role in supporting student success for students participating in CAMP and those who had established an unofficial relationship with CAMP. As the previous student commented:

> Like I said I was not into the program, but that did not mean I couldn't come over and ask for help. Like in my first semester, they would help me out with a book . . . If I needed tutoring they referred me to where to go and get tutoring. I would tell them that I was struggling and stuff and they would ask me how I was doing and I would tell them, even though I was not in the program they would still help me. And I really liked that. And now that I am in the program, they have mentors and stuff like that. They catch up with you, like asking 'how are your classes going?' 'Do you need any help?' Even themselves, they help you if they can. (Cassie, medical assistant student)

The student success theme emerged from the group interviews in several ways. It took the form of an institutional college success course structured according to AVID learning strategies. The student success theme was articulated as a goal toward achieving a college credential. Finally, this theme surfaced as an outcome for student participation in broader student retention programs such as CAMP, tutoring, and mentoring.

Struggles and Challenges

Participation in the AHE student success course provided students the opportunity to develop strategies and goals in the form of student success plans. These plans helped students to address the struggles and challenges they met as they adjusted to college life. The sub-themes that constituted the overall struggles and challenges were difficulties in academic courses, negative cultural expectations to complete college, and accessing and maintaining financial resources.

Challenges and struggles were faced in academic courses. For example, Will, a welding student, struggled with a speech course:

> Well, for instance, for me [I am] taking a speech class. I am 41 year old. I graduated in 1989 and I have been out of school for a long time. For myself, that class is kind of hard for me. I don't know if I am going to pass it this year or not. But, I asked if there is a tutoring class for this class but apparently there is not. It is hard.

A common sentiment of the welding program students was justifying the need to take a speech course. How does it help with welding? As one student put it:

> It is a communication class, but for most of us when we leave here we are going to weld. We are going to go underneath the hood . . . I think the speech class in important but not so much for welding students. (Ruben, welding student)

Math is a common gatekeeper course and, as can be expected, this course presented academic struggles for students in the interview groups, especially as these students were adjusting to college life. For example, Cassie said:

> Well, like this was my first year. I was kind of nervous but uh but I managed to get through my classes. They were not that hard I just struggled with college algebra. I really liked my first year. It was really just my basics. So my first semester was really easy. I took basics for medical assistant . . . I took all the basics like A&P you know. I am not really good at that but I still wanted to try for it. I think my hardest was math though. I managed to pass AP but math I wasn't really good at. I wasn't really happy with my grade. I passed it but . . . it was college algebra, yes. (Cassie, medical assistant student)

Cultural struggles and challenges confronted the participants. For example, one student remarked that "my dad is really proud of me but I still get negative things like I am not going to

finish. But I know I can do it" (Cassie, medical assistant student). For several students, the negative expectation is a challenge to succeed. One female student addressed this by saying:

> Yeah, even though they give you negative feedback like 'you are not going to make it' that pushes you more and you prove them wrong. Whether it is negative or positive that motivates you to prove them wrong or to show them that you can do it. (Cassie, medical assistant student)

A welding student shared the experience from family members that they were surprised that he was still in school. He quoted them as saying, "You are still in school?" He commented saying, "I guess they expected that I would not finish by staying in school. It kind of built my self-esteem up" (Juan, welding student).

A final struggle and challenge that surfaced was finding and maintaining financial resources to continue in college. Group comments on this concern reflected a perceived difference between older and younger students. The welding students who participated in the group interview were non-traditional aged students. All had work experience and were entering college from the workforce. They had no previous college experience. The fact that these students were older and had previous work experience made dealing with financial challenges a no nonsense priority. One older student commented that "We take our education seriously compared to those out of high school" (Eric, welding student). Several had the sense that they could not waste financial resources because they had a responsibility to family and themselves to finish their program and start a career. As one student asserted:

> We don't get much financial aid to help and they (younger students) get all kinds of help. We are over here trying to struggle to get our classes paid while they get all of their semesters paid, and they don't even like taking advantages of all the opportunities. We

> already know who takes it seriously and who doesn't. The majority of those who take it seriously are the older ones because they have children and a family. (Rudy, welding student)

One participant commented that younger students do not have a sense of financial responsibility. They do not see the big picture that allows one to see the connection between school, career and the availability of financial aid to make that connection a reality upon graduation. As this same student said, "You are training in your studies for a job, and that is why you are more responsible" (Freddy, welding student). Several lamented that while they struggled to find financial resources to continue in school, younger students:

> Don't want to work on weekends. They don't want to work nights or overtime . . . They don't even bring supplies to school and they get financial aid. They don't have any bills and that is why they can't take anything serious. (Ruben, welding student)

A strong sense of determination characterized their commitment to finish strong in spite of financial struggles. One student put it this way, "If you set goals in life, then it is just like that. You have to reach your goals. If you want something you have to go and get it" (Juan, welding student).

Struggles and challenges surfaced from the interviews as predominately academic, cultural, and financial examples of student adjustment to college. Participants commented that the student success course provided them a structure to think through these obstacles and ascertain strategies to connect their goals to college success. As one student put it, the course "helped you lay out a plan to better yourself" (Eric, welding student).

Cultural/Social Capital

The AVID for Higher Education structured student success course provided participants with structured interactions with AVID for Higher Education trained instructors who facilitated practical considerations for utilizing educational, career, and personal enrichment resources. These interactions precipitated classroom activities and discussions on recognizing and employing networks and knowledge and skill sets for student success. Moll, Amanti, and Gonzalez (1992) referred to these abilities as “funds of knowledge.” They are made-up of cultural and social experiences that build capital to support educational success. The sub-themes that comprised the cultural and social capital theme were socioeconomic influences, social networks, family, values, larger cultural issues, cultural conflict, and diversity.

An example of social capital that one student found helpful was the connection between career, salary, and budget implications. The topic of money management helped participants to practically think through “what life would be like with bills and stuff” (Rudy, welding student). Other students created power points that investigated career options that linked them to salaries. Students then created a budget that reflected “a realistic view of what to expect for taking care of a family” (Will, welding student).

Students reported an increase in social prestige as a result of internalizing career knowledge and skills. For example, a student in an allied health program told of an experience of correcting a nurse who used the same needle twice to draw blood. She reflected that “Honestly, if I did not chose this field I probably would not have complained. Now I know what you are supposed to do. I tell them my opinions. They get upset” (Cassie, medical assistant student).

One welding student saw the value of making adjustments to his work schedule that placed a higher social and economic value on attending classes rather than choosing work over school. He said:

> I worked for security for the government at night. I had to change my entire schedule to night time so I could come to class here during the day. Sometimes I work 12 hour shifts and then I would have to come over here. Not that I have to, I want to. (Rudy, welding student)

The social and economic value of attending college was underscored in one student's comment concerning the absence of a personal sense of achievement that comes with being recognized for your work. Eric, a welding student, came to college to better himself. At his previous job there was a lead man who, in his words "kept me at the bottom. He would always have me do the difficult projects. I would get them done and he would get the credit. So he just kept me down and, I thought, I got to go."

Another indication of the importance of building social networks and the value in obtaining career knowledge and skills was reflected in the enthusiasm that students had for their program of study. Cassie, a medical assistant student, said, "now that I am in the program I like it. Well, no I love it . . . It is really interesting." Several welding students shared a similar attitude when they spoke about their "determination" to complete the program because they enjoy the learning that will give them "an advantage in the field."

