

ABSTRACT

Title: ADDRESSING THE HISPANIC DROPOUT
CRISIS: PREDICTING THE EDUCATIONAL
PERSISTENCE OF MEXICAN-DESCENT
STUDENTS USING DEMOGRAPHIC AND
PROCESS VARIABLES

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While there has been a concerted effort to close the achievement gap and decrease school dropout rates for more than 30 years, Hispanic students are still dropping out of school at two and a half times the rate of black students, four times the rate of white students and almost eight times the rate of Asian students (Kaufman, Alt & Chapman, 2002). The Hispanic dropout crisis has been recognized as a national problem and was addressed by the federal government through the No Child Left Behind Act of 2001, through its focus on closing the racial gap in graduation rates. Regrettably, data continues to suggest that this situation is not improving (U.S. Census Bureau, 2000). A more thorough understanding of the relationship between race/ethnicity and educational persistence is necessary to help create policies and practices to increase Hispanic graduation rates and close the graduation gap.

Investigating deeper into this issue of Hispanics drop out, census data disaggregated by national origin, reveal that there are strong differences between nationalities and that Mexicans have the lowest rate of educational attainment among all Hispanic groups (U.S. Census Bureau, 2004). Due to the disparity in performance within the larger Hispanic population, this study will focus on the sub-group with the lowest educational attainment and highest drop out rate, Mexican youth.

The purpose of this study is to investigate those input and process variables that may be influenced by school personnel in order to help increase Mexican-descent students' ability to persist in school toward graduation. The current study, in essence, will contribute to a better understanding of students' social support from adults at school (social capital) and the effect this has on students' educational expectations, attendance and persistence.

The current study utilizes the Educational Longitudinal Study of 2002/2004 (ELS:2002/2004) dataset sponsored by NCES.

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DEMOGRAPHIC AND PROCESS VARIABLES

By

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Dedication

I dedicate my dissertation to my family and friends. Specifically, I would like to thank my parents, Vincent R. DiPaula and Margaret K. DiPaula, for instilling in me the value of a good education and the belief that I could be anything that I want to be. I would also like to thank my late grandfather, Robert S. DiPaula, who taught me some valuable life lessons while we played chess- such as the importance of always thinking several moves ahead. I have taken this advice to heart! I would also like to recognize my siblings, Robert J. DiPaula, Donald A. DiPaula, V. Michael DiPaula and Lisa L. Geier for their support and encouragement over the years.

Most importantly, I would like to thank my wife, Darcy M. Pietryka, for her love, sacrifice and support. Thank you for putting up with me through this stressful time. Without Darcy's emotional support, encouragement and understanding, I may have never finished. Thank you, Darc, you are the best! And, now it's your turn!

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CHAPTER I

INTRODUCTION

If the high school diploma is the standard measure for calculating school success, then United States' schools are failing the Hispanic population miserably. According to the U.S. Census Bureau, in 2004 only 58 percent of Hispanics age 25 or older had earned a high school diploma or the equivalent as compared to over 89 percent of the comparable Caucasian population. The National Council of La Raza (2003) has described the state of Hispanic education in the United States as a "national crisis". While there has been a concerted effort to close the achievement gap and decrease school dropout rates for more than 30 years, Hispanic students are still dropping out of school at two and a half times the rate of black students, four times the rate of white students and almost eight times the rate of Asian students (Kaufman, Alt & Chapman, 2002).

If effective systematic changes are not made, Hispanic students will continue to face an educational crisis because they are the largest and fastest growing minority population in the U.S. with the greatest propensity to drop out of school (U.S. Census Bureau, 2004; Hispanic Dropout Project, 1996; Tienda, 2001). More than 600,000 Hispanic students drop out of U.S. schools every year (U.S. Census Bureau, 2002) with 80 percent of these students leaving between their 10th and 12th grade year (Frase, 1989). While many Hispanic adolescents have been successful in high school and have gone on to complete rigorous college and graduate school programs, the majority of Hispanic adolescents struggle to overcome the real and perceived barriers to high school graduation.

The Hispanic dropout crisis has been recognized as a national problem and was addressed by the federal government through the No Child Left Behind Act of 2001, through its focus on closing the racial gap in graduation rates. Regrettably, data continues to suggest that this situation is not improving (U.S. Census Bureau, 2000). The Hispanic dropout crisis directly affects teachers, counselors and school administrators as well as the futures of millions of Hispanic children. A more thorough understanding of the relationship between race/ethnicity and educational persistence is necessary to help create policies and practices to increase Hispanic graduation rates and close the graduation gap.

Rationale for focusing on Students of Mexican descent

The term Hispanic is a broad term used to recognize a diverse group of people from more than 25 different countries that might have little in common aside from sharing a common language (Thernstrom & Thernstrom, 2003). However, most of the available research to date on Hispanics, including the U.S. Census data, has grouped all Hispanics together into one homogeneous population. This homogeneous grouping does not take into account the differences in culture between nationalities, which may include: language, traditions, beliefs, norms, values, and ethnic identity (Umana-Taylor & Fine, 2001). Nor does this grouping take into account the differences in academic attainment within the Hispanic population.

As Umana-Taylor and Fine noted, “The generalizations that are often made across Latino groups are at times inaccurate and could be misleading (Umana-Taylor & Fine, 2001, p.348).” Census data on Hispanics, disaggregated by national origin, reveal that

there are strong differences between nationalities and that Mexicans have the lowest rate of educational attainment among all Hispanic groups (U.S. Census Bureau, 2004).

According to the 2004 Census Population Survey, overall 58.4 percent of the Hispanic population in the U.S. completed high school, while 12.1 percent were able to earn a 4-year degree. Disaggregating this same dataset, the South American population achieved the highest level of academic attainment among Hispanic subgroups, with 82.7 percent of its students completing high school and a total of 33 percent completing a 4-year degree (U.S. Census Bureau, 2004). The Mexican population, on the other hand, showed the weakest combination of attainment among all Hispanic subgroups with only 51.9 percent of its students completing high school and 7.9 percent earning a 4-year degree. Due to the disparity in performance within the larger Hispanic population this study focused on the sub-group with the lowest educational attainment, Mexican youth. However, this literature review also references studies and statistics on Hispanics in general because Hispanic statistics are heavily influenced by the dominant Mexican population in the U.S. (U.S. Census Bureau, 2004).

Myriad factors influence dropout rate and academic persistence. These factors may be grouped into two categories: school input and school process variables. School input variables are “givens” to the school and can, therefore, not be influenced by school personnel (Hanushek, 1989). School input variables include demographic factors such as student and parent characteristics, as well as school resources and school structure. School process variables, such as social capital (students having a positive relationship with members of the school community), educational expectations and attendance, conversely, are factors that school faculty can influence (Rumberger & Thomas, 2000).

Both school input and school process variables influence students' dropout rate and academic persistence and are important to research.

The majority of research on school persistence and dropout focuses on school input factors, such as students' and parents' demographic variables. Student demographic variables include gender, generational status, prior academic achievement (ability), students' native language and school urbanicity. Parent demographic variables include factors such as education level, socio-economic status (SES) and parental involvement with school. Because research has shown that these student and parent demographic factors may have an effect on students' school persistence and propensity to drop out of school, they will be used in this research study (Ginorio & Huston, 2001; Suarez-Orozco & Suarez-Orozco, 2001; Grogger & Trejo, 2002; Rumberger, 1995; Rumberger & Larson, 1998; Portes & MacLeod, 1996; Steinberg, 1996; Kao & Tienda, 1995).

Students' Demographic Variables

Research on school persistence and gender for Hispanic students, though limited, suggests differences in the educational attainment between males and females. While research on Hispanics rarely breaks down the data to investigate differences in gender (Ginorio & Huston, 2001), there is evidence that Hispanic girls have a slightly higher chance of graduating from high school than their male counterparts (AAUW Educational Foundation: 1998). Female students that do drop out of school prior to graduation are less likely to return to school than their male classmates (AAUW Educational Foundation: 1998). In addition, research suggests that female adolescents, on average,

earn higher grades in school than their male counterparts (Steinberg, 1996). This study will investigate differences in educational persistence between male and female Mexican American students.

Research on school persistence and Hispanic students' generational status is ambiguous and requires additional study. A number of researchers claim that first generation Hispanic immigrants are more successful in high school completion because either they possess a frame of reference from their former country, they may not yet be skeptical about their chances of attaining the American dream or because they have yet to be socialized into the mainstreams' indifference toward education (Suarez-Orozco & Suarez-Orozco, 2001; Ginorio & Huston, 2001; Ogbu, 1999; Ogbu, 2003; Steinberg, 1996; Yowell, 2002; Matute-Bianchi, 1991; Rumbaut, 1995). Other researchers (Grogger & Trejo, 2002; Kao and Tienda, 1995; White & Kaufman, 1997) believe that second generation Hispanic immigrants are more successful in completing high school because of the benefits of intergenerational progress (Grogger & Trejo, 2002). Generational status is a variable that clearly needs to be explored more thoroughly, as intergenerational progress might not be working as effectively for the current wave of Hispanic and Asian immigrants as it did for the immigrants at the turn of the century (Steinberg, 1996). In the current study generational status of students and how it relates to educational persistence will be explored.

There is a body of research that relates school persistence to prior academic achievement (Rumberger, 1983; Portes & MacLeod, 1996; Rumberger, 1995; Wehlage & Rutter, 1986). More specifically, research shows that individuals with a history of poor academic achievement drop out of school at higher rates than students with a history of

strong academic achievement (Rumberger, 1995). Therefore, the current study will also explore academic achievement as it relates to persisting and dropping out of school.

The relationship between school persistence and native language is important to investigate because, in the U.S., public education is taught solely in English. In addition, educational achievement tests, which are often used as predictors of future educational attainment, are also only administered in English. Thus, if a student's native language is not English, the student likely has an academic disadvantage that may influence school achievement and attainment. Several research studies suggest that English language ability and acquisition, which are directly related to native language, have an effect on school achievement (Rumbaut, 1995). Therefore, the current study will explore native language and its relationship to academic persistence and dropping out of school.

Schools' Demographic Variable

Research on school persistence and its relationship to school urbanicity has been shown in research studies to be significant (Orfield, Losen, Wald & Swanson, 2004; Betts, Rueben & Danenberg, 2000). Betts, Rueben and Danenberg (2000) found urbanicity to be related to dropout and assert that students drop out of urban schools at a greater rate because urban schools possess larger numbers of disadvantaged students. Furthermore, urban schools are more likely to enroll minority students and are twice as likely to enroll students who are poor or English language learners (The Council of Great City Schools, 2005). Therefore, the current study will explore school urbanicity and its relationship to academic persistence and dropping out of school.

Parents' Demographic Variables

There is an abundance of research studies that relate school persistence to SES, with some of these studies suggesting that SES is the single strongest demographic predictor of educational achievement and attainment (Kao & Tienda, 1995; Portes & MacLeod, 1996). More specifically, various studies have found that students from low-SES families drop out of school at a higher rate than students from higher SES families (Rumberger, 1983; Rumberger, 1987). Students from high-SES families generally have more highly educated parents as well as more resources available to support them academically. This study will focus on SES as it relates to persisting and dropping out of school.

While parental education level is commonly measured, along with job status and income level, as one piece of the SES construct, there is little research available that specifically compares the education level of Mexican American parents to their children's educational persistence. There is an abundance of research, however, that affirms the relationship between SES and parental education level, and educational persistence (Kao & Tienda, 1995; Portes & MacLeod, 1996; Rumberger, 1983; Rumberger, 1987). This study will directly examine parental education level and how this variable influences the educational persistence of Mexican American students.

Research suggests that school persistence is related to parental involvement with school (Steinberg, 1996; Coleman, 1988). There is a common belief amongst educators that parental involvement is related to positive educational outcomes for students (Balli, Demo & Wedman, 1998). Parental involvement, however, can be defined in myriad ways. While parental involvement with school could take place at school, for the

majority of immigrant parents, their involvement with school takes place at home (Valencia, 1997). Parental involvement at home might include discussing school and schoolwork, as well as tutoring and expressing high educational expectations for their children (Valencia, 1997). For non-immigrant, middle-class families, parental involvement generally also includes parental participation at school meetings, volunteering at school events and communication with school personnel (Steinberg, 1996). Although defined in many ways, parental involvement has been proven to be related to educational persistence (Steinberg, 1996; Coleman, 1988). Therefore, the current study will include discussions with students regarding report cards, checking homework is complete, working on homework together, attending PTA meetings and volunteering at school as a parental involvement variable.

School Process Variables

As is clear from the literature review, these input variables have been shown to influence educational persistence, even though the research findings are not always clear. Other variables relating to students' drop out rate are school process factors, which include attendance, educational expectations and social capital, referring to students having a positive relationship with members of the school community, and which can provide a student access to strategic or culturally important information for school success. These variables are of special interest to researchers as they can be influenced by school personnel. Research on school process variables suggests that student outcomes are affected by what happens in school; these processes may hold the answers for understanding and increasing student achievement (Rumberger & Thomas, 2000).

There is an abundance of research that finds school attendance to be a strong predictor of dropout for adolescents (Rumberger, 1995; Rumberger & Larson, 1998; Wehlage & Rutter, 1986). Moreover, research suggests that this relationship between attendance and the dropout rate could be reflective of students' engagement in school (Rumberger & Thomas, 2000).

One way to explain the link between school attendance and persistence is by utilizing Finn's (1989) frustration/self-esteem model. The frustration/self-esteem model suggests that early school failure leads to lowered self-esteem, which leads to problematic school behavior, including school disruption and absenteeism, and, ultimately, drop out (Finn, 1989).

As such, the model suggests a casual link between early school failure, absenteeism and ultimately school withdrawal. School failure could start as early as elementary school and might be reflected through poor skills, low grades and low standardized test results. The frustration and embarrassment that often comes with school failure, generally has a negative effect on self-esteem, self-concept or academic self-concept. This decrease in an individual's personal view of self often leads to disruptive classroom behavior, delinquency, truancy, increased absenteeism and drop out (Finn, 1989).

Similarly, Bryk and Thum (1989) conceive dropping out of school as the end result of chronic truancy. In addition, they view early absenteeism as the strongest student-level predictor of dropping out of school. Absenteeism is less prevalent in schools where faculty are interested and engaged with students (Bryk and Thum, 1989). This study will explore absenteeism as it relates to persisting and dropping out of school.

Just as school attendance plays a role in students' academic success, so do students' educational expectations. Educational expectations are grounded in a concrete, personal understanding of the opportunities and resources that individuals have available to them through their immediate social context (Mickelson, 1990, Yowell, 2002). Student expectations generally start off unrealistically high, and are eventually lowered as they see others like themselves experiencing success and failures (Kerchoff, 1976). Especially minority students, after lowering their expectations, develop the attitudes and behaviors that reflect a realization of their limited opportunities in society and of how the class structure works (Bourdieu, 1973).

Educational expectations have been found to be closely tied to SES in several studies. Trusty (1998) found considerable differences in educational expectations between four SES quartiles. This study found that 20 percent of low-SES youth expected to earn a high school diploma as their highest level of education, while only 2 percent of upper-SES students had comparable expectations. Hanson (1994) found that low-SES youth are more likely to reduce and ultimately to never achieve their educational expectations as compared to their upper-SES classmates. In addition, Hanson (1994) found that low-SES youth were more than twice as likely as upper-SES youth to fall short of achieving their educational aspirations. In a similar study, Trusty (2000) also found SES to be positively correlated to the stability of educational expectations over time.

Since many Hispanic students fall into the low-SES category, they are more likely than their Caucasian classmates to have lowered expectations. In Trusty's (2000) study of educational expectations it was also determined that Hispanic females are the most likely gender group to reduce their educational expectations over time. Behnke, Piercy

and Diversi (2004) conducted multiple in-depth interviews with 10 families from a local Hispanic after-school program to measure educational goals. Only 2 of 10 students interviewed aspired to earn a college degree, although 8 of 10 students thought it would be beneficial to them. The Hispanic students interviewed indicated a lack of knowledge on how to navigate the path to academic success and they perceived racism by their teacher. These students viewed their experiences with racism as deterrents to attaining their educational goals (Behnke, Piercy & Diversi, 2004).

Though research on social capital is not prolific, some of the qualitative research on Hispanic dropout shows that relational issues between students and staff are primary factors related to academic disengagement and eventual dropout (Nowicki, Duke, Sisney, Stricker & Tyler, 2004; Fine, 1987; Conchas, 2001; Rumberger, 1987, Kitchen, Velasquez & Myers, 2000). Thus, the current study will explore students' perceptions of their teachers as one variable linked with academic success.

Finally, the current study will explore the educational persistence of Mexican-descent high school students as an outcome variable. Educational persistence is defined in much of the literature (Tinto, 1993; Bean, 1985) as follows: persevering in school; or as not being retained or dropping out. The current study will define educational persistence as persevering in school toward attaining a high school diploma, through not dropping out.

Following the literature review, the following variables will be investigated in terms of their relationship to educational persistence:

- School Input Variables
 - Student Demographic Variables
 - Gender
 - Generational Status
 - Prior Academic Achievement
 - Native Language
 - School Demographic Variable
 - Urbanicity
 - Parent Demographic Variables
 - Parental Education Level
 - Socio-Economic Status (SES)
 - Parental Involvement
- School Process Variables
 - Attendance
 - Educational expectations
 - Social capital variables consisting of:
 - student/teacher communication outside of the classroom;
 - student perception of teacher expectations
 - student perception of teacher praise
 - student perception of teacher interest
 - student perception of fair punishment at school
 - student perception of feeling “put-down” by teacher
 - student perception of quality of teaching
 - student perception of getting along with teachers

Research Questions

Is educational persistence of Mexican-descent high school students related to:

1. Students' demographics including gender, generational status, prior academic achievement and native language?
2. Schools' demographic variables, including school urbanicity?
3. Parents' demographics including parental education level, SES and parental involvement?
4. School process variables including attendance, educational expectations and school-based social capital?

Statement of Purpose

The current study directly addresses a much needed gap in the professional literature regarding how to support Mexican-descent students' persistence in high school. The current study explores the input and process variables that effect the educational persistence of students. This study is essential not only to help explain the gap in the professional research but it will be critical in aiding teachers, counselors and administrators to support Mexican-descent students to graduate from high school.

Definition of Terms

The following terms, presented in alphabetical order, were pertinent to the current study. These terms were defined in accordance with their application to this investigation.

1. Educational aspirations refer to how far in school students hope to go.

2. Educational expectations refer to how much formal schooling students realistically believe they will complete. Educational expectations are grounded in a concrete, personal understanding of the opportunities and resources that individuals have available to them through their immediate social context (Mickelson, 1990).
3. Educational persistence refers to students persevering in school; not being retained or dropping out (Tinto, 1993; Bean, 1985).
4. Mexican-descent refers to being of a lineage that was born or had ancestors that lived in Mexico; including all of the participants in this study. Students of Mexican-descent could be of any generational status, gender, legal status, language ability or SES level. For the purpose of this study, Mexicans, Mexican-Americans and Chicanos are all considered individuals of Mexican-descent.
5. School-based social capital is the benefit derived from students developing positive relationships with members of the school community. Faculty members often have access to strategic or culturally important information about school decisions and responsibilities that could aide students in finding academic success. Some of the benefits of developing “instrumental relationships” with faculty members at school include, access to tutoring, academic counseling, guidance, encouragement and emotional support (Stanton-Salazar, 1997).

6. Social capital refers to the sum total of knowledge, information, support, and encouragement that is available to an individual through the social networks to which he or she belongs (MacCullum, 2001).

CHAPTER 2

LITERATURE REVIEW

This Chapter presents a review of the literature on the Hispanic (Mexican) dropout crisis, conducted with a view toward exploring factors that have an effect on the educational persistence of high school students of Mexican descent. The literature review is addressed from the following perspectives: 1) an overview of the growth of the U.S. Hispanic population, 2) history of Mexicans in the U.S., 3) generational differences in educational attainment of Hispanic immigrants, 4) the impact of dropping out of school on students and their future, 5) recent and historical trends in Hispanic achievement and dropout, 6) the influence of Hispanic culture on educational attainment, 7) variables related to educational attainment, and 8) differences in educational attainment of Hispanics between genders.

Hispanic or Latino?

The title “Hispanic” was originally implemented by the U.S. Census Bureau to represent all individuals who spoke Spanish as their native language. Today in the U.S., the titles “Hispanic” and “Latino” are used interchangeably to recognize a group of people from over two dozen different national origin groups that have many similarities and differences but all share a common language— Spanish (Thernstrom & Thernstrom, 2003).

Though used interchangeable in the U.S., the titles “Hispanic” and “Latino” have different origins. The title “Hispanic” is derived from the region once referred to as

Hispania; this region includes all of the areas that were conquered or colonized by the Spaniards. Any contemporary country that can trace its' history to Spain is now considered to be Hispanic. Hispanic countries are found mainly in South America and Central America; Spanish is the dominant language of Hispanic countries.

The title "Latino" is very similar in meaning to Hispanic and comes from the reference that individuals are descendants of Latin America. Latin America is said to encompass the region of the Americas that speaks any of the romance languages but mainly Spanish, French and Portuguese. All of the romance languages are derived from Latin. One example of a country that is considered Latino but not Hispanic is Brazil. Brazil is located in South America and its national language is Portuguese.

Though a comprehensive literature review found both "Hispanic" and "Latino" commonly used, the title "Hispanic" was found more often throughout the literature review. Thus, for the purpose of this study, the researcher has chosen to use the title "Hispanic" throughout, to give the paper continuity.