The success of social networks in building capital and resources for success was tied to the support individuals received through group participation. A strong example was demonstrated through student participation in the CAMP program. Leo, a dental hygiene student,

remarked that CAMP counselors wanted “to help us more by putting CAMP students in the same basic education classes”. Participants felt that:

> If you had a question or something you can ask for the person’s number, and since you already knew them because they are from CAMP you just talk to them and say ‘let’s study’ or ‘let’s do this. That is why I like the CAMP counselors. They would put you in classes where there are already people in CAMP. (Cassie, medical assistant student)

The welding students also affirmed the value of their group cohesiveness. Juan stated “Our circle of peers is important.” Another said that from all the sections of students in the program “we are the closest” (Will, welding student). Their common bond was starting the program together. Juan added:

> We started the program at the same time. Most of us are completing a certificate in welding. We work with each other. We ask for each other’s opinion, like how did you run a certain process? What temperature did you use? Things like that. We communicate a lot with each other. We rely on each other.

In addition to the social networks, knowledge and skills that form the foundation for social capital, cultural capital, created from the influences of family, language, values and traditions, impose meaning on the importance of college success. The AHE student success course, through the Noel-Levitz College Student Inventory (2013) teacher-student interview, as well as reflective critical thinking assignments, provided a structure for students to share how culture plays a role in their achievement and persistence.

When asked about the role family plays in achieving educational and career goals, one student said “it has a big influence. They help me out. They go above and beyond. I am always thinking about my family, my kids; they are always there to back me up” (Freddy, welding

student). Another student received encouragement from his family, “Their support gives me a good attitude. They have a positive attitude about my going to school” (Eric, welding student).

However, some family members expressed doubt as to whether or not one participant was going to complete college. This critical attitude served an encouraging purpose. As Juan expressed it:

> I get reactions from family members and friends. They are surprised that I am still in school. They say ‘Are you still in school?’ I guess they expected that I would not finish and stay in school. It kind of built ups myself –esteem. (Juan, welding student)

An example of the type of encouragement that participants receive from their family was expressed by one student who said “Actually, I made a promise to my girls. I actually made a promise to them that I would give them an associate’s (degree). That is what is pushing me forward to finish” (Eric, welding student). One student, who spent some time in prison, spoke about the importance of setting a good example for his nieces and nephews, an example that showed getting into college can turn your life around. His anticipated graduation was also meant to send a message to his family members that “you got to look forward and not do those same things I did when I was younger” (Will, welding student).

Reciprocity was another value expressed by several participants. Family members demonstrated support by giving time, money, and taking on additional responsibilities so that their husbands, boyfriends, and sons could attend college and finish. One student commented, “See another thing is that I put my wife through school and now she is putting me through school and then once I’m done she is going to go back” (Will, welding student).

An expectation that a first generation son or daughter could graduate from college reflects a profound sense of family honor in that person completing college. As one participant

indicated, going to college was required. “I am the first one to go to college and my parents tell me that I have to go to college to be a better person and have better opportunities” (Leo, dental hygiene student). In a vicarious way the completion of a college degree is not only an individual achievement but also one for the family, especially the parents. As Cassie observed:

> Well none of my family went to college at all. Being a migrant worker I did not see myself doing that my whole life. With all due respect to my dad, he told me a long time ago that ‘you don’t want to be struggling like me. It is really, really hard.’ He would always inspire me . . . Even though I became pregnant; he would tell me ‘You need to go to college. I don’t want you to end up like me.’ He is really, really supportive. (Cassie, medical assistant student)

The AHE structured student success course was perceived by some participants as a means to connect with larger cultural issues. For example, Cassie talked about the connection she made between her own pursuit of a degree and the small percent of Hispanic women who do not complete college. For her, the course “opened her thoughts” to decide that she would not be in the percent of Hispanic women who did not complete a degree; rather, she expressed determination to achieve her degree. Her determination was fueled by a concern for the future, a motivating factor that kept her eyes focused on the prize of receiving a diploma. When asked what she believed the future would hold for her she said, “A better living and not struggling . . . not to depend on others or ask for money.” For many of the group participants pursuing educational and career goals, the purpose of imaging a future characterized by independence was dedicated to the betterment of their children. An intergenerational perspective emerged as participants viewed their commitment to success as the bridge between previous generations of economic disadvantage and future generations of economic advantage. One student put it

plainly: "My parents could not give me stuff like they wanted to give me. And I want to have a better future to give my sons because my parents could not provide for me" (Leo, dental hygiene student).

The student success course promoted critical thinking. A course topic applicable to critical thinking knowledge and skills was diversity. The cultural concerns highlighted the awareness of Mexican identity in American society, which surfaced a lot of conflict. Students experienced these bicultural conflicts within families. For example, one student talked about the times when he had to "stick up for his culture" whenever he visited his in-laws and friends of his wife:

> We had gatherings and stuff; this is up in California, and you kind of feel out of place. I mean like it's not that they were racists or anything, well, yeah I guess they were a little bit. There were a couple of times where I spoke up. I had an attitude back then. I didn't come right at them. I did not want to get into fights, but I did confront them. I mean the names. They would call you 'wetback' because you were Mexican, 'wetback' 'taco-eater and stuff like that. (Will, welding student)

Schools presented adjustment problems as well. This was evident in one student's case who was a migrant and traveled up north. He attended different schools. It was often that he was one of a handful of Mexican students attending public schools. "They would call us 'wetback.' They would tell us to go back to Mexico. We would just cuss them out and that made things worse" (Eric, welding student). One student who lived in Florida before coming to Texas spoke of his experience of not belonging. He said, "They would just try to look down at you. You could tell even if you confronted them. You could just tell. They would look at you like you did not belong there" (Freddy, welding student).

One student spoke about the value of integrating culture meanings as a way of celebrating diversity. He said:

> I think it is important to share with other people your culture and explain to them why we do things a certain way or why we do things differently. With that you can be more understanding with each other instead of looking down at each other. (Juan, welding student)

In response to this comment, another student reflected out loud that he should take the time to share his culture with his children. Will responded:

> I have two daughters with my first wife. She is white. My oldest daughter claims she is Mexican and my second daughter claims she is White. With my second wife, who is Syrian, I have a daughter who claims she is Syrian, not Mexican. I should sit down and talk to them about my culture, but I haven't and I should. I mean . . . I guess it is important. (Will, welding student)

Participant testimonies on cultural influence affecting student persistence and achievement included family expectations, conflicts, integrating the larger societal experience with the more personal and cultural story, and the value of diversity. These elements constructed a reality that bridged Mexican culture and American society.

Chapter Summary

Student statements from the group interviews characterized the AVID for Higher Education structured student success course as having a critical influence on their success in college. The course was an instructional avenue that provided direction to participants in developing and applying learning strategies. The course was a reflective opportunity for students to connect academic success with short and long term goal formulation and achievement. The

course linked students to resources for success. Essentially the course played a determining role in building confidence and the efficacy needed to achieve success.

Students shared the struggles and challenges they faced as first generation non-traditional students. While they confronted the educational, cultural, and financial verisimilitude of college life, they did so learning the strategies to navigate through the difficulties.

The evidence for social and cultural capital was demonstrated in the experiences that recognize the importance of social networks, cultural influences, and the knowledge and skills acquired through the AVID for Higher Education student success course. Participant understanding of the value of these elements for student achievement and persistence suggests that bicultural self-efficacy, "the belief, or confidence that one can live effectively, and in a satisfying manner, within two groups without compromising one's sense of cultural identity" (Lafromboise, Coleman, & Gerton, 1993, p. 404), is a critical quality in determining success.

The next chapter is the concluding chapter of the research. It will present a summary of the study. It will include conclusions based on the research findings, implications for policy and recommendations for further research.

CHAPTER VI

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this mixed methods study was to explore the relationship between bicultural self-efficacy and student achievement and persistence Mexican American first generation college students attending a two-year college. This study also sought to explore differences between students enrolled in an AVID for Higher Education (AHE) structured student success course and students not enrolled in AVID for Higher Education student success course. The study addressed three research questions.

1. What is the relationship among bicultural self-efficacy, student achievement, and persistence for Mexican American students attending a two-year college?
2. What is the difference between bicultural self-efficacy of Mexican American students enrolled in an AVID for Higher Education (AHE) structured student success course and students not enrolled in an AVID for Higher Education (AHE) structured student success course?
3. How does participation in an AVID for Higher Education (AHE) structured student success course promote an understanding of bicultural self-efficacy for Mexican American student achievement and persistence at a two year college?

Summary

As demonstrated in previous studies (Fry, 2011; Santiago, 2012; Santiago & Callan, 2010), Hispanic college completion rates were low when compared to other ethnic groups.

Earlier studies (Allen, 1999), along with relatively recent ones (Gandara & Contrera, 2009; Hernandez & Lopez, 2004; Sanchez, 2011) identified precollege factors and cultural influences that shaped the college going behavior and determined the extent of success for Hispanic students. The factors and influences that direct the college going behavior and success of Hispanic students, in particular Mexican American students, revealed the extent to which these students have the efficacy to achieve a college credential. This current study advocates that self-efficacy, especially bicultural self-efficacy, warrants consideration as a factor contributing to college completion for Mexican American students.

Studies on self-efficacy and college performance (Choi, 2005; Devonport & Lane, 2006; Dewitz, Woolsey & Walsh, 2009; Hsieh, Sullivan & Guerra, 2007) reflected a variety of views that connected self-efficacy to college success that ranged from academic outcomes to the primacy of integrating purpose of life issues with career and educational choices. Bandura's (1997) efficacy formulation fueled research on student success not only to address the academic motivation for achievement in college but also the emotional and physiological components discussed in studies dealing with stress (Zajacova, Lynch & Espenshade, 2005).

The initial research on bicultural self-efficacy reviewed in this study discussed an early theoretical construct of bicultural socialization (De Anda, 1984; Galan, 1992). This presentation set the cultural context for understanding how cultural systems, such as family, language, and peers shape efficacious beliefs that relate to education, career, and developmental outcomes. The institutional arrangements that foster interaction between dominate and subordinate groups, a socialization process that is referred to as primary and secondary socialization (Galan, 1992), is key to understanding the concept of bicultural self-efficacy as the "belief or confidence, that one

can live effectively, and in a satisfying manner, within two groups without compromising one's sense of cultural identity" (Lafromboise, Coleman & Gerton, 1993, p. 404).

Two studies (Gross, 2004; Lucer-Miller, 1999) in particular were noted for their attempts at addressing elements of bicultural self-efficacy and college completion for Mexican American students. Gross (2004) argued for the importance of intersecting collective cultural efficacy with personal achievement of educational and career goals. This intersection invites students to reflect on the inherent cultural and social meaning that joins collective efficacy with individual determination. Lucer-Miller (1999) demonstrated that high levels of acculturation, especially favoring secondary dominate group affiliation over primary cultural systems like family and language, leads to an absence of bicultural identity.

Programs intended to create a student success infrastructure are important initiatives for transitioning students from high school to college. These programs are examples of building confidence and affirming talents in students newly engaged in the college experience. One example of a successful program that directs minority students toward college success is Advancement Via Individual Achievement (AVID). As reviewed earlier, the existing research on AVID's success is primarily focused on preparing high school students for a college experience (Lozano, Watt & Huerta, 2009; Mendiola, Watt & Huerta, 2011; Watt, Huerta & Alkan, 2011; Watt, Powell & Mendiola, 2004). Recently, AVID has developed initiatives at the post-secondary level (http://www.avid.org/hed_studentsuccess.html), and recent research has attempted to study the "AVID Effect" on college students participating in AVID program activities (Mehan, Villanueva, Hubbard & Lintz, 1996; Watt, Butcher & Ramirez, 2011).

The methodology employed in this study was a QUAN-Qual mixed methods approach. As an exploratory project, this study used a moderate sized sample to examine the relationship

among the variables of bicultural self-efficacy, student achievement, and persistence. Group differences were also explored between students enrolled in an AVID for Higher Education structured student success course and students not enrolled in such a course.

The quantitative data collection component of the study utilized the *Bicultural Self Efficacy Scale Minority Version for Adults* (BISES-MA) developed by Soriano and Bandura (2005). A factor analysis was run on the original BISES-MA 22-item scale with a principle component analysis yielding 5 components of the survey. Four items were eliminated that did not meet the threshold of .45 to be considered as loading significantly on a given factor. As a result, the scale was reduced to 18-item consisting of three subscales, *Mexican cultural identity, White cultural identity, and defending* culture. The subscales were generated by items having a .45 score; and, therefore considered to load significantly on one of the three subscales of the factor analysis.

To select a study group and a comparison group population, a survey was developed that asked students to identify if they were Mexican American first generation college students. A purposeful sampling approach was used to administer the survey in AVID for Higher Education structured student success courses and in general education courses not using AVID for Higher Education strategies. Quantitative data were analyzed for determining relationships among the variables: bicultural self-efficacy, student achievement, and student persistence. Analysis of the data also sought to identify differences between the study group and comparison group on the bicultural self-efficacy scale.

Focus group interviews were used to collect qualitative data for the study. The focus groups consisted of volunteer students enrolled in an AVID for Higher Education structured student success course. The focus groups met three times during the spring and summer of 2013.

Data analysis followed a protocol that listed themes and subthemes emerging from the focus group interactions. Trustworthiness of the data was determined using member check and external audit techniques (Creswell, 2013).

The conclusion section to this chapter discusses interpretations of the findings from the quantitative and qualitative data collected in the study. While the quantitative results reflect possible relationships among the variables bicultural self-efficacy, student persistence, and student achievement, and differences between the study and comparison groups, the qualitative information provides criteria to formulate the basis for grounding a theory of bicultural self-efficacy to understand Mexican American student achievement and persistence. Using the self-efficacy framework set out by Bandura (1997), this exploratory study draws conclusions that bear support for uncovering cultural factors bridging distinct world views for college success.

Conclusions for Quantitative Analysis

Findings for research question one did not demonstrate a significant difference between bicultural self-efficacy and persistence. However, there was a slightly higher mean for students who persisted than those who did not persist. While significance cannot be proven at the set alpha level .05 for the difference between bicultural self-efficacy and persistence, the difference in means may suggest that bicultural self-efficacy has an influence on student persistence. It raises a question for further study.

The means for the BISES-MA subscales, *Mexican cultural identity, White cultural identity, and defending culture*, were compared to the means of students who persisted and those who did not persist. Again, no significant difference was established between the groups at the .05 level of significance; however, results show that a significant difference is evident at the higher alpha level of .10 on the defend culture subscale of the BISES-MA survey. It appears that

standing up for cultural values is related to student persistence. The subscale does differentiate between Mexican and White culture. Perhaps adherence to cultural values is a criterion for student persistence. This assumption would support the concept of bicultural self-efficacy as a predictor for college persistence toward completion; though, not found in this study, further research is needed to explore this assumption more completely.

Research question one also examined the relationship between bicultural self-efficacy subscales and student achievement. While no significant relationship was evident at the .05 level of significance, the three subscales, Mexican cultural identity, White cultural identity, and defending culture, showed varying degrees of significance. It is interesting to theorize that for Mexican American bicultural self-efficacy, Mexican American students perceive Mexican cultural identity as a greater value to assert when choosing to defend between Mexican and White cultural identity. The relationship among the three subscales indicates that Mexican American students find it less important to "stick-up" (BISES-MA, 2005) for White culture than for Mexican culture. While these students straddle two cultures, they lean more toward the values that constitute their Mexican cultural identity than their White identity. For these Mexican American students, this may suggest that there is a greater threat to the strength of the efficacy associated with defending Mexican cultural values than with the efficacy that comes with defending White cultural values.