As noted above, the title Hispanic includes individuals from myriad national origin groups who share a common language. Hispanic individuals are diverse racially, and can be white, black, indigenous and many combinations of these three races (Suarez-Orozco and Suarez-Orozco, 2001). Accordingly, the U.S. Census Bureau disaggregates racial-ethnic data into six categories: 1) White, non-Hispanic, 2) Black, non-Hispanic, 3) Hispanic or Latino, 4) Asian or Pacific Islander, 5) American Indian/Alaska Native and 6) more than one race. The Census Bureau further disaggregates the Hispanic population into five, more specific categories: 1) Mexican (20 million), 2) Puerto Rican (3.4 million), 3) Cuban (1.2 million), and 4) Central American and South American (5.3

million) (U.S. Census Bureau, 2004). The U.S. Census Bureau, however, operates under the same set of limitations that most other agencies and research studies do: it can only ask individuals to self-identify what their race and ethnic background are and has no way to check for accuracy of responses.

The Hispanic population in the U.S. has traditionally been clustered into specific regions of the country based on individual's country of origin. The Mexican population, by percentage, is clustered throughout California (41 percent) and Texas (25 percent), as well as in Illinois (5.5 percent) and Arizona (5.2 percent). The Cuban population is mainly clustered throughout the state of Florida (67 percent) with the vast majority of Cubans residing in south Florida. The majority of the Puerto Rican population is found in New York (31 percent), Florida (14 percent) and New Jersey (11 percent). South Americans as a group tend to reside in New York (23.5 percent), Florida (22 percent), New Jersey (13 percent) and California (12 percent). And, Central Americans are most likely found in California (34 percent), Florida (12 percent), New York (11 percent) and Texas (9 percent) (U.S. Census Bureau, 2004).

The Mexican population in the U.S. has a strong influence on the overall Hispanic population research because approximately two-thirds of the Hispanics in the United States are of Mexican descent (U.S. Census Bureau, 2004). Therefore, the Mexican population has been selected as the focus of this research study. Because the Mexican population in the U.S. is so much greater in size than any other Hispanic nationality group and because of the critical need for additional research specifically on the educational attainment of Mexican-descent students, this study will focus on the factors that support the educational persistence of the Mexican-descent population. Whenever

possible, this literature review will focus on studies that were conducted solely on individuals of Mexican descent.

When researching Mexican-Americans in the professional literature, the term “Chicano” was found many times. Chicano refers to individuals of Mexican descent that are living in the U.S. Chicano was initially introduced as a derogatory name for Mexican laborers that came to the U.S. to do agricultural work in the early 1900s. Later in the 1960s, Mexican-American activists adopted the name Chicano to proudly recognize themselves and their consciousness of the Mexican-American political struggle in the U.S. (del Castillo, 1990). This researcher has included studies on “Chicanos” when researching individuals of Mexican descent.

The History of Mexicans in the United States

The war between Mexico and the U.S. (1846-1848) was a conflict over territory. U.S. leaders in the mid-nineteenth century felt it their right to spread democracy to all of the “lesser” people across the continent (del Castillo, 1990). Manifest Destiny was the vision by which Americans thought they had the right to populate and govern all of the land west of the Mississippi River (del Castillo, 1990). Thus, the U.S. embarked on a war with Mexico in 1846 in order to ultimately obtain much of Mexico’s land. The Mexican-American War came to an end in 1848 when the U.S. military defeated the Mexican army near Mexico City and forced the Mexican government into peace negotiations.

The Treaty of Guadalupe Hidalgo in 1848 represents the end of the Mexican-American War as well as the forcible incorporation of over half of Mexico’s land to the

U.S. The Treaty of Guadalupe Hidalgo negotiated national boundaries between the U.S. and Mexico and legally transferred portions of what was then Mexico and what is now present day Arizona, Colorado, New Mexico, and Wyoming, as well as all of Utah, California, and Nevada to the U.S. (del Castillo, 1990). The Gadsen Purchase in 1853 transferred the remainder portions of present day Arizona and New Mexico from Mexico to the U.S.

In 1848, Mexicans living in the transitional border territory—now established as U.S. property— were given three options regarding settlement and citizenship. Mexicans residing in this area could move south to within the recognized Mexican territory to maintain their Mexican citizenship and receive a small incentive of money and land from the Mexican government. The Mexican government set aside land for repatriated Mexicans in towns along the newly created northern border of Mexico to help create a buffer between the U.S. and the more wealthy settlements of central Mexico. The second option for Mexicans residing in the transitional area was to remain in their current residences and choose to maintain formally their Mexican citizenship by appearing before their local county official and stating their intentions. Or, as a third option, Mexicans residing in this transitional area could choose to remain without going through the steps to formalize their Mexican citizenship. By doing this, they would be incorporated into the U.S. and eventually be granted U.S. citizenship, to include all of the civil and property rights afforded to U.S. citizens (del Castillo, 1990).

Through Article IX of the Treaty of Guadalupe Hidalgo all Mexicans and Mexican-Americans in the newly acquired American territory were given the promise of maintaining their civil and property rights in their new country. Although Mexican-

Americans were promised to be able to maintain their land in addition to other civil and property rights, the majority of Mexican-Americans were treated as second-class citizens: their rights were not respected and their property was taken from them (del Castillo, 1990). This racism and oppression that Mexican-Americans experienced as they were initially incorporated into the U.S. would have long lasting effects.

Effects of Mexican Incorporation into the United States

Cultural-ecological theory attempts to explain the academic engagement, or disengagement, of various minority groups in the United States. The present study utilizes Cultural-ecological theory to help explain differences in academic persistence between Mexican-descent students and other Hispanic student groups in the U.S.

Cultural-ecological theory posits that the way a minority group interprets their history of incorporation into the U.S., along with the impact of society's subsequent treatment, shapes how minorities view problems, barriers and solutions (Ogbu, 2003).

Individuals of Mexican-descent were initially incorporated into the United States against their will, through conquest, as a result of the Mexican-American War, ending in 1848. As a result, individuals of Mexican-descent were subsequently relegated to menial jobs and were denied the opportunity to assimilate into mainstream society (Ogbu, 1992). Cultural-ecological theory suggests that Mexican-Americans, like other minority groups that did not choose to incorporate into the U.S. (i.e., Black Americans, American Indians), maintain high levels of pessimism toward White Americans and the opportunity structures in the U.S. In addition, due to prejudicial treatment and racism in schools and society, Mexican-Americans are likely to develop or participate in oppositional

subcultures that are resistant to assimilation and schooling (Ogbu, 1987; Ogbu, 2003). Further, Mexican-Americans see little evidence among their own people that education is the key to success and upward mobility in the U.S. (Ogbu, 2003).

On the other hand, Cubans, South Americans and other non-Mexican Hispanic groups in the U.S., or their forefathers, have chosen to immigrate to the U.S. for greater opportunity, better jobs, and religious and/or political freedom. Though these minority groups may also distrust White Americans and their institutions (i.e., schools), Cultural-ecological theory postures that Non-Mexican Hispanic groups do see schooling as the pathway to greater success and upward mobility in the U.S. (Ogbu, 2003). Non-Mexican Hispanic groups view teachers as useful experts that will help them to achieve the skills and knowledge that they need to be successful in the U.S. regardless of whether or not they trust or feel cared about by their teachers (Ogbu, 2003). Thus, many Cuban, South American and other non-Mexican Hispanic youth see others like themselves benefiting from the value of education and they see education as a viable, worth-while investment into their future.

Ogbu (1992) suggests that later generations of Mexicans have immigrated to the U.S. by choice, in search of better jobs and greater opportunity. These optimistic, more recent immigrants, however, are quick to find that the same prejudices and barriers that have prevented earlier Mexicans from fully assimilating into U.S. society are still present. The present study utilized Cultural-ecological theory to help explain the educational persistence of Mexican-descent students.

Growth of the Hispanic Population

Hispanics are the largest and fastest growing ethnic group in the United States (U.S. Census Bureau, 2004; Tienda, 2001). The Hispanic population (41.32M) has recently surpassed the African-American population (37.5M) as the largest minority group in the United States (U.S. Census Bureau, 2004). According to the U.S. Census Bureau (2001), between 1990 and 2000 the Hispanic population in the U.S. grew from 22.4 million to over 35.3 million. This represents more than a 57 percent increase in the total Hispanic population of the United States in just 10 years. This growth rate is 4.5 times faster than the 13.2 percent growth rate that the country as a whole experienced during the 1990's. Between 1972 and 2004, the percentage of minority students enrolled in public schools nearly doubled, increasing from 22 percent to over 43 percent. Much of this growth in minority enrollment is attributed to the increased enrollment of Hispanic students. Hispanic enrollment in U.S. schools during this time period more than tripled, increasing from 6 percent to over 19 percent of the overall student population (U.S. Department of Education, 2006). Looking forward, the Hispanic population in the U.S. is projected to double between 2010 and 2050 (U.S. Census Bureau, 2004), thus increasing the Hispanic school population to 25 percent of the total public school enrollment.

In addition to being the largest and fastest growing minority population, the Hispanic population is also comparatively young compared to all other racial-ethnic groups in the U.S. According to the U.S. Census Bureau (2004), the median age of the U.S. population in 2004 was 35.2 years. The median age for Whites was 36.7 years, Asians 33.8 years, Blacks 29.9 years, and Hispanics 26.1 years. Over one-third of the Hispanic population in the United States is under the age of 18, and only 5 percent of the

Hispanic population is 65 years old or older (U.S. Census Bureau, 2004). Furthermore, among 15- to 19-year-olds in the U.S., Hispanics have the highest birth rate of any racial-ethnic group (U.S. Department of Health and Human Services, 2003). These combined factors will continue to increase the growth of Hispanic students in U.S. schools and could impact the crisis of Hispanic dropout.

Llagas and Snyder (2003) composed a report on the status and trends of Hispanic education. Looking at a sample of fourth grade students across the country, Llagas and Snyder (2003) found that Hispanic students were more likely than any other racial or ethnic group to live in poverty, be concentrated into high poverty schools, and to attend minority-dominant schools. Minority-dominant schools are those that are made up of 90 percent or greater minority enrollment. The study showed that 71 percent of Hispanic students were eligible for free or reduced lunch, a measure of low family income, while only 23 percent of White students in this study were eligible for the same benefit. The study further showed that 51 percent of Hispanics were enrolled in the country's highest poverty schools, as compared to only 5 percent of White students. The highest poverty schools were those that had 75 percent or more of their students eligible for the low-income lunch benefit. In addition to attending the highest poverty schools, 39 percent of Hispanic students attended minority-dominant schools. Thus, because Hispanics are the youngest and fastest growing ethnic group in the U.S. and because they are highly likely to be living in poverty and clustered into high poverty schools, this study focused on factors that aid Hispanic students to persist in school.

Generational Differences in Educational Attainment of Mexican Immigrants

While it is commonly believed among Hispanics that education is the pathway to success in the U.S., dropout rates for Hispanics are consistently higher than dropout rates for non-Hispanics of the same immigrant generational status (Ginorio & Huston, 2001). However, there is disagreement in the professional literature whether educational attainment, more specifically graduation rate, differs among first and later generations of Mexican immigrants. Researchers today disagree as to whether Mexican-Americans are benefiting from intergenerational progress, the theory that each new generation of immigrant will make progress in income and well-being and find greater social and economic success than their parents' generation. Some researchers believe that the first generation of Hispanic immigrants are more successful in attaining a high school degree (Suarez-Orozco & Suarez-Orozco, 2001; Ginorio & Huston, 2001; Ogbu, 1999; Ogbu, 2003; Steinberg, 1996; Yowell, 2002; Matute-Bianchi, 1991; Rumbaut, 1995), while other researchers (Grogger & Trejo, 2002; Kao & Tienda, 1995; White & Kaufman, 1997; Wojtkiewicz & Donato, 1995) believe that second generation Hispanic immigrants are more successful in attaining a high school degree.

Research Supporting First Generation Success

Suarez-Orozco and Suarez-Orozco (1995) suggest that the academic attainment of Hispanics is highest among the first generation, then decreases over each successive generation of residing in the U.S. The researchers (1995) maintain that Mexicans come to the United States to escape poverty and poor living conditions and to find better economic opportunities than they perceived were available in their country of origin.

Mexican immigrants understand and respect education as the key to economic and social mobility, however, this respect seems to dissipate between the first and second generation (Suarez-Orozco & Suarez-Orozco, 1995). Mexican immigrants initially come to the United States with strong aspirations to learn the language, acculturate, and become contributing members of society. Successive generations of U.S.-born Mexican-Americans, however, seem to get frustrated with unequal treatment at school, develop an oppositional identity and disengage and reject the institution of education (Ogbu, 1999).

An individual's frame of reference is one of the main factors affecting how minority students respond to society's treatment. Immigrant minorities compare their educational experiences and opportunities in the United States with their experiences from their home country- sometimes including poverty, oppression and civil war. The children of immigrants, or second generation immigrants, do not possess the same dual frame of reference as their parents, because second generation immigrants were born in the U.S.. econd and later generations of Hispanic immigrants compare their situation in school with the educational opportunities and benefits that they see openly available to the dominant White population in America and this is their only frame of reference (Ogbu, 2003). Because second generation immigrants do not have the cultural frame of reference that their parents possess, they might resent the unfair and unequal treatment they receive in school and sometimes disengage from school (Ogbu, 2003).

The dual frame of reference position suggests that immigrants come to the U.S. for greater economic, educational and social opportunities and are able to persist through prejudice and racism in schools and society because their frame of reference reminds them that they have greater opportunity in the U.S. than they had in their country of

origin (Ogbu, 1999; Ogbu, 1991). Despite poor living conditions and poverty, these immigrants stay optimistic and focused on the future opportunities they have acquired (Matute-Bianchi, 1991). It seems possible, therefore, that each successive generation of Hispanic immigrants will find less academic success due to frustration, prejudice and eventual disengagement and that second generation and later immigrants will continue to drop out of school at a greater rate than first generation immigrants (Suarez-Orozco & Suarez-Orozco, 1995; Ogbu, 1999; Steinberg, 1996; Yowell, 2002).

In a study of Mexican and Mexican-American students' generational status (Suarez-Orozco & Suarez-Orozco, 1995), teachers admitted that they preferred to work with first generation Mexican immigrants as opposed to later generations because the first generation immigrant students had a more positive attitude, were better mannered, more appreciative and more excited to learn (Suarez-Orozco & Suarez-Orozco, 1995). Teachers in the study claimed that later generations of Mexican immigrants did not have the same attitude or desire to learn, misbehaved more often and dropped out of school at a much higher rate (Suarez-Orozco & Suarez-Orozco, 1995). This optimistic attitude and strong motivation to learn amongst first generation Mexican immigrants might explain why some researchers believe that first generation Mexican immigrants are more successful in educational attainment than second and later generations (Suarez-Orozco & Suarez-Orozco, 1995).

In his findings from a national survey of over 20,000 students, Steinberg (1996) reports that first-generation immigrant students encounter more discrimination and language barriers than American-born Hispanics, yet despite these obstacles, immigrant students are still able to consistently earn higher grades in school. This researcher found

that immigrant students spend more time on homework, pay closer attention in class, are more focused on academic achievement and are more likely to have friends who value education than their non-immigrant classmates (Steinberg, 1996). Findings from Steinberg's study suggest that becoming Americanized, or acculturating, is detrimental to students' academic achievement (Steinberg, 1996).

According to Steinberg (1996), straight-line assimilation theory, which suggests that the longer an immigrant is present in the U.S., the better that individual will fare in school, does not hold true for Hispanics. In fact, straight-line assimilation is part of the unidimensional acculturation model that was prevalent at the turn of the century but is less commonly accepted today. Unidimensional acculturation suggests that acculturation occurs across a continuum from not acculturated to totally acculturated, and that individuals can only move toward being more acculturated by giving up their original culture (Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005). It was a common belief at the turn of the century that the quicker an immigrant could shed traditions, culture and language, the quicker he or she could assimilate, and the quicker he or she could find success and acceptance in the American culture, including school.

Berry (2003) believes immigrants today are better characterized through the use of a bidimensional acculturation model. He postulates that acquiring a new culture does not require an individual to reject or lose their culture of origin. In his bidimensional acculturation model, Berry measures the level of value that an individual places on maintaining his or her cultural identity and characteristics as well as the value that he or she places on maintaining relationships with individuals from other groups. From these two measures, Berry sets up four potential modes of acculturation. These modes are

based on the individual's attitude toward acculturation, and they are: assimilation, separation, marginalization and integration (Berry, 2003). Assimilation refers to the position where an immigrant chooses to identify only with the new culture. Separation refers to when an individual chooses to only be involved in their traditional culture. Marginalization is characterized by the absence of an individual's original culture and the lack of involvement or rejection of the host culture. Lastly, integration refers to high identification with both the host culture and the culture of origin (Berry, 2003).

Mario De La Rosa (2002) explored the four modes of bidimensional acculturation for Hispanic adolescents in relation to drug use and acculturation related stress. De La Rosa (2002) found that students characterized by the mode of integration were least likely to use illicit drugs or to drop out of school. In addition, De La Rosa found that these students, who were well integrated into the American culture while still enculturated to their culture of origin, were also least likely to have behavior problems. The assimilated students in this study were also resilient in school and unlikely to drop out. Students characterized by the mode of separation and marginalization were found to have an elevated risk of dropping out of school above and beyond their integrated and assimilated classmates (De La Rosa, 2002).

Though acculturation models suggest that school success is related to students' level of participation in both their culture of origin and their new culture (Berry, 2003), others suggest school success is related to students' generational status (Steinberg, 1996).

Steinberg (1996) proposes that academic achievement decreases and behavioral problems increase with each successive generation. Steinberg (1996) explains that this is either the result of immigrants losing faith in their belief of being able to participate in the

“American Dream” or a result of ethnic minorities socializing into the mainstream’s indifference toward academic success. Thus, Steinberg’s (1996) findings propose that first generation Hispanics are more successful in school than later generations.

A study by Yowell (2002) supports the findings of Steinberg. Using educational aspirations, expectations and fears as variables, Yowell found that second and third generation Hispanics face a greater chance of dropping out of school than Hispanic immigrants. Yowell found that the more Hispanic students feared dropping out of school, the greater their risk was for eventually dropping out.

Research Supporting Second Generation Success

Intergenerational progress, as previously mentioned, proposes that each new generation of immigrants will make progress in income and well-being and find greater social and economic success than their parents’ generation. Intergenerational progress is a theory that proved true for most of the Europeans and Asians that came to the U.S. at the turn of the century; economic and social gains for immigrants and their offspring were found through formal education and a strong work ethic (Grogger & Trejo, 2002). Intergenerational progress is one of the central tenets of the American Dream, according to Grogger and Trejo (2002) of the Public Policy Institute of California. Kao and Tienda (1995) contend that second generation Hispanics ought to be able to outperform both their foreign-born and native-born peers because they enjoy both the optimism of their parents’ frame of reference as well as the stronger English skills learned from being raised through U.S. schools. Thus, second generation immigrants should be more successful than their first generation peers.

Recent data collected on Hispanic drop out rates strongly supports the theory of intergenerational progress for Hispanic immigrants- but only from the first to the second generation. According to Grogger and Trejo (2002), Mexican-Americans traditionally make significant gains in academic attainment between the first and second generation, with U.S. born Mexican-Americans (second generation) achieving three and a half more years of education than foreign born (first generation) Mexican immigrants.

Unfortunately, this pattern of intergenerational progress slows after the second generation, with only minor gains in educational attainment for third and future generations of Mexican-Americans (Grogger & Trejo, 2002). According to data collected by the U.S. Department of Education (2006) in 2004, the status dropout rate, which measures the cumulative percentage of individuals, ages 16–24, who are out of school and who have not yet earned a high school credential, for Hispanic immigrants (first generation) in the U.S. was 38 percent. These dropout numbers improved greatly decreasing to 14 percent for the second generation, then to 13 percent for the third generation. Thus, this study suggests there are significant gains being made in educational persistence and attainment between the first and second generation.

White and Kaufman (1997) conducted a research study using the *High School and Beyond* (HSB) data set to explore the effects of ethnicity, generational status, duration in the U.S., language usage and social capital on high school completion. In the analyses the researchers used logit regression, in which the dependent variable was whether or not the students dropped out. The analyses of generational status and time spent residing in the U.S. support the straight-line assimilation theory- the more time spent living in the

U.S., the better immigrants and their children performed in school (White & Kaufman, 1997).

Further analyses conducted on ethnicity as related to time spent living in the U.S. showed that immigrants were more likely to drop out of school than native Anglos, that recent first generation immigrants (less than 5 years living in U.S.) were more likely to dropout than longer term first generation immigrants (more than 5 years in U.S.), and that first generation immigrants were more likely to drop out than second generation immigrants (White & Kaufman, 1997). Thus, White and Kaufman's (1997) study supports the premise that second generation immigrants drop out of school less often than first generation immigrants.

Wojtkiewicz and Donato (1995) conducted a research study investigating the effects of foreign birth and family background on the educational attainment of four separate Hispanic populations: Mexican, Puerto Rican, Cuban and other. This study also explored the effects of language spoken at home, residence at age 14, gender, family structure and parental education. Findings showed that foreign-born students in this study had higher dropout rates than native-born students suggesting that first generation immigrant students are less successful in educational attainment than their second generation peers. Due to the contradictory findings within the professional literature on generational differences, there was a need to pursue further study in this area.

Barriers to studying the effect of generational status on educational attainment

There are several barriers that make it difficult to determine the effect of generational status on educational attainment. One barrier is the lack of a uniform system

to measure and collect consistent data on school dropout and completion rates (Greene, 2002). Without a uniform measure it is hard to determine how much educational progress Mexican-Americans are making from one generation to the next. Other factors that make accurate data collection difficult, specifically for the Mexican population, include a high number of undocumented immigrants entering the country, seasonal immigrants frequently entering and leaving the country, and a large number of school-aged immigrants entering the U.S. but never enrolling in schools (Suarez-Orozco & Suarez-Orozco, 2001).

Impact of Dropping Out of School

Mexican-Americans are one of the most economically disadvantaged populations in the U.S. today and, as a group, are earning household incomes that are more than 40 percent less than their White counterparts (Grogger & Trejo, 2002). Moreover, Mexican-Americans have the lowest average income among all Hispanic groups in the United States (U.S. Census Bureau, 2004). Mexican-Americans attain significantly less education than all other racial/ethnic populations in the U.S., and this is the primary reason for their comparatively low income (Grogger & Trejo, 2002). The fundamental economic problem that Mexican-Americans face is insufficient schooling (Grogger & Trejo, 2002).