Findings for research question one established a significant difference between students who persisted and students who did not persist when measuring persistence with term grade point average. Students who persisted had a higher term grade point average when compared to student who did not persist. This finding is consistent with studies that examined grade point

average as a predictor for student persistence toward college completion (Allen, 1999; Wang, 2009).

Research question two sought to determine if a difference in bicultural self-efficacy existed between students enrolled in an AVID for Higher Education (AHE) structured student success course and students not enrolled in an AVID for Higher Education (AHE) structured student success course. While the findings did not demonstrate a significant difference between the two groups on the bicultural self-efficacy scale, there was a slight difference in the mean for the students enrolled in the AHE structured student success course and the mean for those not in an AHE structured student success course. Students enrolled in an AHE structured student success course had a higher mean score on the BISES-MA survey than students not enrolled in an AHE structured student success course. This may suggest that because Mexican American students enrolled in an AVID structured student success they developed higher levels of bicultural self-efficacy than did students in a non-AVID structure course. This does not necessarily mean that enrolling in such a course contributes to higher levels of bicultural self-efficacy. However when comparing the two groups using an odds ratio calculation, students in the AVID for Higher Education structured student success course were 4 times more likely to persist than students not enrolled in such a course. These findings, while not significant, raise questions as to the implications of exposure to AVID structured courses for student persistence and bicultural self-efficacy.

The general conclusions that arise from the data analysis germane to research questions one and two are the following:

- While no significant difference exists among the variables bicultural self-efficacy, student achievement and student persistence, there is evidence that bicultural self-efficacy plays a role in Mexican American student persistence in college.
- The chances for Mexican American students persisting in college toward graduation are greater when enrolled in an AVID for Higher Education structured student success course.
- This study supports the consistent findings present in other research that grade point average is a significant predictor of student persistence.
- Mexican cultural identity has a higher value for maintaining and strengthening self-efficacy than White cultural identity.

Conclusions for Qualitative Analysis

The qualitative analysis of data from focus group interviews provides a starting point to ground a theory that relates participation in an AVID for Higher Education structured student success course with bicultural self-efficacy, student achievement, and student persistence. Research question three explored the possible connection among these areas of inquiry: How does participation in an AVID Higher Education structured student success course promote bicultural self-efficacy for Mexican American student achievement and persistence at a two year college?

A theory that grounds bicultural self-efficacy with student achievement and persistence emerged from student focus group interviews suggesting the formation of networks for success. From the student focus groups, two broad components surfaced to describe the content of these networks. They were educational resources and benefits, and social/cultural relationships.

Laura Cortez (2011) studied the campus climate at the University of Texas Pan American. Her study investigated student and faculty perceptions of how a Hispanic Serving Institution "promoted degree completion of first generation students" (p. 24). Specifically, she was interested in uncovering the experiences that first generation students perceive as "influential in completing a degree" (p. 25), and the institutional characteristics that allow "first-generation, Mexican American students to persist" (p. 25). As part of her theoretical framework, Cortez (2011) included the concept, "funds of knowledge" as set forth by Moll, Amanti, and Gonzalez (1992) in their study on Mexican American families. The funds of knowledge construct advances the idea that from cultural experiences such as family, Mexican American individuals "develop rich funds of knowledge that provide information about practices and resources" that can be transferred from the family to other contexts as useful in ensuring one's well-being (Cortez, 2001, p. 62).

Cortez (2011) argued that family cultural experience generated funds of knowledge that transfer to higher education influencing Mexican American student completion. This transfer of knowledge from home to school should be most evident at postsecondary colleges and universities designated as Hispanic Serving Institutions. Ricardo Stanton-Salazar and Stanford Dornbusch (1995) described the need for promoting additional institutional agents other than family to influence persistence until college completion. Salazar-Stanton (2000) argued that minority students were often excluded from network structures that provided benefits and resources. He posited that the creation of student-agent networks form strategic educational experiences that empower minority students to succeed in college (Salazar-Stanton, 2000). Cortez's (2011) and Salazar-Stanton (1995, 2000) would agree that colleges and universities designated as Hispanic Serving Institutions should shape the strategic educational experience of

students that connect them to cultural funds of knowledge and learning networks, which provide benefits and resources essential to Mexican American college student completion.

The definition for bicultural self-efficacy used in this study is taken from the research of Lafromboise, Coleman, & Gerton (1993). They defined bicultural self-efficacy as the "belief, or confidence that one can live effectively, and in a satisfying manner, within two groups without compromising one's sense of cultural identity" (p. 404). Lincoln and Guba (1985), cite Paul Diesing's "patterns of discovery" (p. 205) as an articulation of grounded theory. Diesing (1972, as cited in Lincoln and Guba, 1985) proposed that data yielding patterns of meaning establish a model for explanation and description of phenomena. Applying Diesing's approach of grounded theory development to the major themes and subthemes that surfaced in the qualitative analysis of this study, a useful pattern of bicultural characteristics is revealed that exemplify Lafromboise, Coleman, and Gerton's (1993) theory of bicultural self-efficacy.

The construction of a theory on networks for success aligned with the mission of Hispanic Serving Institutions to increase Mexican American college student completion supports Bandura's (1997) general self-efficacy theory, especially with regards to acquisition of information, the self-assessment of previous experience, and the comparison of one's capabilities with others. As described in the emerging theory, networks for success, these sources of self-efficacy underlie the attainment of educational resources and benefits related to efficacious thinking and behavior for Mexican American students seeking completion of a college credential.

These determinants of efficacy were the topic of a study conducted by Sandra Ochoa (2011). She investigated sources of efficacy for Latino high school students. She examined, through a mixed methods study, how degrees of efficacy influenced "the college going

aspirations of Latino students in high school" (p. 14). She found that knowledge gained through information about college, which included "options after high school, which colleges to attend, and visiting colleges" (p. 81) were positively correlated with "students' belief about being able to attend college" (p. 81). Assessing student ability to succeed in college by comparing measures of capability, such as grade point average and having family members attend college, were also positively correlated to high school student efficacy for college success. When Latino high school students contemplated their college going opportunities, they relied on the resources and benefits of their educational experience as sources for their beliefs in attending and succeeding in college.

South Tech College is a Hispanic Serving Institution (HSI), with 88% of the student enrollment identified as Hispanic. The assertion made in this study, and supported by Cortez's (2011) and Salazar-Stanton (1995, 2000), that such a designation places a unique responsibility on HSIs to provide networks for success to facilitate Hispanic college student completion applies to South Tech College.

As discussed above, one component that grounds a theory for positing networks for success is the existence of educational resources and benefits that promote and sustain a commitment for college completion. The AVID for Higher Education structured student success course is the pivotal institutional expression of these resources and benefits. This course aids in the development and support of bicultural self-efficacy by allowing first generation Mexican American students to build confidence through establishing short and long-term educational and career goals, acquiring new technology knowledge and skills, and valuing the achievement of a college credential. The recognition that being Mexican and achieving a college credential that is valued in two cultural worlds was perceived by students to be not only personally meaningful but

meaningful for the community as well. Personal self-efficacy contributed to the group's collective self-efficacy (Bandura, 1999).

Networks for success were also essential in helping students overcome struggles and challenges with difficulties in academic courses, maintaining financial resources, and confronting negative messages from others not to complete college. These networks were visible in cohort interactions as students supported one another from semester to semester. Educational resources and benefits such as a tutoring and mentoring assisted students to overcome academic difficulties. The AVID for Higher Education structured student success course included a financial aid literacy curriculum to help students reduce the stress of financial uncertainty. The AVID for Higher Education structured student success course also provided resources for students to address the negative messages dissuading them from completing college. These resources included counseling, student life, and support services.