The high school diploma is a prerequisite to successful participation in the U.S. workforce, economy and society (Hall, 2005). The economic consequences for dropping out of school are severe; high school completion is a prerequisite to most types of higher education and training, as well as to entering the labor force (Kaufman, Kwon, Klein &

Chapman, 1999). The economy of the U.S. has changed; the well-paying jobs that used to be available to those with little formal education are no longer available.

Advancements in technology have increased the demand for a highly educated work force and decreased the necessity for unskilled labor (Lan & Lanthier, 2003). More than ever, it is important for individuals to have enough education and training to be successful in the workplace.

While there is a discrepancy between how researchers define and calculate dropout rate, there is no denying the impact that dropping out of school has on individuals (as noted below) (Stanard, 2003). High school dropouts are more likely to be unemployed than high school graduates, and when they are employed they are likely to earn less money (U.S. Census Bureau, 2004). In 2006, the unemployment rate for high school dropouts was more than 50 percent greater than for those with a high school diploma (U.S. Department of Labor, 2007). Statistics show that those who drop out of school will earn significantly less money, academically achieve at a lower level and experience more mental and physical health issues than their peers who graduate high school (Hodgkinson, 1998; Rumberger & Larson, 1998).

Dropping out of school is strongly correlated to participation in many government assistance and social programs. School dropouts make up 82 percent of the prison population, 85 percent of the juvenile justice cases and 52 percent of the recipients of welfare (Hodgkinson, 1998). School dropouts are also more likely to abuse drugs, have poor health, and be victimized by criminals than high school graduates (Rumberger, 1987; Hodgkinson, 1998; McNeal, 1995). The cost of dropping out of school prior to high school graduation is also a major expense to the U.S. economy. Dropouts cost the

nation billions of dollars in lost tax revenue, unemployment, underemployment, welfare and crime prevention (Hahn and Danzberger, 1987; Rumberger, 1987). Dropping out of school is related to great economic, social and physical costs, thus educational persistence was an important variable to investigate for the current study.

Recent and Historical Trends in Hispanic Achievement and Dropout Rate

Congress and local school systems have been trying to reduce the graduation gap that plagues Hispanics students for more than thirty years but have made little progress (U.S. Census Bureau, 2004). Hispanic students begin school behind every other racial group in academic achievement and never catch up (Education Trust, 2003). Ultimately, Hispanic students face the greatest propensity to drop out of school (Kaufman, Kwon, Klein & Chapman, 1999; U.S. Census Bureau, 2000).

In 1969, Congress mandated that the National Assessment of Educational Progress (NAEP) be created as a standardized measure to inform policy makers of how much content students are learning in school. NAEP, commonly referred to as “the nation’s report card” regularly tests nationally representative samples of 4th, 8th and 12th grade students to assess academic achievement (Thernstrom & Thernstrom, 2003). According to findings by NAEP, the academic discrepancies between Hispanics and their higher achieving White and Asian peers is staggering.

Academic discrepancies between Hispanics and other ethnic groups begin as early as kindergarten; in kindergarten, Hispanics perform below every other peer group in reading, mathematics and science (Education Trust, 2003). These problems persist and multiply as Hispanic children move through their schooling. By the end of the 4th grade,

NAEP scores show that Hispanic students are approximately two years behind their White and Asian peers and by the 12th grade, Hispanics are four years behind their peers in educational achievement (Thernstrom & Thernstrom, 2003; Education Trust, 2004).

In addition to performing below grade level, Hispanics also possess the highest propensity to drop out of school of any racial-ethnic group (Kaufman, Kwon, Klein & Chapman, 1999; U.S. Census Bureau, 2000). It is difficult to measure and compare dropout rates across school districts because there is not yet one universally accepted method to measure school dropout (Wehlage & Rutter, 1986; Ginorio & Huston, 2001; Greene, 2002). Researchers use several different methods to calculate students' level of success in attaining a high school degree. Three of the most accepted methods of measuring high school attainment are status dropout rate, event dropout rate and high school completion rate.

Status dropout rate is one of the most commonly accepted ways to calculate dropout rate (Kaufman, Kwon, Klein & Chapman, 1999). Status dropout rate is a cumulative measure of the percentage of individuals, ages 16–24, who are out of school and who have not yet earned a high school credential. Status dropout rate is more commonly used to measure broad issues of educational attainment. For example, the U.S. Census Bureau uses status dropout rate as one measurement of drop out trends.

Over the last 30 years, status dropout rates for African-Americans, Whites and Hispanics have all declined; however, status dropout rates for Hispanics have remained significantly higher than those of other racial ethnic groups (U.S. Department of Education, 2006). In 2004, the status dropout rate for Hispanics was 23.8 percent, which is double the rate of African Americans (11.8 percent) and almost four times the rate of

Whites (6.8 percent) (U.S. Department of Education, 2006). The dropout rate for Whites and for African Americans decreased nearly 40 percent between 1972 and 2000, while the dropout rate for Hispanics only decreased slightly (U.S. Department of Education, 2001). During this same 30-year period, the gap in status dropout rate between African Americans and Whites decreased, while the gap between Whites and Hispanics remained unchanged (U.S. Department of Education, 2006). This is not a new phenomenon; the dropout rate for Hispanics has always been high (Fashola & Slavin, 2001).

The U.S. Census Bureau (2004) confirms earlier reported findings regarding a strong association between racial-ethnicity and the propensity to dropout of school. Cohort studies of national longitudinal data on high school students, such as the *HSB* study, show that Hispanic students are at a greater risk of dropping out than White or Black students. The NCES' *National Educational Longitudinal Study* confirms findings that Hispanics face a greater risk of dropping out of school than their peers of other races (Kaufman, Kwon, Klein & Chapman, 1999). Moreover, in 1995, Hispanic children ages 3-5 were almost seven times as likely (27 percent vs. 4 percent) as their White peers to have parents who have not completed high school (Gandara, Larson, Mehan & Rumberger 1998). The U.S. Census Bureau (2004) confirmed that the graduation gap is still a significant problem for Hispanic students. The U.S. Census Bureau found that only 58.5 percent of Hispanic students age 25 or over graduated from high school, while the same study sighted the overall high school graduation rate to be 85.5 percent.

Thernstrom and Thernstrom (2003), however, warn that status dropout rate is grossly misleading for minorities in the U.S. Because status dropout rate measures the percentage of *all* individuals, ages 16–24, who are out of school and who have not yet

earned a high school credential, it does not account for the large number of immigrants who come to the U.S. from other countries with no intention of attending a U.S. school. Often these individuals have already completed their education in their home country by the time they are 13 or 14 years old. While Thernstrom and Thernstrom (2003) agree that the high school dropout rate is extremely high for Hispanics, they also suggest that individuals who have never enrolled in a U.S. school should not be counted in the U.S. dropout rate.

Secada, Chavez-Chavez, Garcia, Munoz, Oakes, Santiago-Santiago and Slavin (1998) accepted the fact that many Hispanics come to the U.S. to work and never enroll in school, thus they investigated only those students who enrolled in U.S. schools, and found that 80 percent eventually earned a diploma or a GED. However, Secada et al (1998) also found that Hispanics were more likely to drop out of school than any other racial-ethnic group and when they did withdraw from school, Hispanics left school at an earlier age than any other racial-ethnic group.

While immigration may explain some of the status dropout rate for Hispanics, Hispanics also maintain almost double the event dropout rate as compared to the White population. Event dropout rate measures the percentage of 15 to 24 year-olds who have dropped out of grades 10 through 12 in the year preceding each fall's data collection. Event dropout measures the most recent dropouts over a finite period of time and gives feedback about how effective schools are in retaining students. According to the U.S. Census of 2003, the event dropout rate for Hispanics is significantly higher than for all other racial groups and this has been a consistent pattern. The event dropout rate for all U.S. students in 2003 was 3.8 percent (U.S. Census Bureau, 2003). Disaggregated by

racial groups, the event dropout rate for Asian students was 2.4 percent, for White students was 3.0 percent, for African American students was 4.5 percent and for Hispanic students was 6.5 percent (U.S. Census Bureau, 2003).

Though event and status dropout rates are effective tools to examine educational persistence, they do not include the percentage of students that complete their high school education through an alternate means. High school completion rates, however, measure the percentage of 18-24 year olds that have either graduated from high school or completed a high school equivalency credential. High school completion rates have been on the rise for both White and African-American students since the early 1970's, with Whites at 91.7 percent and African-Americans at 83.4 percent in 2004. Hispanic students, however, have not shown the same improvement in high school completion rate. In 2004, Hispanic students amassed a 69.8 percent completion rate, significantly lower than all of their peers (Laird, DeBell & Chapman, 2006). Measured in several ways—status dropout rate, event dropout rate, and high school completion rate, Hispanic students continue to possess the lowest level of educational attainment of any racial-ethnic group in the United States (U.S. Department of Education, 2006; U.S. Census Bureau, 2003; Laird, DeBell & Chapman, 2006) and, therefore, are the focus of the current study.

Hispanic Culture

Hispanic culture and the high value that Hispanics place on relationships may play a role in the educational persistence of Hispanic students. Culture encompasses all of the things that individuals have learned to do, value, believe and enjoy from their

history (Sue & Sue, 1990). Moreover, culture is the totality of ideals, skills, beliefs, customs, tools and institutions into which each individual member of society is born (Sue & Sue, 1990). Hispanic culture revolves around the importance of community and social bonds. This communal emphasis conflicts with two main fundamental values in American schools: achievement and independence (Dreeben, 1968) and may result in the decreased educational persistence of Hispanic students.

The Hispanic culture subscribes to an ideology of communalistic beliefs and practices (Boykin, 1995). Communalism focuses on the interdependence of people and the priority that should be placed on social bonds. Communalism emphasizes that duty to the group is more important than individual rights and privileges (Boykin & Baily, 2000). This sense of communalism is evident in familial relationships. Family is the central component to the quality of life for Hispanics (Eggers-Pierola, 2002). Each member of the Hispanic family is supported and held responsible through a concept of family interdependence (Eggers-Pierola, 2002). When making decisions, Hispanics have a responsibility to consider the desires, well-being and expectations of their extended family and friends (Mirowsky and Ross, 1984). Within the Hispanic culture, being part of a family implies developing a sense of belonging as well as a sense of commitment and obligation to others.

While communalism is an important and valued part of the Hispanic culture, it is not valued by all cultures. The ideology of communalism is in direct conflict with middle-class Anglo America which is heavily rooted in individualism, competition and independence. Dreeben (1968) found that the two main fundamental values in American schools are achievement and independence. Dreeben points out that students who come

from cultural backgrounds that do not value individual achievement and independence, such as the Hispanic population, could struggle to find success in American schools.

While this cultural conflict creates a serious problem for many Hispanic students, some Hispanic youth have learned to cope by utilizing the European ideals of self-reliance and independence to find success in public situations but still take advantage of the benefits of their cultural interdependence and social network in their personal lives (Stanton-Salazar & Spina, 2000).

For the part of the Hispanic population that does not find success in school, the main reason they state for disengaging and eventually drop out of school is their failure to make connections with school staff and the perception that they do not feel supported and cared about in school (Nowicki, Duke, Sisney, Stricker & Tyler, 2004; Fine, 1987; Conchas, 2001; Rumberger, 1987, Kitchen, Velasquez & Myers, 2000). These perceived relationships and feelings of support from school staff, defined as social capital, may be especially important to Hispanic students because Hispanic students come from a culture that values relationships, cooperation and communalism as opposed to a U.S. school culture that values independence, competition and individual achievement (Vasquez-Nuttall & Romeo-Garcia, 1989). Thus, considering the emphasis on personal relationships within the Hispanic culture, further study of school-based social capital may be beneficial to the educational persistence of Hispanic-descent students.

Variables Related to Hispanic High School Students'

Educational Attainment / Achievement

Research has shown that myriad variables influence Hispanic educational attainment. The current study focused on demographic variables as well as on those

variables that school personnel can alter or change. These latter variables, called process variables, are social capital, attendance and educational expectations.

There are many factors that influence dropout rate and academic persistence, and these factors can be organized into two categories: school input and school process variables. School input variables are factors that cannot be influenced by school personnel; they are “givens” (Hanushek, 1989). School input variables include demographic factors such as student and parent characteristics, as well as school resources and school structure. School process variables, such as social capital (students gaining access to important strategic information for school success through positive relationships with and support from members of the school community), educational expectations and attendance, conversely, are factors that school faculty can influence (Rumberger & Thomas, 2000). Both school input and school process variables are important to research due to their influence on students’ dropout rate and academic persistence.

The majority of research on school persistence and dropout focuses on students’ and parents’ demographic variables, also known as school input factors. Student demographic variables include factors such as gender, generational status, prior academic achievement, native language and school urbanicity. Parent demographic variables include factors such as education level, parental involvement with school and socio-economic status. Since research has shown that student and parent demographic factors may have an effect on students’ school persistence and propensity to drop out of school (Hernandez, 1995; Ginorio & Huston, 2001; Rumberger, 1995; Wojtkiewicz & Donato, 1995; Steinberg, 1996; Bryk & Thum, 1989), they were used in this research study.

School Input Variables: Student Demographic Variables

Gender Differences and Educational Attainment among Hispanics

Research on Hispanic education in the U.S. rarely focuses on gender, much less on national origin, race, or class (Ginorio & Huston, 2001). In a comprehensive review of the literature, there appears to be some discrepancy as to which gender of the Hispanic student is more likely to drop out of school.

Some researchers found that Hispanic female students face a greater likelihood of dropping out of school than their male peers (Driscoll, 1999; Croninger & Lee, 2001; Ginorio & Huston, 2001). While exploring high school drop out among native and immigrant Hispanic students, Driscoll (1999) found being female to be correlated to dropping out of school, after controlling for prior achievement and family demographic factors. Croninger and Lee (2001) also found that female students are more likely to drop out of school than male students, after risk factors and social capital are taken into consideration. In their study, Croninger and Lee (2001) defined “at-risk” as students who were living at or below the poverty level; belonging to a language minority group; belonging to a disadvantaged minority group (Black, Hispanic, American Indian); living in a single-parent household; or having a mother who failed to complete high school (or father, if head of household). These researchers speculate that females are more likely to drop out of school due to disruptive life events, such as premature parenting and requests to help parents with childcare for younger siblings. Moreover, while all students are susceptible to dropping out due to disruptive life events, Hispanic females are especially

susceptible because they are having babies at higher rates than both White and Black teenagers (Ginorio & Huston, 2001).

Other researchers suggest that Hispanic male students are dropping out of school at a greater rate than their female peers (Roderick & Cambrun, 1999; Rumberger & Larson, 1998). In an examination of the transition to high school, Roderick and Cambrun (1999) explored the demographic variables related to failure rates of 9th grade students. This study used all 9th grade students in the Chicago Public School System during the 1992-1993 school-year as its sample. Analyses found that males (50 percent) were significantly more likely to fail major courses during 9th grade than females (35 percent), after controlling for prior achievement, age and prior school mobility. Moreover, researchers found that there were substantial gender differences in on-time graduation rates within racial groups in this sample, with female Hispanic students graduating on-time at significantly higher rates than males. On-time graduation rates were reported in this study as follows: White females, 65 percent; White males, 51 percent; African American females, 55 percent; African American males, 37 percent; Hispanic females, 58 percent; and Hispanic males, 42 percent.

Roderick and Cambrun (1999) suggest the need for additional study to investigate why males, more specifically Hispanic males, encounter greater academic difficulties passing 9th grade academic classes. This is especially important because Roderick (1994) previously found that the degree of difficulty that students face transitioning to high school is correlated to later dropping out of school.

In a study of Mexican American language minority students, Rumberger and Larson (1998) found that female students earned higher grades than their male

classmates. This finding is especially significant for the current study because prior research shows that higher grades are related to school persistence and lower grades are related to dropping out of school (Rumberger, 1995).

A third position in the Hispanic gender research is that Hispanic females graduate from high school at approximately the same rate as Hispanic males (Hernandez, 1995). While high school graduation rates are comparable for Hispanic students, the academic persistence in high school is actually stronger for males than it is for females (Hernandez, 1995). Hernandez (1995) speculates that more Hispanic males drop out of school prior to 9th grade, generally due to work, than females; thus, those males that do begin 9th grade will complete high school at a higher rate than females that begin 9th grade.

Due to the insufficiency of research available in the professional literature regarding gender differences in the academic persistence of Mexican descent students, and the impact that gender might have on educational persistence, it was important for the current study to investigate gender differences in the educational persistence of Mexican descent students.

Generational Status

Generational status has been used as a variable in numerous research studies to investigate the relationship between the number of generations a student has been in the U.S. and how this relates to the student's educational persistence and attainment of a high school diploma. The professional literature is inconclusive when discussing whether or not generational status is directly related to educational attainment (Suarez-Orozco & Suarez-Orozco, 2001; Ginorio & Huston, 2001; Grogger & Trejo, 2002; Kao and Tienda, 1995). Due to the lack of a uniform system to collect and compute data on school

dropout and completion rates (Greene, 2002), it is difficult to establish how much educational progress Mexican Americans are making from one generation to the next. The main question disputed within the literature is whether the first or second generation of Mexican immigrants are more successful with regards to the educational attainment of a high school diploma within U.S. schools.

As previously noted, a number of researchers from the professional literature believe that first generation Hispanic immigrants are more successful in their educational persistence and are attaining higher rates of high school completion (Suarez-Orozco & Suarez-Orozco, 1995; Suarez-Orozco & Suarez-Orozco, 2001; Ginorio & Huston, 2001; Ogbu, 1999; Ogbu, 2003; Steinberg, 1996; Yowell, 2002; Matute-Bianchi, 1991; Rumbaut, 1995). Suarez-Orozco and Suarez-Orozco (1995) suggest that the academic attainment of Hispanics is highest among first generation immigrants and decreases over each successive generation of Hispanic immigrants residing in the U.S. due to a theory based on “dual frame of reference.”

The dual frame of reference theory proposes that each successive generation of immigrants will find less academic success due to frustration, prejudice and eventual disengagement (Ogbu, 1999). Therefore, second and later generations of immigrants will drop out of school at a greater rate than first generation immigrants (Suarez-Orozco & Suarez-Orozco, 1995; Ogbu, 1999; Steinberg, 1996; Yowell, 2002). First generation immigrants have a dual frame of reference and are able to use this to help them to stay focused and to persist through prejudice and racism in school because this frame of reference reminds them that they have greater opportunity in the U.S. than in their country of origin (Ogbu, 1999, Ogbu, 1991). A dual frame of reference helps immigrants

living in poor conditions stay optimistic and focused on the future opportunities they have available to them (Matute-Bianchi, 1991).

While there is debate over which generation of Hispanic immigrant finds greater educational attainment, the majority of the professional research suggests that the second generation of Hispanic immigrants is more successful, as measured through educational persistence and high school completion (Grogger & Trejo, 2002; Kao & Tienda, 1995; White & Kaufman, 1997; Wojtkiewicz & Donato, 1995). Research collected by the U.S. Department of Education in 2006 supports this position. According to the U.S. Department of Education (2006), using 2004 data, the status dropout rate for Hispanic immigrants (first generation) in the U.S. was 38 percent, compared to 14 percent for second generation Hispanics. Researchers, who believe these numbers are accurate, credit intergenerational progress (the theory that each new generation of immigrant will make progress in income and well-being and find greater social and economic success than their parents' generation) for this large educational gain (Grogger & Trejo, 2002).

Kao and Tienda (1995) also believe that second generation Hispanics ought to outperform their first generation classmates because second generation Hispanics enjoy the benefits of their parents' optimism and frame of reference as well as having stronger English language skills from being educated through U.S. schools. In addition, in a study exploring generational status and high school completion, researchers found evidence to support the straight-line assimilation theory: the more time spent living in the U.S., the better immigrants and their children will perform in school (White & Kaufman, 1997). Thus, these researchers believe that second generation immigrants should be more successful than their first generation peers in persisting in high school to earn a diploma.

Perhaps there are conflicting findings in the professional research because it is difficult to measure educational attainment across districts due to a lack of universally accepted measures (Wehlage & Rutter, 1986; Ginorio & Huston, 2001; Greene, 2002). In addition, maybe findings conflict because there are large numbers of illegal Mexican adolescents that never enroll in school. Should these students be counted in the drop out rate? Due to the conflicting research in the professional literature, more research was necessary to help clarify the relationship between generational status and the educational persistence of Mexican-descent students.

Prior Academic Achievement

School persistence has been strongly correlated to prior academic achievement, generally defined through grades, achievement test scores or both, in various research studies (Rumberger, 1983; Portes & MacLeod, 1996; Rumberger, 1995; Wehlage & Rutter, 1986). Research shows that individuals with a history of poor academic achievement drop out of school at higher rates than students with a history of strong academic achievement (Rumberger, 1995).

Students' academic performance in school, as measured by grades, appears to be a risk factor for all races for predicting who will drop out of school (Velez, 1989). Students maintaining higher grade point averages are less likely to become high school dropouts than students who maintain lower grades (Driscoll, 1999). More specifically, in her research study of native and immigrant youth, Driscoll (1999) found that for each one letter improvement in 8th grade grade-point average, Hispanic students decreased their chances of dropping out of school during 9th and 10th grade by 50 percent. Rumberger

(1983) found poor and failing grades to be a strong predictor of dropout for Hispanic, African American and White students. Similarly, a research study by Velez (1989) shows that Mexican and Cuban high school students were more likely to persist to graduation if they had previously earned high grades in school. These findings might be explained by self-efficacy theory, which suggests that an individual's belief in his or her ability to perform a specific task influences the goals that are set as well as how much effort the individual is willing to put into a specific task (Bandura, 1986). Using the example of how much effort a student will exert in school on a mathematics exam: students that do not believe that they can pass a mathematics exam because they have a history of failing mathematics exams will put forth less effort than those students that have developed a belief that they can be successful on a mathematics exam.

The correlation between academic achievement and school persistence is of particular relevance to Hispanics. Research shows that Hispanic students begin kindergarten behind every other racial-ethnic group in reading, mathematics and science achievement; this achievement gap is never closed (Education Trust, 2004). On average, Hispanic students who persist in school to the 12th grade find themselves four years behind their White and Asian peers in academic achievement, according to the NAEP (Thernstrom & Thernstrom, 2003; Education Trust, 2003). Hispanic students are not only unable to catch up to their peers in educational achievement, but, ultimately, Hispanic students possess the highest propensity to drop out of school of any racial-ethnic group in the U.S. (U.S. Department of Education, 2006; U.S. Census Bureau, 2003; Laird, DeBell & Chapman, 2006; Secada, Chavez-Chavez, Garcia, Munoz, Oakes, Santiago-Santiago & Slavin, 1998).

Because prior academic achievement is a strong predictor of high school dropout (Velez, 1989; Driscoll, 1999; Catterall, 1998; Rumberger, 1995), it was included as a variable in this study to confirm earlier findings and to explore its relationship with other proposed independent variables.

Native Language

It is important to investigate the relationship between school persistence and native language because in the U.S. public education is taught solely in English. In addition to classes being taught in English, educational achievement tests, which are frequently used as predictors of future educational attainment, are also only administered in English. Therefore, when a student's native language is not English, the student may have an academic disadvantage that may influence his or her school achievement and attainment. Thus, the current study explored students' native language and its relationship to the educational persistence of students of Mexican descent.

Few studies in the professional literature explore educational persistence as it relates to a student's native language. One study that did explore students' native language as related to educational persistence found that Hispanics that speak Spanish as their native language drop out of school at a higher rate than Hispanics that speak English as their native language (Driscoll, 1999). While there are few studies that directly measure native language as related to educational persistence, there are an abundance of studies that explore the relationship of academic persistence to topics related to native language, such as English language ability, English language acquisition, and the language that is spoken at home.

In a study by Wojtkiewicz and Donato (1995), researchers found that students who lived in a home where a foreign language was spoken completed high school at a lower rate than students who lived in a home where only English was spoken. In a similar study it was found that students who spoke exclusively a language other than English at home were more likely to drop out than those who spoke only English or English and another language at home (White & Kaufman, 1997). These findings may be of particular interest when researching Hispanic school attainment because Hispanics are far more likely to live in households where a foreign language is spoken than their non-Hispanic, White classmates. According to the NSLY dataset, 92 percent of Mexican students lived in households where a foreign language was spoken, as compared to only 9 percent of non-Hispanic, White households (Wojtkiewicz & Donato, 1995). In a related study, Rumberger (1987) found that dropout rates are higher for members of racial, ethnic and language minority groups as well as for members of low SES. Rumberger further suggested that family factors, such as speaking a language other than English at home is related to dropping out of school. While not clearly explaining this finding in his study, the implication could be that in households where individuals speak another language at home the adults are less fluent in English and maybe less capable to assist their children with schoolwork.

Research studies suggest that English language acquisition and ability, which are sometimes used by educators as academic gauges for non-native speakers of English, have an effect on school achievement (Rumbaut, 1995). In his study, Rumbaut found that English language proficiency was shown to increase the school performance of Hispanic and other immigrant children. In a related study of Mexican American

language minority youth, Rumberger and Larson (1998) found that Hispanic youth with limited English proficiency were more likely to earn lower grades and to drop out of school than were their Mexican American classmates who were fluent in English. Thus, the current study explored students' native language and its relationship to other proposed independent variables and to the educational persistence of students of Mexican descent.

School Demographic Variable

Urbanicity

It is important to investigate urbanicity as a school demographic variable in this study because ethnic and low SES groups, such as African Americans, Native American and Hispanics, have migrated from rural areas in the early 20th century to settle in high concentration in large cities today (Gordon, 2003). Hispanics are highly concentrated in urban areas throughout the East, West and Southwest (Gordon, 2003). The Council of Great City Schools (2005) reports that students enrolled in urban schools are most likely to be minority and are twice as likely to be poor or English language learners as compared to students enrolling in suburban and rural systems across the country.

Urbanicity has been used as a variable in a small number of research studies to investigate the relationship between the density of a schools' locale and student persistence measured through the attainment of a high school diploma. Orfield, Losen, Wald and Swanson (2004) found that students in urban schools were significantly more likely to drop out of high school than students in suburban or rural schools. This finding is of interest in the current study because Gordon (2003) found Hispanic students to be highly concentrated in urban areas.

Betts, Rueben and Danenberg (2000) agree, in their study of California high schools, that urbanicity is related to dropout but they contend that students drop out of urban schools at a greater rate because urban schools possess larger numbers of disadvantaged students. Furthermore, Betts, Rueben and Danenberg (2000) found that urban schools are more likely to be staffed with less educated and less experienced teachers. Thus, the current study explored students' school urbanicity and its relationship to other proposed independent variables and to the educational persistence of students of Mexican descent.

School Input Variables: Parent Demographic Variables

Parental Education Level

There is a relationship between parental education level and their children's propensity to drop out of school (Rumberger, 1983). More specifically, students are more likely to drop out of school when they have parents that have dropped out of school. In addition, students who have parents with higher levels of education are more likely to graduate from high school (Wojtkiewicz & Donato, 1995). Parents that possess higher levels of education may provide home environments that are conducive for supporting educational achievement. In addition, parents with higher levels of education generally have a higher income and more resources to provide education-related support to their children (Wojtkiewicz & Donato, 1995).

Wojtkiewicz & Donato (1995) conducted research utilizing the National Longitudinal Survey of Youth (NLSY79) dataset to investigate the effects of foreign birth and family background on educational attainment. This study explored several demographic factors, including parental education, amongst four Hispanic populations:

Mexican, Puerto Rican, Cuban and other Hispanic as compared to their non-Hispanic White, Black and American Indian classmates. Results of this study suggest parental education to be a significant factor in educational attainment amongst Hispanic students. More specifically, Hispanic students in this study who had college-educated parents graduated from high school at a rate of over 95 percent, compared to students who had parents with less than a high school education, who graduated high school at only 62 percent (Wojtkiewicz & Donato, 1995).

Rumberger's (1983) results differed from that of Wojtkiewicz and Donato's (1995) in that Rumberger found that only the students' fathers' educational attainment was related to high school completion. More specifically, Rumberger (1983) found that having a father with a high level of educational attainment was correlated to high school completion for White, African American and Hispanic males. In this study, mothers' level of educational attainment was only correlated to high school completion for African American males.

Parental education level is one of the main variables measured in the socio-economic status (SES) construct, which has been found to be closely related to educational persistence. Socio-economic status is generally constructed of parental education levels, parental job status, and family income. Thus, to confirm earlier findings in the literature, parental education level, as part of students' socio-economic status, was explored in relation to the educational persistence of Mexican descent students in the proposed study.

Socio-Economic Status (SES)

The Coleman report of 1966 found the majority of differences in educational attainment between students to be due to demographic variables (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld & York, 1966). Since that time, research has consistently found SES to have a powerful influence on school persistence, with some studies suggesting that SES is the single strongest demographic predictor of educational achievement and attainment (Rumberger, 1995; Kao & Tienda, 1995; Portes & MacLeod, 1996; Bryk & Thum, 1989). These same studies have shown that students from low-SES families drop out of school at a higher rate than students from higher SES families (Rumberger, 1995; Kao & Tienda, 1995; Portes & MacLeod, 1996; Bryk & Thum, 1989). SES is generally measured as a composite of parents' education, job status and income however, some studies include family structure factors such as number of children in home. It is logical that SES is related to educational achievement and attainment because a families' ability to invest in their children's education is restricted by their human and economic resources (Driscoll, 1999). Thus, families with more resources are better able to provide education related support to their children (Wojtkiewicz & Donato, 1995).

While many studies have found that SES is a strong predictor of educational persistence and attainment, the relationship between SES, race, ethnicity and educational persistence is less conclusive. Velez (1989) found both social class and ethnicity to be strongly related to dropping out of school, with low-SES and minority students facing the greatest risk of dropping out. Another research study (Wehlage & Rutter, 1986) found that when family background characteristics, such as SES, were held constant, racial/ethnicity did not significantly predict educational attainment. Other studies suggest

that at least half of the differences in dropout rates between racial/ethnic groups can be attributed to SES (Rumberger, 1983).

In looking expressly at the relationship between SES and academic achievement among Hispanic students, Kao and Tienda (1995) found that SES explained the entire difference between achievement test scores and grades for Hispanic and White students. Specifically investigating the Mexican population, Farkus (1996) found that low-SES Mexican American students scored significantly lower on achievement tests than did their middle- or upper-SES peers. However, socio-economic status alone does not account for all differences between educational success and failure. When SES is held constant, other factors, such as school process variables, affect educational persistence and account for differences in educational attainment between different minority groups, (Rumberger, 1991). Because SES is strongly correlated to attainment and achievement in many research studies, the current study explored SES as one of several variables related to educational persistence for students of Mexican descent.

Parental Involvement

Parents exercise a deep and lasting effect on their children's achievement in school through their messages about education, their behavior and their style of parenting (Steinberg, 1996). Children learn how important school is through their parents' messages, both intended and unintended. Through actions, such as attending school events, volunteering at school and helping children with schoolwork, parents show their children how much they value education.

There is a widespread belief amongst educators that parental involvement is related to positive educational outcomes for students (Balli, Demo & Wedman, 1998). In addition, parental involvement during high school might have an effect on educational persistence. Several research studies have shown that school persistence is related to parental involvement with school (Steinberg, 1996; Coleman, 1988). Parental involvement, however, can be defined in numerous ways. Parental involvement with school generally takes place at school for White, middle-class parents. Parental involvement for this population generally includes parental participation at school meetings, volunteering at school events and communication with school personnel as well as support of education and schoolwork at home (Steinberg, 1996). However, for the majority of the immigrant population, parental involvement with school takes place primarily at home (Valencia, 1997).

There are many barriers preventing immigrant parents from getting involved at their children's school. Factors like limited English proficiency, work schedule, unfamiliarity with the U.S. school process and differences in cultural norms in dealing with education, sometimes prevents immigrant parents from getting involved at their children's school (Tinkler, 2002). For immigrants, parental involvement at home may include discussing school and schoolwork, tutoring and expressing high educational expectations to their children (Valencia, 1997). Though defined various ways, parental involvement has been proven to be related to educational persistence (Steinberg, 1996; Coleman, 1988). Therefore, the current study will include parental support through "check homework is complete", "discussed report card", "worked on homework

together”, “attends PTA meetings” and “act as a volunteer at school” as variables to further define the construct.

Process Variables
Attendance

There is a wealth of research that finds school attendance to be a strong predictor of drop out for adolescents (Rumberger, 1995; Rumberger & Larson, 1998; Wehlage & Rutter, 1986; Bryk & Thum, 1989; Roderick & Cambrun, 1999). More specifically, students who have higher absentee rates from school are more likely to drop out than students who have lower absentee rates. Research has found absenteeism to be the single greatest predictor of dropping out of school (Lee & Burkam,1992; Bryk & Thum, 1989). This finding is especially important for Hispanic and African American students because minority students are more likely to be absent from school than White students (Rumberger, 1995; Bryk & Thum, 1989).

Velez (1989) conducted a research study to investigate the antecedents to dropping out of school for four groups of students: Mexicans, Puerto Ricans, Cubans and Whites. Attendance, especially unexcused absences or truancy, were directly related to dropping out of school for Mexican, Cuban and White students in this study. The findings for Puerto Rican students, however, showed the opposite; increased days absent from school led to lower chances of dropping out. Velez could not explain why these differences emerged. The findings for Mexican, Cuban and White students, suggesting that attendance is correlated to dropping out of school, are in agreement with most prior research.

Research suggests that the relationship between attendance and dropping out of school could be reflective of students' engagement in school (Rumberger & Thomas, 2000; Roderick & Cambrun, 1999). Bryk and Thum (1989) concur with this finding; they propose that dropping out is not a spontaneous decision but rather a gradual drifting away from school over time. Dropping out is the end point of the process of distancing one's self from the academic and social life of school. Because Bryk and Thum (1989) see dropping out as the end result of absenteeism and truancy, they conducted a study to explore which student and school level variables predict dropping out and absenteeism. Amongst other findings, Bryk and Thum (1989) found moderate to high absenteeism, behavioral problems and lack of activity involvement to be highly predictive of dropping out of school. In addition, they view early absenteeism as the strongest student-level predictor of dropping out of school. Furthermore, findings suggest that absenteeism is less prevalent in schools where faculty are interested and engaged with students (Bryk & Thum, 1989). Schools in which personnel deal with disciplinary issues promptly, effectively and fairly will be perceived as interested and engaging by students and will have higher student attendance rates. In addition, schools that have a committed faculty, a safe and orderly environment and an emphasis on academics will have lower absentee rates and lower dropout rates (Bryk and Thum, 1989).

Roderick and Cambrun (1999) found high rates of absenteeism in early 9th grade to be related to failure of academic courses for all 9th grade students. In their study of 9th graders in the Chicago Public School System, 29 percent of students who had good attendance, defined as five absences or less, failed at least one course. The percentage of students failing at least one course rose to 59 percent for those students who missed 15

days of school or more in the 9-week quarter. Thus, attendance is related to failure of academic classes for 9th grade students, and failure of academic classes is related to dropping out of school.

In prior research cited in this paper, it has been suggested that students' prior academic achievement, as measured through achievement tests and grade point average (GPA), is correlated to educational persistence (Portes & MacLeod, 1996; Rumberger, 1995). Wise (1994), for example, found that a correlation does exist between student attendance and GPA. In addition, Wise found that gender had no effect on the students' attendance or grade point average. This study suggests that attendance relates to GPA, and GPA relates to educational persistence. Thus, there is also an indirect relationship between attendance and educational persistence.

Bryk and Thum (1989) propose that school experiences for eventual student dropouts follow a progression from elementary school through high school. The progression begins with difficulties in elementary school that lead to behavioral and attitudinal problems, as well as attendance problems in high school, then eventually to dropping out. Finn (1989) developed a similar model that helps to explain the link between school attendance and persistence.

Finn's (1989) frustration/self-esteem model is one way to explain the link between school attendance and persistence. While much of the available research discusses who drops out of school, Finn's model discusses why students drop out of school. With an understanding of why students drop out of school, school personnel can make efforts to decrease the drop out problem. Similar to the self-efficacy theory, the frustration/self-esteem model proposes that early school failure leads to a decrease in

self-esteem, which leads to problematic school behavior, including school disruption and absenteeism, and, eventually, dropout (Finn, 1989).

The frustration/self-esteem model suggests a causal link between early school failure, absenteeism and, ultimately, school withdrawal. School failure often begins in elementary school as the result of low grades, low standardized test scores or intelligence quotient test results. The disappointment, frustration and embarrassment that often comes with school failure commonly has a negative effect on self-esteem, self-concept and academic self-concept. A decrease in students' self-esteem frequently leads to disruptive classroom behavior, delinquency, truancy, increased absenteeism and drop out (Finn, 1989). Therefore the current study explored absenteeism and its relationship to educational persistence for students of Mexican descent.

Educational expectations

Educational expectations are psychological constructs that change over time and that can be altered or influenced by various factors. Educational expectations are grounded in a concrete, personal understanding of the opportunities and resources that individuals have available to them through their immediate social context (Mickelson, 1990). The concept of educational expectations refers to how much schooling students realistically believe they will complete. People in different socio-economic strata often have different expectations of their chances of success (Kerchoff, 1976). Research shows the lower the SES of a family, the lower the educational expectations of the students (Trusty, 1998).

Most students begin with high expectations for how much schooling they believe they will complete. Students' expectations for the future are affected by their knowledge of the real world (Kerchoff, 1976). These expectations are eventually lowered as students see others like themselves experiencing successes and failures (Kerchoff, 1976). Younger students are likely to have unrealistically high expectations, but late in the high school years expectations become more realistic (Hanson, 1994). Students with decreased expectations then develop the attitudes, aspirations and activities that reflect a realization of their limited opportunities and of how the class structure works (Bourdieu, 1973).

Educational expectations are an important variable to study when researching educational persistence because there is a causal relationship between expectations and outcomes (Yowell, 2002). In a study by Rumberger (1995), low educational expectations were found to be related to dropping out of high school for students of all races. Research shows that students from low-SES families, which include most Hispanic students in the U.S., are likely to lower their expectations over time (Hanson, 1994). Research also shows that Hispanic females are the most likely to decrease expectations over time (Trusty, 2000). It would be valuable to the educational persistence research to determine if expectations predict persistence for Hispanic students and what factors influence expectations over time for Hispanics. Few research studies deal directly with Hispanic or Mexican American educational expectations. The small number of studies that do discuss this topic are referenced below.

Constance Yowell (2002) investigated the relationship between Hispanic students' conception of the future and their risk status for dropping out of school. Yowell

used a mixed-method design that utilized both a quantitative and a qualitative approach. The survey administered to students asked about their educational and occupational expectations, aspirations and fears. The study also disaggregated by country of origin. Additionally, some of the participants were interviewed regarding specific strategies they would use to fulfill their expectations and aspirations, as well as the specifics of what they could do to avoid their fears.

The results of Yowell's study confirmed a gap between Mexican-descent students' educational aspirations and educational expectations. Stated another way, Mexican-descent students do not expect to be able to achieve their personal educational goals; this group of students expects to fall short of their educational goals. This finding is particularly significant because previously Rumberger (1995) found that low educational expectations were found to be related to dropping out of high school for all students, including Hispanics.

In further explaining these results, Yowell agreed with Mickelson's (1990) earlier findings that expectations are grounded in concrete knowledge and a personalized understanding of the resources and opportunities available. It would make sense that if Mexican-descent students have the opportunity to have "instrumental relationships with institutional agents" that they may gain access to strategic or culturally important information about school decisions and responsibilities that could aide them in finding academic success at school (Stanton-Salazar, 1997).

Sandra Hanson (1994) conducted a study to compare the extent to which gender, race and class influence lost talent among late high school students and early post-high school graduates. Lost talent is defined by Hanson as occurring when students who show

early signs of educational talent have (1) educational expectations that fall short of their aspirations, (2) reduced expectations over time, or (3) are not able to realize their earlier expectations (Hanson, 1994). The outcome of the study suggests that the effects of race were not a significant factor when holding SES constant. However, youth from upper SES backgrounds were found to be less likely to experience lost talent. With the understanding that the majority of Mexican-descent families live at or near the poverty level, Mexican-descent students are more likely to experience the loss of talent of reducing or never achieving their educational expectations. Furthermore, Rumberger (1995) found that low educational expectations were related to dropping out of school for all students. Hence, Mexican-descent students may be more susceptible to dropping out of school due to their probability of being from a low SES family.

The sample in Hanson's study (1994), however, only included those students who expected to earn a college degree and who had scored above the mean on both standardized mathematics and reading tests completed in their 12th grade year. This sampling of students makes it difficult to draw generalizations for the Hispanic population because, on average, Hispanic students are 4 years behind grade level on achievement tests (NAEP) when they are in the 12th grade (Thernstrom & Thernstrom, 2003; Education Trust, 2003). Also, for the minority of Hispanic students that did score above the mean in 12th grade, only a small percentage may expect to earn a college degree due to other cultural, socio-economic or psychological factors. More research is needed to determine what variables could support low-SES students to maintain their educational expectations and to persist in school.

Jerry Trusty (1998) found SES to be the strongest and most significant predictor of educational expectations. Dividing respondents into four SES quartiles, Trusty found considerable differences in educational expectations between the four SES quartiles. For example, of respondents in the lowest SES quartile, 20 percent of students, expected only to finish a high school degree while 12 percent expected to complete a master's degree. In the highest SES quartile, only 2 percent of the respondents expected only to finish high school, while 40 percent expected to earn a master's degree. The study showed the higher the SES of the family, the higher the educational expectations of the children. Trusty's (1998) study also found that parental involvement, with regard to attending school activities and entertainment events, correlated with educational expectations. Parental involvement with regard to helping students with homework was not reported to be correlated to educational expectations. Gender was also weakly related to educational expectations, with girls generally indicating higher educational expectations than boys.

Jerry Trusty (2000) also conducted research using the NELS:88 data to investigate the stability of educational goals over students' adolescent years. Participants were selected by the following variables: high academic expectations, desire to at least complete a bachelor's degree, and low in achievement. Low achievement in this context was defined as students having scored below the median in at least one 8th grade reading or mathematics test. Students' educational expectations were initially measured in their 8th grade year, then again measured 6 years later. If participants still expressed the expectation of completing a bachelor's degree during the posttest, they were considered to have stable expectations. If, on the other hand, participants responded that they no

longer expected to complete a bachelor's degree, they were considered to have lowered expectations.

The results of the regression analysis showed SES to positively predict stable educational expectations. Thus, students from low SES families, a category including the majority of Mexican-descent students, were more likely to fall short of their personal educational goals and would also be more likely to drop out of school.

Behnke, Piercy and Diversi (2004) believe that the best predictor of academic achievement in youth is educational aspirations. While the current study did not focus on educational aspirations, the findings of Behnky et al are relevant to the educational expectations of Hispanic students. In an effort to inform educators about the importance of academic and occupational aspirations, Behnke, Piercy and Diversi (2004) conducted multiple in-depth interviews with 10 families, each including the mother, father and the adolescent student, from a local Hispanic after-school program. The results showed that parents who possessed little or no educational aspirations had children with little or no educational aspirations. Only half of the parents interviewed were capable of stating their child's current aspirations for future education and employment. Only 2 of the 10 youth expressed a desire to pursue a college degree, while 8 of the 10 youth acknowledged that it would be a wise idea.