The second component of the network for success theory is the social/cultural relationships that provide capital for attaining a college credential. Social capital reflects dominate structures in society that students identified as the connection between career, salary and budget-making. The AVID for Higher Education structured student success course permitted students to explore career implications for financial security and standard of living goals. Career and financial planning activities in the course fostered confidence in the belief that students would have little difficulty transitioning from school to career. The course also allowed students to investigate in depth their degree programs. Since students were already studying the technology in their program while in the student success course, their enthusiasm and confidence for their career choice was confirmed when they did the career activities in the student success course.

Social networks for success were also visible through student participation in educational and peer interactions, such as the College Assistance Migrant Program (CAMP) and student cohort groups. For example, CAMP assisted students with counseling support, tutoring and mentoring help, and peer encouragement. A specific course section of the AVID for Higher Education structured student success course was selected for the welding students, thus creating a cohort experience. The course provided the space and opportunity for these students to encourage and support one another in their academic and technical classes.

Networks for success that fostered cultural capital were also salient to student persistence and achievement, and for strengthening student bicultural self-efficacy. For example the teacher-student interviews based on the Noel-Levitz College Student Inventory (2013) permitted students to reflect on the opportunities and challenges of being a first generation Mexican American student persisting toward completion of a college degree or certificate.

Family played an integral role in establishing cultural networks for success. The capital gained through family interaction was earned by encouragement and motivation, although there were examples of doubt and discouragement. A unique aspect uncovered within the cultural networks for success was the value of cultural reciprocity. The family was the basis for student encouragement, support, and expectation for college success. In return, the student reciprocated with persistence and college completion. The impact of cultural networks for success not only bridged the bicultural worlds of the first generation Mexican American student but of the family as well. The student's success was family success.

A final example of cultural networks for success that emerged from the qualitative analysis of focus group interviews was awareness of the relationship between individual social experiences and societal arrangements. For example, the information and learning activities

involved in the AVID for Higher Education structured student success course presented varying perspectives between individual career expectations and societal opportunities. Students learned that large rates of Hispanics did not complete college. The dawning of this awareness precipitated a greater desire and commitment to complete college.

The general conclusions that arise from the analysis of qualitative data pertaining to research question three are:

- Hispanic Serving Institutions have a unique responsibility to provide, encourage, and support college completion of Hispanic students, especially Hispanic students who are first generation.
- Elements for a grounded theory emerged to support the development of networks for success that include educational resources and benefits for first generation Mexican American college students to academically achieve and persist in college.
- Cultural networks for success also surfaced to encourage and support student achievement and persistence. These networks include family expectations, the value of cultural reciprocity, and the relationship between individual career expectations and societal opportunities.
- The AVID for Higher Education structured student success course provided the learning experience that fostered a greater perceived sense of efficacy for student persistence and achievement.
- The AVID for Higher Education structured student success course was the institutional student success structure that connected first generation Mexican American students with resources for student success, such as tutoring, mentoring, and the acquisition of technology knowledge and skills.

- Characteristics of bicultural self-efficacy are often unassuming. They are present in individual and collective expressions of generalized efficacy.

The conclusions from the analysis of quantitative data were not significant to observe a relationship between the variables of bicultural self-efficacy and student achievement, and bicultural self-efficacy and student persistence. However, there was evidence to suggest that bicultural self-efficacy may play a role in the student persistence of Mexican American college students. Also, the existence of a relationship between student achievement and student persistence is consistent with other empirical studies. Furthermore, the chances that students would persist from semester to the next were greater for student enrolled in the AVID for Higher Education structured student success courses than for students enrolled in a non-AVID structured student success course. Finally, it is more likely that Mexican American college students will defend their Mexican cultural identity more readily than they would their White cultural identity.

The conclusions from the analysis of qualitative data underscored the significance of being a Hispanic Serving Institution with the responsibility of fostering the college completion of Hispanic students. Also, the emergences of networks for success combined educational resources and benefits with cultural and social capital to sustain a commitment to college completion. Finally, the AVID for Higher Education structured student success course was the principle institutional structure that connected students to resources essential for their success.

The next section discusses implications of this study for practitioners, administrators, policy and researchers. This section is followed by recommendations.

Implications for Practitioners

One advantage of the AVID for Higher Education structured student success course is that it addresses some of the concerns raised by researchers on the need to build self-efficacy in

students. Bandura (1997) argued that establishing goals is not enough to instill efficacy. Efficacy needs to be built. Ochoa (2011) cited research from Schunk and Pajares (2002), who recommended "that students need to develop strong beliefs that they are capable of completing college-going related tasks successfully and not just acquire skills and information necessary for college choice process" (p. 112). The qualitative results of this study indicated that students' sense of efficacy is enhanced through participation in an AVID for Higher Education structured student success course. The knowledge and skills learned through this course that enhanced educational and career confidence can also be integrated into other courses. Generating awareness among college faculty across the curriculum on the success of AVID structured learning strategies on building student confidence can expand the benefits of this approach to affect passing rates in other courses.

Students would also benefit from the integration of AVID structured learning strategies across the curriculum. It would provide students with a toolkit of knowledge and skills that they can seamlessly adapt to diverse course content.

Implications for Administrators

Administrators of designated Hispanic Serving Institutions should be concerned with the low college completion rates of Hispanic students (Santiago, 2013; Fry, 2011). According to Tinto (1993), student success thrives on developing relationships that include students in all aspects of college life. The sense of belonging and cohesiveness on college campuses nurtures a strong sense of confidence that translates into college completion.

Tinto (2006) has argued that the key to college persistence and completion is the development of institutional commitments to students, their learning, and to their intellectual and social well being. Too often, Tinto (2006) observed, colleges treat retention "as one more item to

add to the list of issues to be addressed by the institution" (p. 1). The institutional strategy is usually to add another course and separate the student from a comprehensive institutional response to why students are not graduating. Tinto argued that the result of creating additional courses to address student retention shapes student experiences in ways that further segment their relationship with the institution: "their relationships with faculty, staff and each other becoming more narrow and specialized; their learning further partitioned into smaller disconnected segments" (p. 1).

Tinto's call to build institutional responses that put "student welfare ahead of other institutional goals; are committed to the education of all students; and are committed to the development of supportive social and educational communities in which students are integrated as competent members" (Tinto, 1993) is a formula that administrators need to embrace. The AVID structured experience would offer a means for college administrators to change the college culture of stand along retention programs to an integrated campus wide plan for student success that infuses the AVID approach at all levels of student interaction.

Implications for Policy

Cortez (2012) and Salazar-Stanton (1995, 2000) recognized the importance of establishing effective networks that connect students to resources and benefits that lead to successful educational outcomes and career decisions. The importance of being designated an Hispanic Serving Institution (HSI) should influence school policy to prioritize how funding needs to be allocated to maximize the educational success of first generation, first time in college Mexican American students. This is especially important in light of the Murdock (2006) study on the changing demographics of the Texas workforce.

Policy implications include looking at curriculum to establish learning outcomes that reflect the diversity of the campus. Creating opportunities for the growth of bicultural self-efficacy involves experiential learning (Trueba, 2009). When designing learning outcomes for student development, emphasis should be given to service learning projects, creating events that allow student exposure to successful cultural role models, and opportunities to critically reflect on one's own cultural identity.