Hispanic youth in this study cited three main barriers to the attainment of their aspirations: 1) lack of knowledge to navigate the path to achievement, 2) low English proficiency and 3) racism. Even the youth that had high educational expectations did not know the pathway to follow to attain their goals. A child that wanted to be a doctor did not know how much education he would need to attain this goal nor the steps he or she

must accomplish in school to get there. Many students in this study cited racism as a real deterrent to attaining their aspirations. Children replied that teachers are racist, that they believe White people more than Hispanics, and that they will not give you help when you raise your hand. This lack of trust among the students toward the teachers seems to be a real barrier to educational attainment.

Educational aspirations in this study were defined as how far in school students “hope” to go, as compared to educational expectations that were defined as how far in school students “expect” to go. It may be possible that the lack of trust, and perceived racism, that Hispanic students feel regarding their teachers has a negative effect on how far in school they expected to go- their educational expectations.

Ann Driscoll (1999) examined the relationship between Hispanic youth and the factors related to their dropout rate from school. Driscoll found an inverse relationship between educational expectations and the likelihood of ever dropping out of school. Overall, Hispanics that had expectations of graduating from college dropped out of high school at an approximate rate of 10 percent, while those Hispanics with lower expectations dropped out of high school at the rate of 33 percent (Driscoll, 1999). In addition, Driscoll found no differences in educational expectations between first, second or third generation Hispanic students during the 8th grade. However, during their 10th grade year, third generation Hispanic students were more likely to have higher educational expectations than their first generation peers (Driscoll, 1999).

As noted above, educational expectations have been shown in several studies to be related to academic persistence and drop out (Rumberger, 1995; Driscoll, 1999). More specifically, students with low educational expectations are more likely to drop out

of school than their peers who aspire to higher levels of education. Research studies focusing on Hispanic students confirm these findings (Rumberger, 1995; Driscoll, 1999). However, little research exists investigating educational expectations in relation to the educational persistence of Mexican-descent students. As Hispanic students have the highest propensity to drop out of school (Kaufman, Kwon, Klein & Chapman, 1999; U.S. Census Bureau, 2004), and students of Mexican descent are the lowest achieving of all Hispanic groups (U.S. Census Bureau, 2004), more research was necessary to investigate if these findings hold true for students of Mexican descent.

Social Capital

Social capital is a relatively new term in the field of social science research and does not have one standard definition in the professional literature. Rather, social capital is conceptualized and operationalized in a variety of different ways (Dika and Singh, 2002). MacCullum (2001) defines social capital as the sum total of knowledge, information, support, and encouragement that is available to an individual through the social networks to which he or she belongs. Coleman (1990) broadly defines social capital as any aspect of a social relationship that has utility as a resource for an individual. While these definitions focus on social capital in a global sense, other researchers more narrowly restrict the definition of social capital as it applies to education within the school system.

School systems are not isolated from society's inequities. The inequities in social capital and SES are evident in schools as well as the larger society. Bourdieu's (1986) social capital theory, also referred to as social reproduction theory, postulates that low-

income minorities are lacking the necessary resources to aid their children with their education. Bourdieu suggests that schools reproduce the inequalities in society by valuing and rewarding the students that possess the cultural capital of the dominant white, middle-class (Bourdieu, 1986). Low-SES minority parents, Bourdieu suggests, lack the connections and interactions with middle- and upper-class individuals who possess the strategic information regarding effective ways to navigate through the school system (Bourdieu, 1986). This lack of social connection prevents low-SES minority parents from providing their children with the strategic information they need to be successful in U.S. schools (Stanton-Salazar, 1997). Similarly, Lareau (1989) believes that to be successful in this society, individuals need to acquire the cultural attributes of those who control the power and run the major institutions, like schools. While Conchas (2001) concurs that schools replicate the social and economic inequalities of society, he also believes that schools can circumvent these inequalities if teachers and students work closely together toward the common goal of academic success, thereby increasing the students' access to school-based social capital.

When studying social capital, several researchers define social capital not specifically within a school setting, but rather within an educational context. Coleman (1990) defines the benefits of social capital within the educational setting by expressing that within cohesive communities adults can facilitate the role of parenting through each persons' shared supervision over children. Moreover, Coleman believes that with social capital there is reciprocity of expectations amongst adults and group enforcement of norms. McQuillan (1998) also emphasizes the role of family and community in children's success, defining social capital as the relationships within the family and

community that are of value toward helping children to be successful. These relationships provide love, encouragement and support as well as information and knowledge (McQuillan, 1998). Furstenburg and Hughes (1995) similarly define social capital as the extent to which parents and students are engaged in a protective social network and closely connected through shared expectations, trust and loyalty. Stanton-Salazar and Dornbush, in their 1995 study, also focus on social relationships and education; they defined social capital as the social relationships through which an individual potentially could obtain resources and support. Examples of school resources and support might include tutoring, academic counseling, and guidance to explain the college admission or financial aide process.

Though Stanton-Salazar and Dornbush defined social capital in their 1995 research, Stanton-Salazar (1997) later went on to elaborate on this definition of social capital by emphasizing the importance of low-SES minority students needing to form an “instrumental relationship with an institutional agent” in order to be successful in school. According to Stanton-Salazar (1997), institutional agents are the teachers and counselors within an individual’s school. These institutional agents are thought to have access to strategic or culturally important information about school decisions and responsibilities that could aide low-SES minorities in finding academic success. The current study utilized Stanton-Salazar’s (1997) definition of social capital because it applies specifically to the sociology of the educational process and because it does not require the cooperation of anyone outside of the student and his or her school’s faculty to find success. The benefit of defining social capital using only institutional agents at school is that neither the student nor the school have the power to control a student’s friends,

family, or community, thus we are reducing as many uncontrollable variables as possible in our strive for educational persistence.

Within the research framework, the definition of social capital explains how it is conceptualized, while the constructs determine how it is operationalized. Social capital has been constructed in many different ways by social science researchers; these differences should be taken into account when reviewing research studies. Furstenberg and Hughs (1995) utilized 18 different measures, including family cohesion, educational aspirations and school quality to construct social capital. Teachman, Paasch and Carver (1996) constructed social capital using parent-child connectivity, parent-school connectivity, knowing the parents of your child's friends and the number of times a child has transferred schools. Coleman (1988) constructed social capital through studying small families, family composition and parental expectations, while McNeil (1999) constructed social capital through parental involvement in school. Because this research study is framed on Stanton-Salazar's definition of social capital, emphasizing the importance of low-SES minority students forming an instrumental relationship with an institutional agent in order to be successful in school (Stanton-Salazar, 1997), social capital was constructed through student perceptions of teachers' support.

The importance of social capital in schools for low-SES and minority students

In recent research studies, it has been suggested that social capital may increase the academic engagement of low-SES and minority students. Conchas (2001) proposes that schools can structure success and failure for minority students by using institutional mechanisms to impact school engagement. Institutional mechanisms, like specialized

high school programs, can create opportunity structures for success within schools for minority students (Conchas, 2001). When minority students feel that they cannot succeed, some researchers postulate, they lower their expectations, shut down and stop trying. Minority children reduce their efforts in school when they believe that their efforts are not worth the outcome (Ogbu, 1978). Low-SES minority students need to feel connected to institutional agents at school who can provide them with the knowledge, resources and encouragement in order to find success in school (Stanton-Salazar, 2001). Teachers and counselors who are functioning as institutional agents can help students believe that they do have control over their future, their education and their social mobility (Stanton-Salazar, 2001).

The Relationship between Social Capital and Educational Persistence

Social capital is an important variable to explore when researching educational persistence and the dropout rate because recent studies have found that social capital and dropping out of school are related for some groups of students (Coleman, 1988; Teachman, Paasch and Carver, 1996; White & Kaufman, 1997; Stanton-Salazar & Dornbusch, 1995). In a 1988 study, Coleman found a negative relationship between social capital and the dropout rate of Catholic school students; the more social capital a student possessed, the greater the chance that the student would persist through school and graduate, as opposed to dropping out. White and Kaufman (1997) also found a strong negative correlation between social capital and dropping out of school. Social capital effects in this study were so strong that they outweighed the effects of ethnicity,

generational status, and English language usage and buffered the effects of SES (White & Kaufman, 1997).

Coleman (1988) found a positive relationship between a student's level of social capital and their persistence in school. Using the data set from the HSB study, Coleman investigated the effect that social capital has on dropout rate for public, Catholic and other private school students. Social capital was measured both within the family and within the community. Social capital was operationalized within the family by family structure and within the community by family mobility (changing schools). A logistical regression showed that public school students dropped out of school at more than four times the rate of Catholic school students and that private school students also dropped out at more than three times the rate of Catholic school students. After adjusting for financial, human and social capital among the three sets of schools by standardizing the populations, there were only small differences. While students' levels of religious service did correlate inversely to dropout rate, it did not explain all the differences generated by enrollment in a Catholic school. Coleman (1988) hypothesized that this strong level of social capital is due to the strong network of connections that Catholic school students have to their families, teachers, friends and church community. Catholic school students often interact with their friends, teachers and church community both inside and outside of school on a regular basis, year-round.

From a study cited earlier, social capital showed a strong negative relationship to dropping out of school for a large, diverse sample of students (White & Kaufman, 1997). In this study, social capital was defined as possessing any of the following: parents present in the home; parents who monitor homework; parents who frequently talk to their

child; and a sibling enrolled in college. Social capital also included the number of siblings a student possesses. The researchers found that even after controlling for all other factors, such as age, test scores, grades and educational expectations, the effects of social capital were strong and significant. Social capital effects in this study outweighed the effects of ethnicity, generational status, and English language usage and buffered the effects of SES (White & Kaufman, 1997).

Teachman, Paasch and Carver (1996) also used the data set from the HSB study used by Coleman (1988) to investigate the effect that social capital has on dropout rate for public, Catholic and other private school students. Teachman, Paasch and Carver (1996) replicated Coleman's study because they believed that social capital was related to dropout rate but they did not believe that Coleman had effectively measured social capital. In this study, Teachman, Paasch and Carver (1996) operationalized social capital as parent-child connectivity, parent-school connectivity, affiliation with the parents of your child's friends and the number of times a child has changed schools. Teachman, Paasch and Carver also used several factors in their model as control variables, such as parent income, parent education, family structure, and having a sibling who has dropped out.

The analyses of Teachman, Paasch and Carver's (1996) study showed findings contrary to Coleman's (1988) study. Teachman, Paasch and Carver (1996) found that when all measures of social capital were considered together, Catholic school attendance is unrelated to dropping out of school. This contradicts Coleman's (1988) findings that public school students were four times as likely as Catholic school students to drop out of school. In addition, Teachman, Paasch and Carver (1996) found that parent-school

connectivity, a measure of parent interaction with school staff for academic, behavioral, informational or volunteer reasons, is also unrelated to dropping out of school. One factor that was found to be significantly related to dropping out in this study was the number of times the student changed schools. Thus, the current study decreases some of the inconsistencies in the professional research by clarifying the relationship between social capital and educational persistence.

Social capital in the school system

Teachers and counselors represent a primary source of social capital that is available to adolescents because they can provide students with countless valuable resources through their roles as instructors, advisors and mentors (Stanton-Salazar, 1997). Research on students' perceptions of teacher care and support suggest that students are more persistent, engaged, and involved in school when they believe that their teachers care about and support them (Croninger, 1997; Ford, 1985; Brewster & Bowen, 2004). Croninger (1997) proposes that teachers are an important form of social capital for students at-risk of academic failure. Croninger and Lee (2001) define students "at-risk" as those who are members of socially disadvantaged groups, those who experienced school-related or academic problems prior to high school and those that fall into both of these categories. Teachers can help at-risk students compensate for their deficits in financial and human capital by providing educational counseling and tutoring. The emotional support and encouragement that teachers provide struggling students could be enough to bolster the confidence of adolescents who doubt their academic ability (Croninger, 1997). School-based social capital, including tutoring, academic counseling,

support and encouragement, is especially important to at-risk students who may not have access to this type of social capital elsewhere (Croninger, 1997).

The role of teachers as a source of social capital is of particular importance to Hispanic students. Dropping out of school is a systematic process of academic and social disengagement (McNeal, 1995). Thus, students who stay academically and socially engaged in school are less likely to drop out. Hispanic students often disengage and drop out of school because they fail to make connections with teachers and they do not feel supported in school (Nowicki, Duke, Sisney, Stricker & Tyler, 2004; Fine, 1987; Conchas, 2001; Rumberger, 1987; Kitchen, Velasquez & Myers, 2000). These perceived connections and feelings of support may be particularly important to Hispanic students because Hispanic students come from a culture that values relationships, cooperation and communalism as opposed to a U.S. school culture that values independence, competition and individual achievement (Vasquez-Nuttall & Romeo-Garcia, 1989). Research shows that Hispanic students' perceived connections and support from staff affect how often students ask for assistance with schoolwork, how engaged students are in school, how often they exhibit problem behaviors, and how meaningful school is to students (Stanton-Salazar, 2001; Brewster & Bowen, 2004; Ford, 1985; Croninger, 1997).

Stanton-Salazar (2001) found, in a large multi-sample study, that Hispanic students would not ask for assistance from adults at school if they had not first developed a trusting relationship. In addition, the same study found that low-SES Hispanic students often did not ask for assistance with schoolwork because of feelings of shame, confusion and powerlessness. It thus follows that a trusting relationship with an institutional agent

could decrease negative feelings and increase students' trust with adults to be able to ask for assistance.

Rumberger (1995) also found a relationship between dropping out of school and student perceptions of teacher care and support for Hispanic students. Rumberger (1995) conducted a research study to investigate the factors that are predictive of 8th grade students dropping out of school before the 10th grade. Rumberger found a large variety of demographic, family and previous educational achievement factors to be predictive of 8th grade students dropping out of school. However, after controlling for demographic and family background variables, absenteeism and lack of participation in school activities, both measures of school engagement, were highly predictive of dropping out of school. In addition, after controlling for background and attitudinal characteristics, students who believed they had better and more caring teachers had significantly lower odds of dropping out of school.

Brewster and Bowen (2004) investigated the effects of student-perceived teacher support on the school engagement of middle and high school Hispanic students. In this study, school engagement was measured through students' problem behavior at school and school meaningfulness- which measured how much students like school. The researchers used hierarchical linear regression analyses to investigate the relationship between students' perceptions of teacher support and school engagement measures. School level (high or middle), gender, family structure (other than two parent household) and student participation in the federal free and reduced school lunch program were all used as control variables to reduce the amount of outside influence that might affect the

results of the study. In the second step of the regression, parent support, another form of social capital, was also used as a control variable.

The analyses of this study showed that after considering the four demographic control variables and perceived parental support, perceived teacher support significantly affected both problem behaviors and school meaningfulness for Hispanic students. More specifically, as the level of perceived teacher support increased, mean levels of problem behavior decreased and mean level of school meaningfulness increased. More investigation is needed in the area of teacher support and social capital as the research exploring these variables is limited (Brewster & Bowen, 2004).

While not specific to Hispanic students, Ford (1985) found that students' perceptions of teachers impacted their behavior and engagement in school. Ford (1985) calculated minority students' perceptions of school atmosphere by measuring teacher affiliation and school affiliation. Teacher affiliation was measured through self-observation scales of students' perceptions of teacher acceptance and care. Students who rated their teachers highly on the teacher affiliation scale found teachers to be helpful and considerate; those who rated their teachers low on the teacher affiliation scale found teachers to be inconsiderate and arbitrary (Ford, 1985). School affiliation was also measured through self-observation scales in which a high score indicated that students found school to be a happy place where they got involved, and a low score found that students did not enjoy school nor did they want to get involved (Ford, 1985). Students were also asked to complete a school atmosphere questionnaire to assess student perceptions of the school environment in general.

Student data on school and teacher affiliation were analyzed along with student perceptions of school atmosphere through t-tests (Ford, 1985). The results showed that students who perceived their teachers as attentive and caring were more likely to be enthusiastic about their school and to get involved in school-related activities. Similarly, students who found their teachers to be inconsiderate and uncaring were more likely not to enjoy school and not to get involved in school-related activities (Ford, 1985). Clearly, access to social capital at school has benefits: students feel cared about by their teachers and are encouraged to get involved and engaged in school activities, which will ultimately result in retention.

Though these studies illustrate the importance of social capital in relation to the academic engagement of Hispanic students, research was needed to explore whether or not these relationships are significant for students of Mexican descent. Specifically, research was needed to explore the relationship between social capital and educational persistence for Mexican-descent students.

Need for the Study

Congress and local school systems have been trying to reduce the graduation gap that plagues Hispanics students, especially students of Mexican-descent, for more than three decades but have made little progress (U.S. Department of Education, 2006; U.S. Census Bureau, 2003; Laird, DeBell & Chapman, 2006). Hispanic students begin their public education behind every other racial group in standardized academic achievement and are never able to catch up (Education Trust, 2003). Ultimately, of all people of color, Hispanic students face the greatest propensity to drop out of school (Kaufman, Kwon &

Klein, 1999). Mexican-Americans achieve considerably less education than all other racial/ethnic populations in the U.S., and this is the principal reason for their comparatively low income (Grogger & Trejo, 2002). Dropping out of school is related to great economic, social and physical costs, including low income, social services, incarceration and potential for victimization. Thus educational persistence was a critical variable that needed to be investigated for the current study.

Schools have an obligation to accept each student who walks through their doors and to educate them, regardless of their academic deficits, emotional baggage or other outside factors that might impede student learning. With this in mind, the current study focused not only on earlier discussed demographic variables but also on those process variables that staff may be able to influence during the regular school day. Stanton-Salazar's (2001) definition of social capital was chosen for the current study because it does not rely on family or community factors to help students find academic success. Stanton-Salazar defines social capital as students gaining access to important strategic information for school success through positive relationships with and support from members of the school community (teachers, counselors). Stanton-Salazar (2001) further proposes that low SES minority students need to have an instrumental relationship with an institutional agent to find success at school (Stanton-Salazar's, 1997).

Hispanic students come from a culture that values relationships, cooperation and communalism (Vasquez-Nuttall & Romeo-Garcia, 1989). Research suggests that Hispanic students, including students of Mexican-descent, often disengage and eventually drop out of school due to their failure to make connections with school staff and because of the perception that they do not feel supported and cared about in school (Nowicki,

Duke, Sisney, Stricker & Tyler, 2004; Fine, 1987; Conchas, 2001; Rumberger, 1987, Kitchen, Velasquez & Myers, 2000). Perceived relationships and feelings of support from school staff, defined as social capital, may be especially important to Mexican-descent students due to their cultural emphasis on relationships and their history of poor educational persistence. Thus, further study of school-based social capital was important and may be beneficial to the educational persistence of Mexican-descent students.

The current study addresses a gap in the professional research on school-based social capital as it relates to the educational persistence of Mexican-descent students. The current study is similar to and builds on the research of Croninger and Lee (2001), Brewster and Bowen (2004), and White and Kaufman (1997). Croninger and Lee (2001) conducted a similar study using a measure of school-based social capital to investigate the educational persistence of “at-risk” students. These researchers defined “at-risk” as students who were living at or below the poverty level; belonging to a language minority group; belonging to a disadvantaged minority group (Black, Hispanic, American Indian); living in a single-parent household; or having a mother who failed to complete high school (or father, if head of household) (Croninger & Lee, 2001). Forty-one percent of the students in this study belonged to the “at-risk” group according to the researchers’ definition. The current study constructed school-based social capital in a similar way to how it was created in Croninger and Lee’s (2001) study.

White and Kaufman (1997) investigated the effects of family-based social capital on the high school completion of Hispanic immigrants. In their study, these researchers calculated their social capital construct as a measure of parents being present in the home and of parents helping their students with their homework. In a related study, Brewster

and Bowen (2004) examined the effects of social capital on school engagement for a group of Hispanic adolescents. These studies all have similarities to the current study because they deal with social capital and Hispanic students however, the current study is also different in several ways.

The current study differentiates from the three aforementioned studies in several ways. First, the current research contends that all Hispanics can not be grouped together as one homogeneous sample because this will confound the findings due to broad differences in educational attainment between different Hispanic nationality groups (U.S. Census Bureau, 2004; Umana-Taylor & Fine, 2001). So therefore, this study focuses not on the larger Hispanic population but specifically on students of Mexican-descent. The current study is also different from most previous studies because it used a measure of school-based social capital and did not have to rely on the help of anyone outside of the schoolhouse to help students to be successful. A third way the current study differentiates from some of the aforementioned studies was that it measured educational persistence in school and not academic engagement. Specifically, the current study investigated the educational persistence of the Mexican-descent population; the largest, fastest growing and poorest achieving minority population in the U.S. The current study further investigated the ambiguity in the professional research with regards to differences between first and second generation Mexican immigrants and their educational persistence, as well as the differences between genders, prior academic achievement, native language, school urbanicity, parental education level, parental involvement and SES.

Existing research surrounding the Hispanic, and Mexican, dropout crisis tends to focus on variables over which school practitioners have little control, such as student and family demographics and past educational achievement (Rumberger, 1995). It seems logical for future research to focus efforts on those variables that may be influenced by school personnel in order to help increase Mexican-descent students' ability to persist toward graduation. The current study, in essence, contributes to a better understanding of students' social support from adults at school and the effect this has on students' educational expectations, attendance and persistence as well as the variations between first and second generation Mexican immigrants and variations between genders. The current study therefore addresses a much needed gap in the professional literature as to "how to" support Mexican-descent students' educational persistence in high school. This study was important not only to help explain the gap in the professional research but it will also be critical in aiding teachers and counselors to help Mexican-descent students to graduate from high school, and to increase their opportunities and quality of life

The current study answers the following research questions:

Is educational persistence of Mexican-descent high school students related to:

- 1 Students' demographics including gender, generational status, prior academic achievement and native language?
- 2 Schools' demographic variables, including school urbanicity?
3. Parents' demographics including parental education level, parental involvement and SES?
4. School process variables including attendance, educational expectations and school-based social capital?

CHAPTER 3

RESEARCH METHODOLOGY

Design

This was an exploratory and descriptive study designed to investigate the input and process variables related to and predictive of the educational persistence of Mexican-descent high school students. This study represents an attempt to better understand students of Mexican descent and, more specifically, the factors which help these students to persist in school toward graduation.

Data Set

The current study utilized the Educational Longitudinal Study of 2002/2004 (ELS:2002/2004) dataset because of the richness of the data and because the large national sampling of Mexican-descent students enables the results to be generalized to the overall Mexican-descent population in the U.S.

ELS:2002/2004, which was sponsored by the National Center of Educational Statistics (NCES), is a longitudinal, multilevel study. The base-year data from ELS:2002/2004 was designed as the first stage of a major longitudinal study to provide trend data about critical transitions students face as they proceed through their formal education and into the workplace (Ingels, Pratt, Rogers, Seigal & Stutts, 2004).

ELS:2002 follows a national sample of students from the spring of their 10th grade year through high school, in some cases through higher education, and into the workforce (Ingels, Pratt, Rogers, Seigal & Stutts, 2004). The students in the ELS:2002/2004 first

follow-up sample have already been surveyed twice, in the spring of both 10th and 12th grade, and will continue to be surveyed every two years until they are in their mid to late 20s. Base-year data for the ELS:2002 study were collected in the spring of 2002.

The benefit of a longitudinal study is that researchers can follow students' achievement over time and try to determine which variables and early experiences contributed to the students' successes and failures throughout their education and work experience. In the base-year, data were collected on students' academic achievement in English and mathematics through two cognitive tests, as well as students' attitudes and experiences through a student questionnaire. ELS:2002 is a multilevel study that surveyed students, parents, teachers, principals and media specialists. The benefit of a multilevel study is that researchers are able to obtain a comprehensive picture of the home, school and community environments and the influences that these environments have on students (Ingels, Pratt, Rogers, Seigal & Stutts, 2004).

Participants

The ELS:2002 base-year study was conducted on a nationally representative sample of 752 schools, where a total of 15,325 10th grade students were randomly sampled. The ELS:2002 sample contains students that are 57 percent (n=8757) White, 15 percent (n=2234) Hispanic, 13 percent (n=2033) African American, 9 percent (n=1403) Asian, 5 percent (n=742) multi-racial and 1 percent (n=131) American Indian. Seventy-nine percent (n=12,795) of the students were enrolled in public schools, 12 percent (n=1987) in Catholic schools and another 9 percent (n=1470) in private schools (ELS:2002/2004).

Data Collection

The ELS:2002 base-year data were sampled in a two stage process. First, 1221 public, private and Catholic schools were identified using probability proportional to size, from a population of more than 27,000 schools across the country containing 10th grade students (Ingels, Pratt, Rogers, Seigal & Stutts, 2004). Each of the 752 schools that agreed to participate in the study provided enrollment rosters of all of their 10th grade students.

In the second stage of the sampling process, 26 students were randomly selected from each of the participating schools. Over-sampling was used in many schools to ensure that each subpopulation had a minimum of 1,356 students, to ensure that findings could be generalized to the overall population of 10th graders (Ingels, Pratt, Rogers, Seigal & Stutts, 2004). The base-year data set includes four populations that generalizations could be drawn from: White, Hispanic, African-American and Asian. Because over-sampling was used in the data collection, design weights were added to compensate for unequal probabilities of selection. Weights were also added to reduce sampling error and errors from non-responses on questionnaires (Ingels, Pratt, Rogers, Seigal & Stutts, 2004).

Each student that participated in the ELS:2002 base-year study was asked to complete an initial questionnaire and a cognitive achievement test in English and mathematics. Some students with mental and physical disabilities were not asked to complete the cognitive assessments while other students with disabilities were offered special accommodations. Students that did not have a sufficient enough command of the

English language to complete the questionnaire and achievement tests were not used in the study. In addition, foreign exchange students were excluded from the study.

Parents, teachers, administrators and librarians also completed questionnaires in the base year. The measures used in the current study were taken solely from student, teacher and parent questionnaires.

Instrument Development

Special care was taken during the instrument development stage to ensure that the achievement tests and questionnaires would all be valid and reliable. Initially, content specification documents were created for the English and mathematics achievement tests as well as for each of the questionnaires, in order to provide a framework from which to identify the key questions and constructs for the study. The content specification document drew largely from previous studies, such as NAEP, NELS:88 and the Program for International Student Assessment (PISA) to guide the assessments, and NELS:88 to guide the questionnaires (Ingels, Pratt, Rogers, Seigal & Stutts, 2004).

Both the achievement tests and the questionnaires were field-tested one year prior to their administration. For the achievement tests, item parameters were estimated and both classical and Item Response Theory (IRT) techniques were utilized to determine the most appropriate items to include in the assessments. Psychometric analyses were also conducted to examine item difficulty and discrimination, reliability and factor structure, and analysis of differential item functioning. For the questionnaires, field test analyses included evaluation of item non-responses, examination of test-retest reliabilities, calculations of scale reliabilities and examinations of correlations between theoretically

related measures (Ingels, Pratt, Rogers, Seigal & Stutts, 2004). Some questions were modified based on the field test results.

Student Questionnaire

Students participating in the ELS:2002/2004 study were required to complete a base-year (2002) student questionnaire as well as a follow-up (2004) questionnaire two years later. Base-year questionnaires were administered to participants in a classroom setting. The questionnaires were 45 minute self-administered instruments that contained seven sections: (1) locating information, (2) school experiences and activities, (3) plans for the future, (4) non-English language use, (5) money and work, (6) family, and (7) beliefs and opinions about self (Ingels, Pratt, Rogers, Seigal & Stutts, 2004). The longest portion of the student questionnaire was the module on student experience and activities.

To maintain the representative sample of students two years after the initial round of data collection, the sample was “freshened” in 2004 for the first follow-up questionnaire. Freshening the sample allows students who were not eligible 10th graders two years prior to have the opportunity to be selected for the study and it allows the sample to again be representative of the entire national 12th grade population. For example, a student who was excluded from the base-year data collection in 2002 because of limited English proficiency but by 2004 was functionally fluent could now be freshened into the sample to make it more representative of the 2004 12th grade cohort (Ingels, Pratt, Rogers, Seigal & Stutts, 2004).

In 2004, cohort members completed the first of several follow-up questionnaires. The first follow-up questionnaire, which students completed in 12th grade, was also

divided into seven sections: (1) locating information, (2) school experiences and activities, (3) how you spend your time, (4) plans and expectations for the future, (5) work after high school, (6) work experiences, and (7) community, family and friends (ELS:2002/2004). Students were administered the first follow-up questionnaire in a classroom setting.

The current study used variables from the school experiences and activities section, plans for the future section and non-English language use section from the base-year (2002) student questionnaire. The current study did not use variables from the follow-up (2004) two years later with the exception of the school persistence variable.

Achievement Tests

All student participants were asked to complete achievement tests in English and mathematics during the base-year. The English test required students to read passages of up to one page, then to answer questions related to reproduction of detail, comprehension and inference (Ingels, Pratt, Rogers, Seigal & Stutts, 2004). The mathematics test contained questions that could be categorized as arithmetic, algebra, geometry, data/probability and other advanced topics (Ingels, Pratt, Rogers, Seigal & Stutts, 2004).

The achievement tests were administered in two stages. First, students received a two part routing multi-choice test that contained 15 mathematics and 14 reading questions. As students completed the initial test, survey administrators would score the tests, then assign either a low, middle or high difficulty second part of the test. The purpose of the two stage procedure was to maximize the accuracy of the results in a limited amount of time (Ingels, Pratt, Rogers, Seigal & Stutts, 2004).

Both tests were scored using IRT, which uses patterns of correct, incorrect and omitted answers, to find ability estimates which are comparable across differing test forms within a domain (Ingels, Pratt, Rogers, Seigal & Stutts, 2004). Standardized T-scores were obtained and split into quartiles to make students' scores easily comparable to their peers.

Parent Questionnaire

The parent questionnaires were developed to gain an understanding of parental aspirations for their children, family background, educational support system at home, students' prior academic history and parents' opinion regarding the school (Ingels, Pratt, Rogers, Seigal & Stutts, 2004). Generally the parent who worked most closely with the school was asked to fill out the questionnaire.

Parent questionnaire packets were mailed home to one parent of each sophomore participating in the research study. Each questionnaire packet contained a letter and brochure explaining the study, a parent questionnaire and postage-paid return envelop. One week after the parent questionnaire packets were sent, each parent was mailed a thank you/reminder postcard to return their questionnaire. Four weeks after the questionnaire packets were mailed parents who had not returned questionnaires were contacted by phone and asked to complete computer-assisted phone surveys (Ingels, Pratt, Rogers, Seigal & Stutts, 2004). At the end of the data collection period over 87 percent (n=13,488) of the student participants had a parent report on file.

Teacher Questionnaire

At the time that student samples were identified in each school, school coordinators were asked to identify the English and mathematics teacher of each participant. The English and mathematics teachers for each of the participants in the study were asked to complete a teacher questionnaire that asked specific questions about their assessment of the student as well as questions about their own professional background. The teacher questionnaire was designed to shed light on the quality, equality, and diversity of students' educational opportunities within the school (Ingels, Pratt, Rogers, Seigal & Stutts, 2004).

Teachers were each given a packet that included a lead letter, a brochure explaining the study, information on uses of the study, a list of the sampled students particular to each teacher, a teacher questionnaire and a postage-paid envelop. Small monetary incentives (10-40 dollars) were offered to teachers who returned their questionnaires. Teachers who did not return questionnaires in a timely manner were reminded by prompting phone calls. By the end of the data collection period, over 92 percent (n=14,081) of the student participants had at least one teacher report on file (Ingels, Pratt, Rogers, Seigal & Stutts, 2004).

Measures

This section will explain how each independent and dependent variable was operationalized within the study. This section will first discuss student demographic variables, such as gender, generational status, prior academic achievement and native language. Then, school demographic variables, such as school urbanicity. Next, parent

demographic variables, such as parental education, parental involvement and SES will be addressed. Then, school process variables, such as attendance, educational expectations and school-based social capital will be discussed. And finally, the last part of this section will discuss the current study's dependent variable educational persistence.

Student Demographic Variables

In the current study gender was taken directly from the base-year student questionnaire (BYSEX). Gender is a dummy coded variable where a response of 1 equals male and 2 equals female.

Students' generational status is taken from the base-year parent questionnaire (BYP23). The generational status variable measures whether a student is a first generation immigrant or a second or later generation immigrant residing in the U.S. Generational status was ascertained from a question in the parent questionnaire that asked: "Was your 10th grader born in the United States (that is, any of the fifty states or the District of Columbia) in Puerto Rico, or in another country or area?" Possible responses included: "He/she was born in the United States; He/she was born in Puerto Rico; He/she was born in another country/area." If the student was born in a country other than the U.S. they were considered first generation. If the student was born in the U.S. then they were considered second or later generation.

Students' prior academic achievement was measured using the average of the standardized scores on the mathematics and reading tests that were administered before the student questionnaire during the 10th grade school year (BYTXCSTD). The resulting scores were then re-standardized to a national mean of 50 and a standard deviation of 10.

Composite scores were then placed into quartiles. The standardized T score provides a norm-referenced measurement of achievement which was relative to the entire national 10th grade population (ELS:2002 Cognitive Tests).

The native language variable measures whether or not a students' native language is English (BYS67). The question on the student base year questionnaire specifically asked: "Is English your native language (the first language you learned to speak when you were a child)?" Possible responses were either "yes" or "no."

School Demographic Variable

The urbanicity of a student's school measured whether a school was located in an urban area or a suburban or rural area (byurban). The urbanicity of the school's locale was listed in the source data. The urbanicity variable was changed to a dichotomous variable in the current study to determine whether students were, or were not, from an urban area.

Parent Demographic Variables

In the current study parental education level was taken from the base year parent questionnaire (BYPARED). Parental education level measures the highest level of education attained by either of the respondent's parents. The base-year parent questionnaire asked for both the mother's (MOTHED) and father's (FATHED) education level. Possible responses included: "Did not finish high school. Finished high school or GED. Attended 2-year school, no degree. Graduated from 2-year school. Attended

college, no 4-year degree. Graduated from college. Completed Master's degree or equivalent. Completed PhD, MD, other advanced degree.”

Parental involvement was measured in the current study using five items from the base-year parent questionnaire. The first question asked: “In this school year do you or your spouse/partner...attend meetings of the parent-teacher association (BYP54B)?” Possible responses included: “yes, no or don't know.” The second question asked: “In this school year do you or your spouse/partner... act as a volunteer at the school (BYP54D)?” Possible responses included: “yes, no or don't know.” The third question asked: “How often do you discuss your 10th grader's report card with him/her? (BYP55B)” Possible responses included: “never, seldom, usually and always.” The fourth question asked: “How often do you check that your 10th grader has completed all homework (BYP55A)?” Possible responses included: “never, seldom, usually and always.” The last question asked: “Looking back over the last year, how frequently did you and your 10th grader participate in the following activities together...working on homework or school projects (BYP57B). Possible responses included: “never”, “rarely”, “sometimes” and “frequently”.

Parental involvement can be defined in numerous ways. For the majority of immigrant parents, their involvement with school happens in their home (Valencia, 1997). Parental involvement at home may include discussing school and schoolwork, in addition to tutoring and expressing high educational expectations for their children (Valencia, 1997). Parental involvement for non-immigrant, middle-class families, might also include participation at school meetings, volunteering at school events and communication with school personnel (Steinberg, 1996). Even though defined in

numerous ways, parental involvement has been proven to be related to educational persistence (Steinberg, 1996; Coleman, 1988). Therefore, the current study explored the underlying dimensions of parental involvement within the Mexican-descent population to help determine best practices for supporting educational persistence.

Socio-economic status is a composite variable measured during the base-year from responses on the parent questionnaire (BYSES1). SES was composed of five variables of equal strength: father's education (FATHED); mother's education (MOTHED); father's occupation (OCCUFATH); mother's occupation (OCCUMOTH); and family income (INCOME). SES was broken down into quartiles.

School Process Variables

School-based social capital is a construct that measures students' perceptions of their relationship with school staff. Students with higher levels of school-based social capital perceive that faculty members within their school care about them personally as well as their academic success. The first six statements used from the student questionnaire were: "Teachers are interested in students (BYS20F);" "The teaching is good (BYS20E);" "When I work hard on my schoolwork, my teachers praise my effort (BYS20G);" "I go to school because my teachers expect me to succeed (BYS27H);" "Students get along well with teachers (BYS20A);" and "The punishment for breaking school rules is the same no matter who you are (BYS20B);" Possible responses for these statements included: "strongly agree, agree, disagree and strongly disagree." The seventh statement reads: "In class I often feel 'put down' by my teachers (BYS20H)." Possible responses for this statement included: "strongly agree, agree, disagree and strongly

disagree.” The responses to this question were reverse-coded, thus strongly disagreeing to this question showed the greatest amount of social capital.

The question used to measure social capital from the teacher questionnaire was “Does this student talk to you outside of class about school work, plans for after high school or personal matters (BYTE07 and BYTM07)?” The possible teacher responses were “yes”, “no” or “don’t know”. A response of “yes” was viewed as supporting the student’s social capital network.

The attendance variable was a self-reported measure from the student questionnaire that measured how many times students were absent from school during the first semester of the current school-year. “How many times did the following things happen to you in the first semester or term of this school year? I was absent from school year (BYS24C).” Possible responses were: never: “1-2,” “3-6,” “7-9” and “10 or more.” A close investigation of the attendance frequencies showed significant clustering around “0 – 2 days absent” and “3 or more days absent”. Therefore, attendance was defined as a dichotomous variable by “0 – 2 days absent” and “3 or more days absent”.

Educational expectations were measured in the base-year on the student questionnaire. Students were asked to respond to a question regarding: “As things stand now, how far in school do you think you will get (BYSTEXP)?” There were seven possible responses to choose from, including: “less than high school graduation”; “high school graduation or GED only”; “attend or complete a 2-year school course in a community or vocational school”, “attend college, but not complete a 4-year degree”, “graduate from college”, “obtain a Master’s degree or equivalent”, and “obtain a Ph.D., an M.D. or other advanced degree.”

Dependent Variable

Educational persistence was the dependent variable investigated in this study. Educational persistence was measured through drop out status in the first follow-up study in the spring of 2004, when participants should have been in the spring of their 12th grade year (F1DOSTAT). Because over 97 percent of the responses to the dependent variable, “educational persistence”, fell into one of two categories, the dependent variable “educational persistence” was dichotomized into those students “enrolled in 12th grade” and those students “not enrolled in 12th grade”. Educational persistence was measured as a dichotomous variable.

Data Analysis

Reliability

To check the internal consistency of the parental involvement and the school-based social capital constructs, a Cronbach’s Alpha test was utilized to determine how well each set of questions from student and teacher questionnaires measures the single latent construct- either school-based social capital or parental involvement.

General Analyses:

Frequencies and proportions were run on all categorical variables as a method to begin analyzing the data. They were conducted on gender, generational status for students, native language, school urbanicity, parents’ education level, SES, prior academic achievement, attendance, educational persistence, parent acts as volunteer and parent attends PTA meetings.

Means and standard deviations were generated for prior academic achievement because in addition to being a categorical variable, prior academic achievement and educational expectations were also continuous variables. Prior academic achievement ranges from lowest (1) to (4) highest quartile. Educational expectations range from 1 (less than high school) to 7 (doctorate). Means and standard deviations were also generated for students' school-based social capital variables and parents' education range, SES range and involvement range.

Specific Analyses:

The following analyses were conducted to answer these research questions:

1. Chi Square analyses to compare male and female students on the following categorical variables: student generational status, student native language, attendance and educational persistence. Chi Square analyses were also used to compare students' school urbanicity to students' gender, generational status and native language. A final Chi-square analysis compared students' generational status to their educational persistence.
2. Multivariate Analysis of Variance (MANOVA) was used to compare male and female students on the following continuous variables: students' prior academic achievement, educational expectations and perceptions of their teachers. In addition, MANOVA was used to compare gender to parents' educational level and SES. A second MANOVA was used to compare school urbanicity to students' prior academic achievement, educational expectations and perceptions of teachers as well as parents' educational level and SES.

3. A logistic regression was utilized with all continuous and categorical variables. The order in which independent variables were entered into the analysis was based on their relationship to the dependent variable shown through prior theoretical research. Earlier research shows that SES (Kao & Tienda, 1995; Portes & MacLeod, 1996; Rumberger, 1983; Rumberger, 1987) and prior academic achievement (Rumberger, 1983; Portes & MacLeod, 1996; Rumberger, 1995; Wehlage & Rutter, 1986) and parental involvement (Steinberg, 1996; Coleman, 1988; Valencia, 1997) predict persistence in high school, so these variables were entered first to control for them. The second set of variables entered into the equation was attendance and educational expectations. This analysis determined how much additional variance was explained by attendance and expectations after partialling out, or controlling for, the variance explained through step one. School-based social capital was the last set of variables entered into the regression in order to determine how much additional variance school-based social capital explains after partialling out for all previous variables.

CHAPTER 4

RESULTS

Introduction

This chapter will first describe the demographics and prior academic achievement of the sample of 1466 Mexican-descent (Mexican, Mexican-American and Chicano) high school students. Furthermore, parents' demographics, including parental education level, parental involvement and SES will be described, as well as students' means and standard deviations on school process variables including school-based social capital, attendance and educational expectations. Finally, the relationship of these variables with educational persistence will be described.

The following variables were measured during the spring of 2002, when students were in the 10th grade: "gender", "generational status", "students' prior academic achievement", "students' native language", "school urbanicity", parents': "education level", "check homework is complete", "discussed report card", "worked on homework together", "acts as volunteer at school", "attends PTA meetings", "SES", "students' attendance", "students' educational expectations", "students' perceptions of teachers", "math teacher talks with student" and "English teacher talks with student". The educational persistence variable was measured during the spring of 2004, when students were in the 12th grade.

Preliminary Analysis

Normalization of Panel Weights

To ensure accurate representation of all subgroups in the sample, data sets such as ELS:2002 employ oversampling and clustering when collecting data. Such oversampling and clustering may result in underestimated standards of errors (Stapleton, 2002), reflecting only the sample, which leads to questionable generalizations (Thomas & Heck, 2001). For this reason, a new normalizing variable was created by dividing the ELS panel weight by the *mean of the panel weights* of the current sample. This process allowed for an adjustment of the numbers, bringing the sample size down to closely reflect the actual number of participants.

Descriptive Analysis

The sample consisted of 1,466 students of Mexican descent. The students were 47 percent (n = 678) male and 53 percent (n = 768) female. With regard to generational status, 24 percent (n = 304) of these students were born outside of the U.S. and thus were considered first generation immigrants and 76 percent (n = 976) of these students were born within the U.S. and were considered second or later generation immigrants. For approximately half, 53 percent (n = 735), English was not their native language. There were initially three categories for defining the “school urbanicity” item; they were urban, suburban and rural. The students were 47 percent (n = 680) urban, 46 percent (n = 667) suburban and 7 percent rural (n = 99). The suburban and rural categories were combined for all analyses in this study because both were found to be similar with regards to their relationship toward the dependent variable, educational persistence (91.0% and 90.9%,

respectively). Thus, 47 percent (n = 680) of this sample attended schools that were in urban areas and 53 percent (n = 766) were enrolled in suburban and rural schools. Results can be seen in Table 1.

Table 1

*Frequency and Percentage of Student and School Demographic Characteristics
(N = 1446)*

Characteristic	n	%
Gender		
Male	678	46.9
Female	768	53.1
Generational Status		
1 st Generation	304	23.8
2 nd or later generation	976	76.2
Native Language		
English	663	47.4
Spanish	735	52.6
Urbanicity of School		
Urban	680	47.0
Suburban/ Rural	766	53.0

Note: Panel weights applied to analysis.