Policies need to emphasize the central role college completion plays in the educational endeavor. The high college drop-out rate for Hispanic students presents special challenges for on-time college completion (*Complete College America, 2011*), especially in Texas where data from *The College Board* (2013) shows that it takes three and half years to complete a certificate and close to five years to complete an associate degree. For Hispanics, 5% complete a certificate and 12% complete an associate degree in six years (*The College Board, 2013*). Currently, colleges in Texas base their funding on enrollment. Decision-makers need to balance enrollment and completion indicators for a funding formula that gets colleges to provide resources to supports college completion initiatives.

Implications for Researchers

Except for the current study, quantitative research that investigates the educational impact of bicultural self-efficacy on college student achievement and persistence is unavailable. Coatesworth and his colleagues (2005) recognized the need to study the relationship between bicultural self-efficacy and educational factors. Empirical research on aspects of acculturation, cultural identity, and educational attainment (Lucero-Miller, 1999; Phinney, Horenczyk, Liebkind, & Vedder, 2001; Torres, 2004; Torres & Hernandez, 2007) are the closest examples of bicultural self-efficacy studies. However, they do not examine what role bicultural identity plays

in shaping self-efficacy, nor the impact that their combined influence would have on student achievement and persistence.

Qualitative studies (Cavazos & Cavazos, 2010; Cavazos, Johnson, Fielding, Cavazos, Castro, & Vela, 2010) examined the resiliency, acculturation, and ethnic identity of Hispanic college students. These studies, however, did not intend their findings to include students' bicultural self-efficacy.

Empirical and interpretative studies that examine factors of bicultural self-efficacy and educational attainment would add to the existing relevant knowledge on the vital role culture plays in shaping best practices for student success. Implications for research using bicultural self-efficacy studies would add an understanding of shared cultural factors that shape college student attainment.

Recommendations

Hispanic Servicing Institutions with a high rate of Hispanic student enrollment, such as South Tech College, should take seriously their designation to lead post-secondary efforts to increase college completion for Hispanic student populations. The college's Institutional Effectiveness and Research department should provide data that informs the college decision makers on the national college completion trends for Hispanics and, in particular, students of Mexican descent. Graduation rates, persistence rates, retention and attrition rates, and accumulated college credits from semester to semester should be compared among local, state and national data to inform policy and programs directed at Hispanic college completion.

All academic and technical courses should be infused with AVID structured learning strategies. These strategies should be introduced as pilot projects and over time expand to all courses transforming the classroom from traditional lecture-based delivery to an active-learning

environment. The application of AVID strategies in on-line courses should be designed with faculty collaborating with instructional designers.

The implementation of an AVID for Higher Education structure student success course should be a linked course and not a course that stands alone. The linked courses should model a learning community with the AVID infused student success course providing the learning support for the academic or technical course. This combination of courses will also demonstrate to students the consistent use of AVID structured learning strategies to enhance student performance. Assessment of student learning in these learning communities needs to be in-depth using quantitative and qualitative measures.

The Center for Excellence in Teaching and Learning should be tasked with the responsibility of designing and implementing a faculty and staff development curriculum for the purpose of training in AVID strategies. Participants should be extensively familiar with AVID strategies to act as peer trainers during the year. While faculty will be trained in AVID learning strategies, staff will become familiar with non-instructional strategies that support student learning and decision-making. This would include tutoring, mentoring, advising, leadership formation, and co-curricular service initiatives.

Building student efficacy for success is a reason for integrating the AVID approach to student learning and development. Generating awareness and appreciation of diversity is also a means to build student efficacy for college success. Workshops and seminars that teach culturally relevant approaches to learning and instruction should be implemented. Project based learning and service learning initiatives that involve students and faculty in shared cultural activities should be made part curricular and co-curricular offerings.

Further research should be conducted on developing an instrument that measures bicultural self-efficacy for educational achievement.

The recommendations offered arise out of the conclusions and implications discussed in earlier sections of the study. They highlight the decisions that need to be made to improve college completion rates for Hispanic populations, and in particular Mexican American college students.

Chapter Summary

Chapter six provided a summary of the study and presented the conclusions, implications for practitioners and policy development, and suggested recommendations that would help to increase Mexican American first generation college student completion. The important knowledge that emerged from this study included the existence of networks for success that linked cultural experience with educational resources and benefits. While the quantitative investigation of a measure for bicultural self-efficacy was not significant, there were suggestions that bicultural self-efficacy may influence student persistence, a suggestion that requires further study. In a similar way, there was no significant difference in student achievement and persistence between students enrolled in an AVID for Higher Education (AHE) structured student success course and student not enrolled in an AHE structured student success course. However, it was shown that students had a greater chance of persisting when enrolled in AHE structured student success than students not enrolled in an AHE structured student success course.

The positing of the networks for success theory is a way to frame a discussion of Mexican American college student completion around cultural experiences and educational resources that benefit student achievement and persistence. In these networks are ways to build

self-efficacy that is rooted in the uniqueness and richness of the bicultural experience of being Mexican American that may lead to greater educational, economic, and personal achievement.

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APPENDIX A

APPENDIX A

DEMOGRAPHIC SURVEY

1. Student ID# ___________________________

2. Gender. Check the appropriate response

   Male ____ Female _____

3. Ethnicity. Check the appropriate response.

   Do you consider your ethnicity to be of Mexican descent?

   Yes ____

   No ____

   (If you answered NO to this question, please stop and hand-in the survey. Thank you for your time)

4. Age. Check the appropriate response.

   18 to 24 years old _____ 25 years old and over _____

5. First Generation in College. Check the appropriate response

   Have either of your parents obtained college credit?

   Yes ____

   No ____

   Do not know ____

6. AVID Participation. Advancement Via Individual Determination (AVID) is a college readiness system for elementary through higher education that is designed to increase school-wide learning and performance.

7. I participated in AVID activities in high school

   Yes ____ Name the high school ___________________________

   No ____

8. Have you taken a HRPO 1311 course in either fall 2012 or spring 2013?

   Yes ____ If yes, when were you enrolled ___________?

   No ____

APPENDIX B

APPENDIX B

PERMISSIONS

E-mail request sent on 9/23/12

Hello Dr. Soriano:

I would like to re-introduce myself. My name is Richard Kirk. I am a doctoral student attending the University of Texas Pan American. I corresponded with you in March of 2011 concerning information on the BISES. At that time, I was researching instruments to measure bicultural self-efficacy and student achievement and persistence for Mexican American college students for my doctoral dissertation topic. At this point in my program I am at the stage of writing my dissertation proposal. The last time I e-mailed, you were getting ready to do a sabbatical. I hope that went well.

The reason I am getting back in touch with you is to ask your permission to use the BISES-MA version in my dissertation proposal. I will give you full credit and share results from my research with you.

There is a second reason. During your sabbatical did you do any further work on reliability and validity of the BISES? In particular, I am interested in the reliability and validity of the BISES-MA measure. In thinking about writing my proposal and putting some drafts together, I noticed that I have a gap in my proposal that lacks explanation on how the 22-item BISES-MA was constructed. I do have the preliminary information you sent on the factorial analysis of the BISES for both minority and non-minority adolescents, but it provides analysis and construction of a 72 item scale. I would greatly appreciate any updated information on the construction and scoring of the 22-item BISES-MA. Perhaps, the analysis on the original BISES measure holds true for the BISES-MA version. If so, documented confirmation would greatly assist me in filling the evidence gap as I begin writing drafts of my proposal.

Again, thank you for your time and kind attention to my request.

All the best in your work,

Richard

E-mail reply received October 1, 2012
Hi Richard,

Sorry for the delay in responding. As it turned out, my sabbatical was postponed until now—i.e., this year. I will have more to share with you at the end of the year regarding the measure and it's psychometric/scale properties. For now, I'm in the middle of moving to Mexico and so I don't have as ready access to my files. When I do I will send you what I have on the scale properties to date.