Descriptive statistics regarding parents' highest level of education and SES can be found below. Twenty-eight percent (n = 409) of the sample population have parents that have not graduated from high school. Another 23 percent (n = 325) have parents that

graduated from high school or earned an equivalency as their highest level of education. Twelve percent (n = 170) have parents that enrolled in a 2-year college but did not graduate, while another 10 percent (n = 139) have parents that graduated from a 2-year college as their highest level of education. Ten percent (n = 142) of the population have parents that attended a 4-year college but did not graduate, while another 12 percent (n = 172) have parents that graduated from a 4-year college as their highest level of education. Five percent (n = 65) of parents in this sample have completed Master's degrees and 2 percent (n = 24) have earned a PhD, an MD or other advanced degree. Results can be seen in Table 2.

Table 2

Parents' Highest Level of Education (N = 1446)

Education Level	n	%
Did not finish high school	409	28.3
Graduated high school or GED	325	22.5
Attended 2-year college, no degree	170	11.8
Graduated from 2-year college	139	9.6
Attended 4-year college, no degree	142	9.8
Graduated from 4-year college	172	11.9
Completed Master's degree	65	4.5
PhD, MD or other advanced degree	24	1.7

Note: Panel weights applied to analysis.

Parent SES is composed of five variables of equal strength: father’s education; mother’s education; father’s occupation; mother’s occupation; and family income. Over half of the population being studied (n = 775) falls into the lowest SES quartile. Twenty three percent (n = 338) of the population falls into the second quartile. Fifteen percent (n = 223) of the population falls into the third quartile. And, only eight percent (n = 110) of the population being studied falls into the highest quartile. Results can be seen in Table 3.

Table 3
Socio-economic Status by Quartiles (N = 1466)

Quartile	n	%
1 (1 – 25)	775	53.6
2 (26 – 50)	338	23.4
3 (51 – 75)	223	15.4
4 (76 – 99)	110	7.6

Note: Panel weights applied to analysis.

The prior academic achievement variable, which was measured using the composite score from an average of a math and reading standardized test administered during 10th grade, was divided into quartiles. The majority of students measured in this sample scored in the lower half of the overall population. Specifically, 46 percent (n = 658) scored in the lowest quartile, 28 percent (n = 397) scored in the second lowest quartile, 18 percent (n = 255) scored in the third quartile and 9 percent (n = 136) scored in the highest quartile. Prior academic achievement distributions can be seen in Table 4.

Table 4

Prior Academic Achievement of Students in Quartiles (N = 1446)

Quartile	n	%
1 (1 – 25)	658	45.5
2 (26 – 50)	397	27.5
3 (51-75)	255	17.6
4 (76 – 99)	136	9.4

Note: Panel weights applied to analysis.

A close look at the attendance data shows that 13 percent (n = 184) of students had zero absences during the first semester of the Fall 2002 school year. Thirty-three percent (n = 453) of students had 1 – 2 absences. Another 33 percent (n = 459) of students had 3 – 6 absences. Ten percent (n = 134) of students had 7 – 9 absences and another 10 percent (n = 142) of students had 10 or more absences.

Since 0 – 2 times absent seems to cluster together (46.4%), and 3 or more times absent clusters together (53.6%), it was decided to code the attendance variable as a dichotomous variable with 0 – 2 absences and 3 + absences. Attendance frequencies can be seen in Table 5.

Table 5

Frequency and Percent of Absences in Previous Semester (N = 1371)

Characteristic	n	%
Attendance		
0 – 2 Days Absent	636	46.4
3 + Days Absent	735	53.6

Note: Panel weights applied to analysis.

The dependent variable in this study, educational persistence, is a dichotomous variable. Students were initially surveyed in the spring of their 10th grade year and two years later they were considered either non-persisting or persisting in school. The frequency distribution shows 88 percent (n = 1273) of students persisting in school and 12 percent (n = 173) of students as non-persisting. Results can be seen in Table 6.

Table 6

Frequency and Percent of Educational Persistence and Non-persistence Variables (N=1446)

Level of Persistence	n	%
Enrolled in 12 th grade	1273	88
Not enrolled in 12 th grade	173	12

Note: Panel weights applied to analysis.

Means and Standard Deviations

Tables 7 through 10 provide means and standard deviations on all variables as an additional way to describe the sample.

The mean score for “parents’ education level” is 3.12, with a standard deviation of 2.01. A 1 indicates the parent “did not finish high school” and an 8 indicates parent earned a “PhD, MD or other advanced degree”. A score of 3 represents “attended 2-year college, no degree”. A score of 4 represents “graduated from 2-year college”. The standard deviation in this case is rather large, 2.01, indicating there is a lot of variability in parents’ education level. The mean SES score in this sample is 1.77, with a standard deviation of .97. With a range of 1 – 4 this finding confirms the data in the frequency table that shows that over 50 percent of the Mexican-descent population lives in the lowest SES quartile and over 77 percent of this population lives in the bottom half of the SES scale.

“Parental involvement at home” items were measured on a 1 – 4 scale, with 1 representing “never” and 4 representing “always”. They consisted of “parents check homework is complete”, “worked on homework together” and “discussed report card”. The means on all 3 items were greater than 2.5. The mean score on “parents check home-work is complete” is 3.13, with a standard deviation of .93. The mean score for “worked on homework together” is 2.83, with a standard deviation of 1.01. The mean score for “discussed report card” is 3.77, with a standard deviation of .55. Results can be seen in Table 7.

“Students’ prior academic achievement” was calculated using a composite of test scores, then broken into quartiles. A score of 1 represents the lowest quartile, representing a standardized reading and math performance in the lowest 25 percent of all grade-level peers across the country. A score of 4 represents the highest quartile, representing a standardized reading and math performance in the highest 25 percent of all

grade-level peers across the country. “Students’ prior academic achievement” has a mean score of 1.96 and a standard deviation of 1.00. This confirms earlier findings that the majority of Mexican-descent students are represented in the lowest quartile of academic achievement. The mean score for “students’ educational expectations” is 4.8, with a standard deviation of 1.56. The Students’ Educational Expectation Scale ranges from 1 – 7. A 1 indicates an expectation of “not finishing high school” and a 7 indicates an expectation of earning a “PhD, MD or other advanced degree”. A response of 4 indicates an expectation of “attending a 4-year college, no degree” and a response of 5 indicates an expectation of “graduating from a 4-year college”. Thus, the average Mexican-descent student expects to attend a 4-year college, but not attain a Bachelors Degree.

Table 7

Means and Standard Deviations of Continuous Student and Parent Academic Variables

Variables	Range	Means	SD
Parent education level	1 - 8	3.12	2.01
SES	1 - 4	1.77	.97
Parental Involvement			
Parents check homework is complete	1 -4	3.13	.93
Work on homework together	1 -4	2.83	1.01
Discuss report card	1 -4	3.77	.55
Students' prior academic achievement	1 - 4	1.91	1.00
Students' educational expectations	1 - 7	4.77	1.56

Note: Higher scores indicate a greater degree of prevalence of the quality measured. Panel weights applied to analysis. SES (1 = lowest quartile, 4 = highest quartile); Parent education level (1 = did not finish high school, 8 = earned PhD, MD or other advanced degree); Parental involvement at home (1 = never, 4 = always); Students' prior academic achievement (1 = lowest quartile, 4 = highest quartile); Students' educational expectations (1 = not finishing high school, 7 = PhD, MD or other advanced degree)

“Parental involvement at school” items were measured on a dichotomous 0 – 1 scale, with 0 representing “no” and 1 representing “yes”. They consisted of “acts as volunteer at school” and “attends PTA meetings”. Approximately 85 percent of parents responded that they did not “act as a volunteer at school” and approximately 57 percent responded that they did not “attend PTA meetings.” Results can be seen in Table 8.

Table 8

*Frequency and Percent of Dichotomous Parent Involvement at School Variables
(N=1446)*

Level of Persistence	n	%
Acts as volunteer at school		
Yes	185	15.3
No	1024	84.7
Attends PTA meetings		
Yes	534	43.4
No	697	56.6

Note: Panel weights applied to analysis.

Means and standard deviations were also calculated for the seven continuous items related to school-based social capital. On each of the variables, low scores indicate an increased presence of social capital. The items range from 1 to 4, with 1 representing “strongly agree” and 4 representing “strongly disagree.” Six of the seven items fell between 2.07 and 2.26, indicating that respondents wavered between agreeing and disagreeing. The “students often feel put-down” item had a mean of 1.93 and a standard deviation of .73, suggesting students had a slight tendency to disagree with this statement. Results can be seen in Table 9.

Table 9

Means and Standard Deviations of Continuous School-based Social Capital Variables

Variables	Range	Means	SD
Teachers are interested in students	1 - 4	2.17	.73
Teaching is good	1 - 4	2.07	.65
Teachers praise effort	1 - 4	2.22	.76
Teachers expect success	1 - 4	2.21	.80
Students get along well- teachers	1 - 4	2.26	.62
Students often feel putdown (reverse code)	1 - 4	1.93	.73
Punishment is same for everyone	1 - 4	2.17	.86

Note: Low scores indicate high presence of social capital (1 = strongly agree, 4 = strongly disagree). Panel weights were applied to analysis.

“Teacher talks with student” items were measured on a dichotomous 0 – 1 scale, with 0 representing “no” and 1 representing “yes”. They consisted of “teacher talks with student outside of class (Math)” and “teacher talks with student outside of class (English)”. The mean score on “teacher talks with student outside of class (Math)” is .30, with a standard deviation of .46. The mean score on “teacher talks with student outside of class (English)” is .40, with a standard deviation of .49. Results can be seen in Table 10.

Table 10

Frequency and Percent of Dichotomous School-based Social Capital Variables

Variable	n	%
Teacher talks with student outside of class (Math)		
Yes	319	29.8
No	753	70.2
Teacher talks with student outside of class (English)		
Yes	428	39.5
No	655	60.5

Note: Panel weights applied to analysis.

Inter-correlations

Inter-correlations of the 17 continuous variables showed 39 weak correlations ranging from .1 - .25, 25 moderate correlations ranging from .26 - .50 and 2 strong correlations ranging from .51 - .75. Surprisingly, correlations between “students’ educational expectations” and “parents’ education level” and “students’ educational expectations” and “SES” were, though significant, weak ($r = .13$ and $r = .17$, respectively), even though the literature suggests a positive relationship (Trusty, 1998; Hanson, 1994). Similarly, the correlation between “student prior academic achievement” and parents and students “worked on homework together” is unexpectedly low ($r = .04$), because researchers have shown positive relationships between these variables (Balli, Demo & Wedman, 1998; Steinberg, 1996).

“Teaching is good” correlates moderately with “students get along well with teachers” ($r = .37$, $p < .01$), “teachers praise effort” ($r = .37$, $p < .01$), “punishment is the

same for everyone" ($r = .27, p < .01$), "often feels put-down by teacher" (reverse-coded) ($r = .29, p < .01$), and "teachers expect success" ($r = .29, p < .01$). Moderate correlations also exist between the variable "students get along well with teachers" and the following variables: "teachers praise effort" ($r = .26, p < .01$), "teachers are interested in students" ($r = .37, p < .01$), "often feels put-down by teacher" (reverse-coded) ($r = .28, p < .01$).

Furthermore, there are moderate correlations between "teachers praise effort" and the following variables: "teachers are interested in students" ($r = .48, p < .01$), "punishment is the same for everyone" ($r = .28, p < .01$), "often feels put-down by teacher" (reverse-coded) ($r = .31, p < .01$), and "teachers expect success" ($r = .30, p < .01$). Similarly, moderate correlations exist between the variable "teachers are interested in students" and "punishment is the same for everyone" ($r = .27, p < .01$), "often feels put-down by teacher" (reverse-coded) ($r = .32, p < .01$), and "teachers expect success" ($r = .31, p < .01$). A moderate correlation exists between "students' educational expectations" and "student prior academic achievement" ($r = .35, p < .01$), as well as between "SES" and "students' prior academic achievement" ($r = .30, p < .01$). Finally, a moderate correlation exists between "parents check homework is complete" and parents "discuss report cards" with student ($r = .36, p < .01$) and between "discussed report cards" and "worked on homework together" ($r = .29, p < .01$).

A strong correlation exists between "parents' education level" and "SES" ($r = .71, p < .01$). While "parents' education level" is one of five variables making up the SES construct, it was determined that "parents' education level" would be left in this study, separate of "SES". A strong correlation also exists between "teaching is good" and

“teachers are interested in students” ($r = .51, p < .01$). Inter-correlations can be seen in Table 11.

Table 11

Inter-correlations of all Continuous Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1. Teaching is good	1.00																	
2. Students get along well with teachers	.37*	1.00																
3. Teachers praise effort	.37*	.26**	1.00															
4. Teachers are interested in students	.51*	.37**	.48**	1.00														
5. Punishment is the same for everyone	.27*	.18**	.28**	.27**	1.00													
6. Often feels put-down by teacher (r)	.29*	.28**	.31**	.32**	.19**	1.00												
7. Teachers expect success	.29*	.19**	.30**	.31**	.25**	.20**	1.00											
8. Attendance	.10*	.18**	.11**	.15**	.09**	.12**	.11**	1.00										
9. Student prior academic achievement	-.02	-.11**	-.02	-.06**	.06*	-.12**	.07*	-.09**	1.00									
10. Students' educational expectations	-.09*	-.09**	-.09**	-.09**	-.10**	-.06*	-.15**	-.11**	.35**	1.00								
11. Parents' highest level of education	.01	.00	-.04	.00	.04	-.02	.08*	-.02	.24**	.13**	1.00							
12. SES	.05	.00	.03	.02	.09**	.00	.07*	.00	.30**	.17**	.71**	1.00						
13. Parents check home-work is complete	-.02	-.02	-.06	.00	-.06*	.04	-.06*	.02	-.08**	-.06*	.02	-.08**	1.00					
14. Discussed report card	.01	.04	.03	.02	.05	-.02	-.02	.07	.03	.11**	.07*	.03	.36**	1.00				
15. Worked on homework together	.05	.01	.00	.00	.00	.01	-.02	.00	.04	.21**	-.01	.04	.24**	.29**	1.00			
16. Act as volunteer at school	.06*	.00	.02	.00	.05	.08**	.03	.00	.09**	.14**	.01	.04	.08**	.06*	.13**	1.0		
17. Attends PTA meetings	-.06*	-.03	-.01	-.05	-.08**	.08**	-.07*	-.07*	-.03	-.10**	-.07*	-.10**	.19**	.09**	.09**	.09**	.19**	1.0

*Note: Panel weights applied to analysis. *. Correlation is significant at the .05 level. **. Correlation is significant at the .01 level. Item 6 was reverse-coded.*

Specific Analyses

Principal Component Factor Analysis

A principal component factor analysis with varimax rotation was used to determine if there are one or more dimensions underlying the social capital and parent volunteer items. The dimensions identified through the principal component factor analysis with varimax rotation were used in the subsequent MANOVA and logistic regression analyses.

The factor analysis revealed that several of the school-based social capital items related to students' perceptions of their teachers and loaded together onto one factor. Factor loadings ranged from $-.07$ to $.76$. Coefficient alpha for this factor is $.75$. This factor labeled "students' perceptions of teachers", accounts for 41 percent of the item variance with an eigenvalue of 2.88. See Table 12 for the school-based social capital factor loadings. These items were entered as one factor in the regression analysis under the label "students' perceptions of teachers."

The two social capital items examining whether students' math and English teachers "talk with student outside of class" regarding schoolwork, whether the student has plans for after high school or about personal matters loaded onto Factor 2, only accounting for 12 percent of the variance with an eigenvalue of 1.18, and a coefficient alpha of $.16$, so they were entered as separate variables into the regression. Results can be seen in Table 12.

Table 12

Structure Coefficients from Principal Components Factor Analysis for School-based Social Capital Items

Items Coefficient	Structure Coefficient	
	Factor 1	Factor 2
Teachers are interested in students	.76	.08
The teaching is good	.72	.22
In class often feels put down by teachers (reverse coded)	.55	-.12
Teachers praise effort	.69	-.04
Students get along well with teachers	.60	.14
Teachers expect success	.53	-.11
Punishment is same for everyone	.52	-.09
Teacher talks with student outside of class (Math)	-.07	.76
Teacher talks with student outside of class (English)	-.07	.66
Coefficient Alpha for Factor Reliability	.75	.16

Note: Factor loadings over .40 appear in bold. Panel weights applied to analysis.

A principal component factor analysis with varimax rotation using the parental involvement variables showed that parental involvement items loaded onto two separate factors. Factor loadings on the first factor loaded from .03 to .80. On the second factor they ranged from -.04 to .79. The factors show a parent involvement at home theme and a parent involvement at school theme, factors 1 and 2 respectively. See Table 13 for parental involvement factor loadings.

As is shown on Table 13, coefficient alpha for each of these factors is relatively low (.52 and .31, respectively) indicating the factors are heterogeneous, so it was decided to place the items individually into the regression analysis.

Table 13

Structure Coefficients from Principal Component Factor Analysis for the Parent Involvement Items

Items	Structure Coefficient	
	Factor 1	Factor 2
Discussed report card	.80	-.04
Checked homework complete	.72	.13
Worked on homework with student	.65	.12
Attend PTA meeting	.12	.74
Act as volunteer at school	.03	.79
Coefficient Alpha for Factor Reliability =	.52	.31

Note: Factor loadings over .40 appear in bold. Panel weights applied to analysis.

Bivariate Correlations

Since the “students’ perceptions of teachers” items, including “teachers are interested in students”, “teaching is good”, “in class often feels put down by teacher (reverse coded)”, “teachers praise effort”, “students get along well with teachers”, “teachers expect success” and “punishment is same for everyone” loaded on one factor, it was decided to repeat the correlation analysis using the factor “students’ perceptions of teachers” instead of the individual items.

The correlational patterns found in this analysis are similar to those found earlier (see Table 9), but the relationships between “students’ perceptions of teachers” and “students’ educational expectations” and “attendance” have become stronger than in the earlier correlation analysis, where the items were correlated individually. The respective correlations are -.14 and .19. Results can be seen in Table 14.

Table 14

Bivariate Correlations Including Student Perceptions of Teachers Factor

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Students' perceptions of teachers - factor	1										
2. Attendance	.19**	1									
3. Student prior academic achievement	-.04	-.09**	1								
4. Students' educational expectations	-.14**	-.11**	.35**	1							
5. Parents' highest level of education	.19**	-.02	.24**	.13**	1						
6. SES	.07	.00	.30**	.17**	.71**	1					
7. Parents check home-work is complete	-.05	.02	-.08**	-.04	-.05	-.06*	1				
8. Discussed report card	.04	.07*	.03	.08**	.14**	.11**	.36**	1			
9. Worked on homework together	.03	.01	.04	.07*	.20**	.21**	.24**	.29**	1		
10. Act as volunteer at school	.07*	.01	.04	.09**	.09**	.14**	.08**	.06*	.13*	1	
11. Attends PTA meetings	-.06	-.07	-.10**	-.01	-.03	-.10**	.19**	.09**	.09*	.19*	1

*Note: Panel weights applied to analysis. *. Correlation is significant at the .05 level. **. Correlation is significant at the .01 level.*

Gender Comparisons

Chi-square analyses were conducted to compare male and female students on the following categorical variables: “generational status”, “students’ native language”, “attendance” and “educational persistence”. For the purposes of this study, “generational status” was measured as a dichotomous variable; students are either “first generation” or “second or later generation”. First generation students are those that were born in another country and subsequently moved to the US. With a Pearson Chi-square value of 7.28 with one degree of freedom, the data show that this sample contained significantly more male first generation than female first generation students.

The second Chi Square analysis compares male and female students on “students’ native language”. Even though a higher percentage of female students than male students report Spanish as their native language, the Chi-square analysis indicates that the difference is not significant.

The third Chi-square analysis compares male and female students on “attendance”. Even though male students tend to have fewer days absent from school than female students, the Chi-square analysis indicates that the difference is not significant.

The last Chi-square analysis compares male and female students on “educational persistence”. With a Pearson Chi-square value of 11.50 with one degree of freedom, the data show that male students in this sample are significantly more likely not to persist in school than female students. Results can be seen in Table 15.

Table 15

Comparison of Male and Female Students on Categorical Variables

	Male		Female		Total N	χ^2 (df)	p
	n	%	n	%			
Generational status							
1st Generation	478	79.7	498	73.2	976	7.28 (1)	.007*
2nd or > Generation	122	20.3	182	26.8	304		
Students' native language							
English	321	49.7	342	45.5	663	2.47 (1)	.116
Spanish	325	50.3	410	54.5	735		
Attendance							
0 – 2 days absent	309	47.8	328	45.2	637	.968 (1)	.176
3 or more days absent	337	52.2	398	54.1	735		
Educational persistence							
Enrolled- 12 th grade	576	85.0	697	90.8	1273	11.50	.000**
Not enrolled- 12 th grade	102	15.0	71	9.2	173		

Note: Panel weights applied to analysis.

*denotes significance at the .01 level

Multivariate Analysis of Variance (MANOVA) was utilized to compare male and female students on the following continuous variables: “students’ prior academic achievement”, “students’ educational expectations” and “students’ perceptions of teachers”. In addition, MANOVA compared gender to “parents’ educational level” and “SES”.

Table 16 shows “students’ educational expectations” ($p < .001$), “students’ perceptions of teachers” ($p = .014$) and “parents’ education level” ($p = .003$), to be significant in the MANOVA. More specifically, male students’ parents had a higher

level of education than female students’. Also, female students showed significantly higher “educational expectations” than male students, while also possessing significantly more favorable “perceptions of (their) teachers”. Neither “students’ prior academic achievement” ($p = .131$) nor SES ($p = .063$) proved to be significant in the MANOVA. Results from the MANOVA can be seen in Table 16.