For now you have my permission to use the scale.

Best,

Fernando

Fernando I. Soriano, Ph.D.
Professor and Department Chair, Department of Human Development, College of Education, Health and Human Services
California State University San Marcos, San Marcos, CA 92096-0001, 760-750-8033 Office

APPENDIX C

APPENDIX C

BICULTURAL SELF-EFFICACY SCALE

Minority Version

(BISES-MA)

February 2005

Fernando I. Soriano, Ph.D.
California State University San Marcos
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San Marcos, CA 92096-0001
(760) 750-8033-Office; (760) 750-3418-FAX
fsoriano@csusm.edu

and

Albert Bandura, Ph.D.
Stanford University
Department of Psychology
Stanford, CA 94305

Permission to Use the Measure Permission to use this measure is given provided that advance written notification is given to the first author with a commitment to provide a copy of generated data sets for continual scale item analysis and validation. Before using the measure, please notify the first author of such intent in writing (email is fine) with a clear commitment to provide data set with sufficient information about the sample. The BISES-MA is for minority or bicultural adult respondents. A youth version is also available, which simplifies language (BISES-MY). Spanish versions of BISES-M(A/Y) are available upon request. A BISES-W is also available to use with White Caucasian respondents to measure their self-efficacy in relating to Non-White populations and cultures.

EXPERIENCES WITH CULTURE
Bicultural Self-Efficacy Scale Minority Version (BISES-M)

Our culture or cultural background is part of who we are and part of our heritage. Our cultural background and heritage are important because it influences who we are, how we think and how we act. Everybody has a cultural background and heritage. For example, you may be German-American, Mexican-American, African-American, Asian-American or mixed.

We live in a world where we have to deal with people who share our culture and also deal with those who do not share our culture and who have a different culture. People often treat us differently because of our cultural background. We are interested in knowing how well under different situations you react to those in your culture and how well you react to those outside of your culture, namely White people also called Caucasian people.

For each of the situations listed below, and even if you have not actually experienced all these situations, **mark ONE** choice that shows **how WELL you can perform** each situation mentioned.

How well can you:	**Not Well At All**	**Not Too Well**	**Somewhat Well**	**Pretty Well**	**Very Well**
1. Convince family member there are good things about Whites	❍	❍	❍	❍	❍
2. Get friends of my culture to appreciate White culture	❍	❍	❍	❍	❍
3. Stick up for my culture with peers and friends	❍	❍	❍	❍	❍
4. Tell Whites in authority, like teachers and bosses, that I appreciate White culture	❍	❍	❍	❍	❍
5. Talk about good experiences I've had with Whites	❍	❍	❍	❍	❍
6. Get friends of my culture to appreciate White culture	❍	❍	❍	❍	❍
7. Stick up for my language or the way I speak with people like teachers and bosses	❍	❍	❍	❍	❍
8. Convince my family that there are good things about my own culture	❍	❍	❍	❍	❍

How <u>well</u> can you:	**Not Well At All**	**Not Too Well**	**Somewhat Well**	**Pretty Well**	**Very Well**
9. Stick up for my culture when it is put down by Whites	❍	❍	❍	❍	❍
10. Complain to White police officers when they mistreat me or people of my culture	❍	❍	❍	❍	❍
11. Get friends of my culture to appreciate my culture	❍	❍	❍	❍	❍
12. Tell Whites, like peers and friends, how important my culture is	❍	❍	❍	❍	❍
13. Tell Whites in authority, like teachers and bosses, that I am proud of my cultural background	❍	❍	❍	❍	❍
14. Obtain family support when making friends with Whites	❍	❍	❍	❍	❍
15. Act or talk like Whites in order to fit in	❍	❍	❍	❍	❍
16. Get White friends to appreciate my culture	❍	❍	❍	❍	❍
17. Make friends with peers who are White	❍	❍	❍	❍	❍
18. Get along with Whites who do not appreciate my culture	❍	❍	❍	❍	❍
19. When with my family, stick up for Whites	❍	❍	❍	❍	❍
20. Complain to White store keepers or restaurant workers when I feel I am being treated differently because of my culture	❍	❍	❍	❍	❍
21. Insist on being served by Whites in stores and restaurants when I feel I am being ignored because of my culture	❍	❍	❍	❍	❍
22. Stick up for my culture when put down by those in my own culture	❍	❍	❍	❍	❍

APPENDIX D

APPENDIX D

FACTORIAL ANALYSIS FOR BICULTURAL SELF-EFFICAY SCALE

Table 6: Factor Analysis for 22-item Bicultural Self-Efficacy Scale for Minority Adults

	Factor Loadings				
Scale Items	**F1**	**F2**	**F3**	**F4**	**F5**
Get friend of my culture to appreciate my culture	.84*				
Convince my family that there are good things about my own culture	.79*				
Tell Whites in authority, like teachers and bosses, that I am proud of my cultural background	.78*				
Stick up for my culture with peers and friends	.77*				
Stick up for my culture when it is put down by Whites	.75*				
Tell Whites, like peers and friends, how important my culture is	.73*				
Stick up for my language or the way I speak with people like teachers and bosses	.66*				
Stick up for my culture when it put down by those in my own culture	.61*				
Get White friends to appreciate my culture	.54**				
Get friends of my culture to appreciate White culture		.84*			
Get friends of my culture to appreciate White culture		.81*			
Tell Whites in authority, like teachers and bosses, that I appreciate White culture		.76*			
Talk about good experiences I've had with Whites		.76*			
Convince family members there are good things about Whites		.72*			
When with my friends, stick up for Whites		.60*			

Insist on being served by Whites stores and restaurants when I feel I am being ignored because of my culture	.76*		
Complain to White store keepers or restaurant workers when I feel I am being treated differently because of my culture	.66*		
Complain to White police officers when they mistreat me or people of my culture	.65*		
Obtain family support when making friends with Whites		.73*	
Make friends with peers who are White		.70*	
Act or talk like Whites in order to fit in			.77*
Get along with Whites who do not appreciate my culture			.65*

* Indicates most significant factor loading
** Complex Item; loaded on different factor

Table 7: Factor Analysis for 18-item Bicultural Self-Efficacy Scale for Minorities

	Factor Loadings		
Scale Items	**F1 Mexican Culture**	**F2 White Culture**	**F3 Defend Culture**
Get Friends of my culture to appreciate my culture	.84*		
Convince my family that there are good things about my culture	.80*		
Tell whites in authority, like teachers and bosses, that I am proud of my cultural background	.78*		
Stick up for my culture with peers and friends	.77*		
Stick up for my culture when put down by those in my own culture	.75*		
Tell Whites, like peers and friends, how important my culture is	.73*		
Stick up for my language or the way I speak with teachers and bosses	.69*		
Stick up for my culture when put down by those in my own culture	.60*		
Get White friends to appreciate my culture	.49*		
Get friends of my culture to appreciate White culture		.84*	
Get friends of my culture to appreciate White culture		.81*	

Talk about good experiences I had with Whites	.79*	
Tell Whites in authority, like teachers and bosses I appreciate White culture	.77*	
Convince family member there are good things about Whites	.77*	
When with my family, stick up for Whites	.68*	
Insist on being served by Whites in stores and restaurants when I feel I am being ignored because of my culture		.77*
Complain to White storekeepers or restaurant workers when I feel I am being treated differently because of my culture		.74*
Complain to White police officers when they mistreat me or people of my culture		.63*

* Indicates most significant factor loading

APPENDIX E

APPENDIX E

INFORMED CONSENT FORMS

Bicultural Self-Efficacy, Student Achievement and Persistence of Mexican American College Students Attending a 2-Year College

Background

This research study proposes to explore the relationship between bicultural self-efficacy and college student achievement and persistence of Mexican American first generation students. Bicultural self-efficacy is the belief that a person can live effectively within two cultures without compromising cultural identity. Student achievement means end of semester grade point average (GPA). Persistence refers to registering for classes in the following semester.

The study is being conducted as partial fulfillment of a doctoral degree in educational leadership. The graduate student conducting the survey is Richard Kirk. The faculty advisor for the doctoral study is Dr. Karen Watt, Ph.D. professor at the University of Texas Pan American.

Students invited to participate in this study are enrolled at [redacted]. Students selected for participation in the study must be 18 years old and older, first generation in college, Mexican American student enrolled in the spring 2013 semester. Some participants will need to be enrolled in a section of a student course for the spring 2013 semester.

Procedure

You will be asked to fill out the following surveys

1. A demographic information form that identifies participant criteria will be required. This form will also ask students to provide general background information such as gender, age, and program participation. This will be given one time and take 5 minutes to complete
2. A 22 item survey entitled, Bicultural Self Efficacy Scale for Minority Adults. The survey will be given one time. It should take participants 15 minutes to complete.

Participants will be asked to join a focus group to follow-up on their learning experience in the student success course. Two 50 minute focus groups will be scheduled before the end of the spring semester consisting of 7 to 10 participants. Questions for the focus group will be generated from the two surveys identified above.

No names will be associated with survey responses. Surveys will indicate that participants should not write their names on the surveys. While student ID numbers will be collected to match your responses with survey data, once matched, the data will then be recoded/deidentified to remove student ID numbers AND study results will be presented in aggregate form so as not to disclose any individual identifying information. Academic data, in the form of term grade point average (GPA) and course registration

information will also be collected. This information will be obtained from [redacted] Colleague student records system. Again, once matched, the data will then be recoded/deidentified to remove student ID numbers AND study results will be presented in aggregate form so as not to disclose any individual identifying information. Academic data will be electronically stored and protected by a secure password and accessed only by the researcher.

Video and audio recording will be used when conducting focus groups for the purpose of data analyze and interpretation. Focus group participants will be asked to sign a separate form.

Risks

There are no anticipated risks associated with your participation in the study.

Benefits of Participation

While participants will receive no direct benefit from their participation in the study, the research project may contribute to a greater understanding of bicultural self-efficacy as a predictor for student achievement and persistence for Mexican American college students.

Voluntary Participation

Your decision whether or not to participate will not affect your current or future relations with Texas State Technical College. Your participation in this study is voluntary; you may discontinue your participation at any time without penalty. If for any reason you decide that you would like to discontinue your participation, simply tell the researcher that you wish to no longer participate. You may turn in the blank or incomplete survey to the researcher.

Anonymity/Confidentiality

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a participant. Research records will be kept in a locked file; only the researchers will have access to the records.

Video and audio recording will be used when conducting focus groups for the purpose of data collection and analysis. After 1 year, the recordings will be destroyed or erased. Focus group participants will be asked to sign a separate consent form.

Who to Contact for Research Related Questions

The researcher conducting this study is Richard Kirk. You may ask questions you have now. If you have questions later, you may contact him at 956-364-4758 or e-mail: rkirk@tstc.edu .You may also contact the faculty advisor, Dr. Karen Watt, Ph.D., at 956-665-7072 at the University of Texas Pan American.

This research has been reviewed and approved by the Institutional Review Board for Human Subjects Protection (IRB). If you have any questions about your rights as a participant, or if you feel that your rights as a participant were not adequately met by the researcher, please contact the IRB at 956.665.2889 or irb@utpa.edu<mailto:irb@utpa.edu>. You are also invited to provide anonymous feedback to the IRB by visiting www.utpa.edu/IRBfeedback<http://www.utpa.edu/IRBfeedback>.

Signatures

By signing below, you indicate that you are voluntarily agreeing to participate in this study and that the procedures involved have been described to your satisfaction. The researcher will provide you with a copy of this form for your own reference. In order to participate, you must be at least 18 years of age. If you are under 18, please inform the researcher.

Participant's Signature ____/____/____ Date

____
Participant's Printed Name

______________________________ ______________________________ ____/____/____
Signature of Investigator Investigator's Printed name Date

The University of Texas- Pan American

Audiotape Release Form

Bicultural Self-Efficacy, Student Achievement and Persistence for Mexican American College Students

Researcher: Richard Kirk

Phone: 956-364-4758

Email Address: rkirk@tstc.edu

Faculty Advisor: Karen M. Watt, Ph.D

I hereby give permission to Richard Kirk to audio record my responses during the interview for this study, Bicultural Self-Efficacy, Student Achievement and Persistence for Mexican American College Students. I further understand that my anonymity will be protected with the use of a pseudonym in collecting the data and that neither my name nor any other identifying information will be associated with the audio recording or transcription of my recorded responses. The recorded material will only be used for research purposes and for the presentation of the research. As with all research consent, I may at any time withdraw permission for audio taped material of me to be used in this research project.

I acknowledge that there is no compensation for allowing myself to be audio taped.

I am permitting the review and transcription of my recorded interview by the investigators. The tape will be kept for approximately one year and will be securely stored in the researcher's office at [redacted] building W room 322. No one other than the investigators will have access to the data. After the data is collected and transcriptions are made, the tapes will be destroyed.

Participant's Signature:____________________________________ Date: ____________________

Investigator's Signature:____________________________________ Date: ____________________

Please keep this sheet for your reference.

APPENDIX F

APPENDIX F

QUESTIONS FOR FOCUS GROUPS

"My name is Richard kirk. I am doctoral candidate at the University of Texas – Pan American. I am conducting research for the completion of my doctoral degree in educational leadership. I am conducting research on bicultural self-efficacy with Mexican American college students. I have invited you here to discuss how Mexican American identity influences your ability to succeed in college. The focus group is expected to last approximately 40 to 50 minutes. Your individual responses will be treated confidentially. Statements made by other group members should also be treated confidentially and should not be shared outside of this group. Your participation is completely voluntary. Although you have all shown interest in participating in this group, you are free to withdraw from the focus group at any time and can choose not to answer specific questions."

"In order to ensure the accuracy of statements made by participants in this group, I will be recording the session using audio a device. The recordings will not be marked with your names and will be securely stored. After 1 year, the recordings will be destroyed or erased."

"You must be at least 18 years old to participate in this research project. If you are under 18, please let me know before we begin."

Interview Questions

1. Tell me about your first year in college

2. Tell me about your student success course (HRPO 1311)

3. What role did family play in your college experience?

4. What has contributed to your ability to move toward your educational/career goals?

5. What role did friends/peers play in your college experience?

6. What factors or experiences have positively contributed to your continuing in college?

7. What factors or experiences have negatively contributed to your continuing in college?

8. What challenges confront Mexican American students in college?

Follow-up Interview Questions

1. How would you identify your cultural/ethnic background?
2. Have you had to stick-up for your cultural with others from your culture?
3. Have you had to tell Whites how important your culture is?
4. Have you had to challenge authority figures like police, business owners, teachers because of your culture?

BIOGRAPHICAL SKETCH

Richard Kirk received his Doctor of Education in Educational Leadership from the University of Texas Pan American in 2014. Additional degrees include, a Master of Science in Social Work from the University of Texas Arlington in 1998, a Master of Education in Guidance and Counseling from the University of Texas Brownsville in 1993, a Master of Arts in Religious Studies from The Catholic University of America in 1985, a Master of Arts in Sociology from Boston College 1982, and a Bachelor of Arts in Sociology and Philosophy from Loyola in New Orleans in 1979.

Contact information for Richard Kirk is rkirk@tstc.edu