Table 16

Multivariate Analysis of Variance to Measure Effects of Gender on Continuous Variables

Dependent Variable	Male		Female		(df)	F	p
	Mean	SD	Mean	SD			
Students’ Prior Achievement	2.00	1.03	1.90	1.01	5,1078	2.29	0.131
Students’ Educational Expectations	4.51	1.53	5.04	1.53	5,1078	32.62	<.001**
Students’ Perceptions of Teachers Factor	2.17	.47	2.09	.43	5,1078	6.00	.014*
Parents’ Education	3.35	2.04	2.99	1.96	5,1078	8.93	.003**
SES	1.85	1.00	1.74	0.97	5, 1078	3.46	0.063

Note: Panel weights applied to analysis. Parent education level (1 = did not finish high school, 8 = earned PhD, MD or other advanced degree); SES (1 = lowest quartile, 4 = highest quartile); Students’ prior academic achievement (1 = lowest quartile, 4 = highest quartile); Students’ educational expectations (1 = not finishing high school, 7 = PhD, MD or other advanced degree); Student Perceptions’ of Teachers (Social Capital Factor) (1 = strongly agree, 4 = strongly disagree)

Urbanicity Comparisons

Chi-square analyses were conducted to compare the “urbanicity” of students’ schools on the following categorical variables: “gender”, “generational status” and “students’ native language”. “School urbanicity” is a measure of how densely populated the greater community is where a school is located. There were two potential categories for the “school urbanicity” item; they were urban and suburban/rural. The suburban and rural categories were combined for these analyses

because they were found to be similar with regards to their relationship to educational persistence (91.0% and 90.9%, respectively). In the first Chi-square analysis, even though urban schools carry a greater percentage of female students than males, the Chi-square analysis indicates that the difference is not significant.

In the second Chi-square analysis, with a Pearson Chi-square value of 20.50 with one degree of freedom, the data indicate that a significant difference exists on generational status in terms of urbanicity. First generation, Mexican-descent immigrants are more likely to attend urban schools and second and later generation immigrants are more likely to attend suburban or rural schools.

A third Chi-square analysis was conducted to explore “students’ native language” in terms of “urbanicity”. With a Pearson Chi-square value of 12.76 with one degree of freedom, the data indicate that students that are native English speakers are significantly more often represented in urban schools. Results can be seen in Table 17.

Table 17
Comparison of School Urbanicity on Categorical Variables

	Urban		Suburban/Rural		Total	χ^2 (df)	p
	n	%	n	%	N		
Gender							
Female	375	55.1	393	51.3	768	2.135 (1)	.08
Male	305	44.9	373	48.7	678		
Generational status							
1st Generation	174	29.6	130	18.8	304	20.50 (1)	.001*
2nd or > Generation	414	70.4	562	81.2	976		
Students' native language							
English	388	51.9	275	42.3	663	12.76 (1)	.001*
Spanish	360	48.1	375	57.7	735		

Note: Panel weights applied to analysis.

*denotes significance at the .01 level

Multivariate Analysis of Variance (MANOVA) was utilized to compare students' "school urbanicity" to the following continuous variables: "students' prior academic achievement", "students' educational expectations" and "students' perceptions of teachers". In addition, MANOVA compared school urbanicity to "parents' educational level" and "SES". Table 18 shows that students living in suburban and rural areas possessed a significantly more favorable "perception of (their) teachers" than suburban and rural students ($p = .020$). Other comparisons were not significant. See Table 18.

Table 18
Multivariate Analysis of Variance to Measure Effects of Urbanicity on Continuous Variables

Dependent Variable	Urban		Suburban/Rural		(df)	F	p
	Mean	SD	Mean	SD			
Prior Achievement	1.94	1.03	1.96	1.01	5,1078	.102	.750
Educational Expectations	4.87	1.58	4.73	1.54	5,1078	2.134	.144
Students' Perceptions of Teachers Factor	2.17	.49	2.13	.44	5,1078	5.411	.020*
Parents' Education	3.15	2.00	3.16	2.01	5,1078	.019	.891
SES	1.77	.98	1.81	1.00	5,1078	.398	.528

Note: Panel weights applied to analysis. SES (1 = lowest quartile, 4 = highest quartile); Parent education level (1 = did not finish high school, 8 = earned PhD, MD or other advanced degree); Students' prior academic achievement (1 = lowest quartile, 4 = highest quartile); Students' educational expectations (1 = not finishing high school, 7 = PhD, MD or other advanced degree); Student Perceptions' of Teachers (Social Capital Factor) (1 = strongly agree, 4 = strongly disagree)

Generational Status Comparison

Chi-square analyses were conducted to compare the “generational status” of Mexican-descent students to their “educational persistence”. Though first generation, Mexican-descent students dropped out of school at a greater rate than second and later generations of Mexican-descent students, the Chi-square analysis indicates that the difference is not significant. Results can be seen in Table 19.

Table 19
Comparison of Students' Generational Status and Students' Educational Persistence

	1 st Generation		2 nd or Later Generation		Total N	χ^2 (df)	p
	n	%	n	%			
Persistence							
Not enrolled- 12 th grade	35	11.5	102	10.5	137	.268 (1)	.336
Enrolled- 12 th grade	269	88.5	873	89.5	1142		

Note: Panel weights applied to analysis.

*denotes significance at the .01 level

Logistic Regression

Hierarchical logistic regression is being utilized in this analysis as opposed to ordinary least squares regression because the dependent variable in this model, “educational persistence”, did not satisfy the assumption of normality. More specifically, over 97 percent of the responses to the dependent variable, “educational persistence”, fell into one of two categories. Thus, the dependent variable was dichotomized into those students “enrolled in 12th grade” and those students “not enrolled in 12th grade”. Logistic regression is a model used to predict the probability that a specific event will occur. In this model “educational persistence” is the event, or dependent variable, that is being predicted.

A hierarchical logistic regression was used to predict “educational persistence” from “students’ prior academic achievement”, “school urbanicity”, “parents check homework complete”, “discussed report card”, “worked on homework together”, “acts as volunteer at school”, “attends PTA meetings”, “SES”, “gender”, “generational status”, “students’ native language”, “attendance”, “students’

educational expectations”, “English teacher talks with student”, “Math teacher talks with student” and “students’ perceptions of teachers”.

This logistic regression utilized a hierarchical approach to modeling. In hierarchical models the order in which independent variables are entered into the analysis is based on their relationship to the dependent variable as shown through prior theoretical research. Earlier research shows that “gender” (Driscoll, 1999; Croninger & Lee, 2001; and Ginorio & Huston, 2001), “generational status” (Suarez-Orozco & Suarez-Orozco, 2001; Ginorio & Huston, 2001; Grogger & Trejo, 2002; Kao and Tienda, 1995), “students’ prior academic achievement” (Rumberger, 1983; Portes & MacLeod, 1996; Rumberger, 1995; Wehlage & Rutter, 1986), “students’ native language” (Rumbaut, 1995; Wojtkiewicz & Donato, 1995 and White & Kaufman, 1997), “SES” (Kao & Tienda, 1995; Portes & MacLeod, 1996; Rumberger, 1983; Rumberger, 1987) and “parental involvement” (Steinberg, 1996; Coleman, 1988; Valencia, 1997) predict persistence in high school, so these variables were entered into the first block of the logistic regression.

The second set of variables entered into the equation included “attendance” and “students’ educational expectations”. Earlier research shows that attendance (Rumberger, 1995; Rumberger & Larson, 1998; Wehlage & Rutter, 1986; Bryk & Thum, 1989; Roderick & Cambrun, 1999) and educational expectations (Rumberger, 1995; Driscoll, 1999) were found to be related to dropping out of high school, so these variables were entered into the second block of the logistic regression.

The third set of variables entered into the equation “teacher talks with student outside of class (Math)”, “teacher talks with student outside of class (English)” and

“students’ perceptions of teachers” all represent school-based social capital variables and were placed in the third block of the logistic regression. Earlier research shows forms of social capital to be related to dropping out of school for some populations (Rumberger, 1995; Croninger & Lee, 2001; Conchas, 2001).

Results of the logistic regression show that “prior academic achievement” ($p < .005$), “school urbanicity” ($p = .001$) (attending a suburban or rural school) and “worked on homework together” ($p = .048$) predicted educational persistence in the first block. In the second block “attendance” ($p = .027$) and “students’ educational expectations” ($p = .007$) predicted educational persistence beyond “prior academic achievement”, “school urbanicity” and “worked on homework together”. In the third block “students’ perceptions of teachers factor” ($p = .025$) predicted educational persistence beyond the variables explained in block 1 and 2. It is also worth noting that “parents check homework complete” is approaching significance in this analysis ($p = .053$). Results of the logistic regression can be seen in Table 20.

The Hosmer-Lemeshow goodness-of-fit test ($\chi^2 = .49$), shows that the overall model fits the data. In addition, the Chi-square values measuring the significance of the 3 blocks of variables entered into the hierarchical logistic regression were all significant (Block 1, $\chi^2 = 65.00$, $p = .000$; Block 2, $\chi^2 = 19.45$, $p = .001$; Block 3, $\chi^2 = 5.06$, $p = .025$).

In logistic regression there is no equivalent to the R^2 found in linear regression. However, the Nagelkerke R^2 , often referred to as a pseudo R^2 , helps to explain the unaccounted for variance that is decreased by adding additional variables into the model. The Nagelkerke R^2 showed increases in the three blocks, thus representing

the decrease in unaccounted variance explained in each block (Block 1 = .26; Block 2 = .33; Block 3 = .35).

Table 20

Logistic Regression Analysis Predicting Educational Persistence

	B	S.E.	Sig.	Odds Ratio Exp(B)
Gender	-.558	.367	.129	.572
Generational status	-.531	.472	.261	.588
Prior academic achievement	.746	.267	.005**	2.108
Students' native language	-.328	.461	.476	.720
School urbanicity	1.270	.376	.001**	3.56
Parents' education level	-.088	.132	.504	.915
SES	.341	.308	.268	1.407
Discussed report card	-.170	.302	.573	.844
Parents check homework complete	.454	.235	.053	1.575
Worked on homework together	.413	.209	.048*	1.512
Attends PTA meetings	.412	.384	.284	1.509
Acts as volunteer at school	-.200	.576	.729	.819
			Block 1	$\chi^2 = 65.00$
			Nagelkerke	$R^2 = .26$
Attendance	.862	.389	.027*	2.368
Students' educational expectations	.313	.116	.007**	1.367
			Block 2	$\chi^2 = 19.45$
			Nagelkerke	$R^2 = .33$
Teacher talks with student outside of class (English)	-.686	.402	.088	.504
Teacher talks with student outside of class (Math)	.198	.424	.641	.218
Students' perceptions of teachers factor	-.422	.188	.025*	.656
			Block 3	$\chi^2 = 5.06$
			Nagelkerke	$R^2 = .35$
Constant	-2.30	1.52	.13	.10

Note: Panel weights applied to analysis.

* denotes significance at the .05 level, **denotes significance at the .01 level

CHAPTER 5

DISCUSSION

This chapter presents an overview of the key findings from the current study and integrates these findings into the existing research in the field. Findings are also discussed in light of Social Capital Theory. In addition, this chapter discusses implications for practice, limitations of the study and suggestions for future research.

Existing research surrounding the Hispanic, more specifically Mexican, dropout crisis tends to focus on variables over which school practitioners have little control, called input variables, such as student and family demographics and past educational achievement (Rumberger, 1995). The current study differentiates from prior research by including not only input variables but also school process variables, such as “attendance”, “students’ educational expectations” and social capital, including “English teacher talks with student”, “math teacher talks with student” and “students’ perceptions of teachers factor” which are variables that faculty members can influence or change. The current study contributes to a better understanding of the factors related to Mexican-descent students’ persistence in high school and specifically addresses a gap in the professional literature on how teachers, counselors and administrators can support Mexican-descent students’ educational persistence.

The research questions in this study address whether the educational persistence of Mexican-descent high school students is related to student demographic variables, parent demographic variables and school process variables. The results of the logistic regression analysis suggest that parent and student

demographics as well as school process variables are related to the educational persistence of Mexican-descent students. This is an important finding, as school process variables can be influenced by school faculty, while input variables can not.

The sample was approximately half male and half female, half spoke Spanish as their native language, and half attended schools in urban school districts. They were mostly second or later generation immigrants. Furthermore, most parents were in the lowest SES quartile and had high school as their highest level of education.

Describing parental involvement within the sample population requires looking at two themes- parental involvement at home and parental involvement at school. For parental involvement at home, parents report checking if their child's homework is complete, working on homework together with their student and discussing report cards with their student. For parental involvement at school, parents do not tend to volunteer at school or to attend PTA meetings.

Describing students' prior academic achievement, the majority of students in the sample population did not perform well: specifically, almost half of the sample population scored in the lowest achievement quartile. With regards to attendance, half of the sample population had between 0 – 2 absences during the previous semester and half had 3 or more absences during the same time period. The average student in this sample expected to attend a 4-year college, but not attain a Bachelors Degree. The dependent variable, educational persistence, showed that the majority of students persisted in school.

Most students have a slightly positive view of their teachers' behaviors, expectations and treatment. On average, respondents wavered between agreeing and

disagreeing on whether or not teachers are interested in students, that teaching is good, teachers praise students' efforts, teachers expect students to succeed and students get along well with teachers. Students also wavered between agreeing and disagreeing on whether or not they felt that the punishment at school was the same for everyone. Students did however, have a slight tendency to disagree that they felt "put down" by their teachers.

Findings from this research study will be discussed in light of social capital theory. Social capital theory maintains that low-SES minority students, such as most students of Mexican-descent, need to form an "instrumental relationship with an institutional agent" in order to be successful in school. According to Stanton-Salazar (1997), institutional agents are the teachers and counselors within an individual's school that have access to strategic or culturally important information that could aid students in finding academic success. Mexican-descent students, as noted in social capital theory, need to develop positive relationships in order to feel connected to adults at school who can provide them with the knowledge, resources and encouragement in order to find success (Stanton-Salazar, 2001). These adults can also provide students valuable resources through their roles as instructors, advisors and mentors (Stanton-Salazar, 1997).

Prior research on students' perceptions of teacher care and support suggest that students are more persistent, engaged, and involved in school when they believe that their teachers care about and support them (Croninger, 1997; Ford, 1985; Brewster & Bowen, 2004). Below, the study's findings will be described using social capital theory as a base.

Correlations

A strong correlation exists between parents' education level and SES. This finding is to be expected as parents' education level is one of five variables making up the SES construct. This information might be useful to Hispanic high school students to help them to understand the positive relationship between education and SES, which include job status and income.

Prior academic achievement was shown to be moderately correlated to students' educational expectations, parents' highest education level and SES. These findings concur with those in the literature. The finding that prior academic achievement and educational expectations correlate positively might be shared with parents as well as with elementary and middle school faculty to encourage additional academic support in lower grades.

Each of the parental involvement at home variables are correlated to one another. In addition, the parental involvement at school variables are also correlated. These findings are to be expected and will be discussed further in the upcoming factor analysis section.

The bi-variate correlation analysis also showed students' perceptions of their teachers to be correlated to students' attendance and students' educational expectations. This finding parallels earlier research which shows that absenteeism is less prevalent in schools where students perceive faculty to be interested and engaged with students (Bryk & Thum, 1989). This is a clear example of students benefitting from social capital that faculty provide through their roles as instructors, advisors and mentors (Stanton-Salazar, 1997). More specifically, this finding shows that students

come to school more often and set higher educational goals when they perceive positive relationships and support from faculty, a finding predicted by social capital theory, which suggests low-SES minority students, such as most students of Mexican-descent, need to form an “instrumental relationship with an institutional agent” in order to be successful in school. Educational expectations and students’ perceptions of teachers were found to be weakly correlated in the negative direction, an unexpected finding. Educational expectations are grounded in a concrete, personal understanding of the opportunities and resources that students have available to them through their immediate social context, such as their neighborhoods and schools (Mickelson, 1990). One possible explanation may be that Mexican-American students see little evidence among people around them that education is the key to success and upward mobility (Ogbu, 2003). Mexican-descent students need to see others like themselves benefitting from higher education in order to make the benefit of higher education concrete and to help increase and maintain educational expectations. If institutional agents at school understand the importance of Mexican-descent students seeing other like themselves benefitting from education, then they can arrange for Latino guest speakers to present to Mexican-descent students at school.

Attendance was shown to be weakly related to educational expectations. Thus, the higher a student’s educational expectations, the fewer days they were absent from school. This finding is to be expected, since students who set high educational goals for themselves probably have thought through the requirements of what it will take to attain their goals and have committed to achieve their goals by attending

school. Often, those students who are disengaging from school and showing a pattern of truancy have not set high academic goals for themselves and they do not see the connection or relevance between their high school education and their future goals. It might be helpful for students to set educational and vocational goals every year as part of a class curriculum. These goals could then be shared with all faculty members so that faculty could reinforce these goals through various cross-curricular activities. In addition, because social capital theory states that students need to form instrumental relationships with institutional agents at school in order to be successful, these written goals might serve as one additional way to help faculty to learn more about and make personal connections with Mexican-descent students. Furthermore, parents need to be educated about the relationships between educational expectations, attendance and school persistence. Schools need to take the initiative to communicate with parents and educate them about what makes a successful student.

Surprisingly, correlations between students' educational expectations and parents' education level and students' educational expectations and SES were, though significant, weak ($r = .13$ and $r = .17$, respectively), even though the literature suggests a positive relationship (Trusty, 1998; Hanson, 1994). More specifically, the research shows the lower the SES of a family, the lower the educational expectations of the students (Trusty, 1998). Research also shows that students from low-SES families, which include most Hispanic students in the U.S., are likely to experience lowered expectations over time (Hanson, 1994), suggesting that negative experiences in school gradually result in students lowering their educational expectations. Some research shows that students begin forming attachment bonds early in their schooling

and these relationships and their subsequent related behaviors effect whether or not students persist in school (Marcus & Sanders-Reio, 2001) Even though the correlations in this sample are weak, which means that issues other than parents' education and SES play a role in students' educational expectations, additional efforts need to be made at school to address the educational expectations of all students, but especially for those students whose parents have relatively little education and who have a low SES status. For example, students could be required to write essays in their English classes every fall to address and re-evaluate their, persistent or changing, educational and career goals. At this time students could be reminded how high school persistence is related to their desired future. Cross-curricular connections could be made throughout every high school course offering. For example, in Biology class the teacher could discuss careers in the life sciences and in Algebra class the teacher could discuss careers involving mathematics. Having in depth discussions about why individuals are pursuing specific vocations; what education is required; what they would do each day on the job; and which high school courses might be related to their future study could help students to make connections and understand the importance of their high school career.

Another unexpected weak correlation was found between student prior academic achievement and parents and students working on homework together. Earlier research has shown positive relationships between these variables (Balli, Demo & Wedman, 1998; Steinberg, 1996). Potential reasons for this weak correlation could include that many Mexican-descent parents are first generation immigrants, and therefore not fluent in English, educated outside of the US or did not

achieve much formal education themselves, thus making it hard to effectively support their children's achievement through support with homework.

Factor Analyses

The results of the principal component factor analysis revealed that several of the school-based social capital items including “teachers are interested in students”, “teaching is good”, “teachers praise effort”, “teachers expect success”, “students get along well with teachers”, “students often feel putdown by teachers”, and “punishment is same for everyone”, were related and suggests that students who view teachers as supportive and caring also think their teachers are competent and fair. This finding regarding the inter-relationships of the school-based social capital items is not surprising as it reflects that students that view teachers in a positive light generally find all of the measurable attributes to be similar.

The two social capital items examining whether students' math and English teachers talked with students outside of the classroom regarding schoolwork, plans for after high school or about personal matters also loaded onto a factor, suggesting that there is an underlying relationship between these variables.

The factor analysis exploring the parental involvement items showed a parent involvement at home theme and a parent involvement at school theme. This finding agrees with prior research on immigrant parental involvement with school (Valencia, 1997). It suggests that while most parents value education and want to support their children, many Mexican-descent parents are not comfortable coming into their children's schools to get involved or may not be in a position to do so. This invisible

barrier keeping Mexican-descent parents out of their children's schools makes it even tougher to develop the instrumental relationships with school faculty that provide students with the benefits of social capital.

Some of the barriers preventing immigrant parents from getting involved at their children's school include limited English proficiency, work schedule, unfamiliarity with the U.S. school process and differences in cultural norms in dealing with education (Tinkler, 2002). For immigrants, parental involvement at home may include discussing school and schoolwork, tutoring and expressing high educational expectations to their children (Valencia, 1997). The fact that for Mexican-descent parents involvement at home and involvement at school load on two different factors suggests that Mexican-descent parents value education but may not feel comfortable coming into their children's schools to get involved or alternately that long work hours or holding down more than one job may prevent parents from getting involved in school. Even though schools cannot modify the latter, schools could do more to influence the former. It is possible that school communities have not made enough of an effort to welcome Mexican-descent parents and to make them feel invited, valued and appreciated enough to come into the schoolhouse and partner with educators for the sole purpose of supporting their students achievement and persistence.

If faculty took the initiative to learn conversational Spanish and attempted to communicate to Mexican-descent parents in their native language, perhaps this might begin to build trust and more parents might be willing to risk coming into schools to get involved with their children's education. Historically, there is a level of distrust

between Mexican-descent people and the Caucasian population that goes back to the original incorporation of Mexican-Americans into the U.S. in 1848. After the Mexican-American War, Mexicans were promised to be able to maintain their land in addition to other civil and property rights but ultimately their rights were not respected and their property was taken away (del Castillo, 1990). It is incumbent on school systems and faculty to take steps to build rapport, trust and relationships with Mexican-descent parents in order to help Mexican-descent students to gain the social capital that they need in order to be successful in school.

Gender Differences

When comparing male and female students on the demographic categorical variables it was found that the sample contained a significantly higher percentage of first generation male than female students. The professional literature provides no information on this. One could speculate that a higher percentage of first generation students are male because first generation female students might drop out of school at a higher rate to take care of traditional female responsibilities around the home. For example, teenage girls might be responsible for staying home and babysitting younger siblings so their parents can work. In addition, among 15- to 19-year-olds in the U.S., Hispanics, who are mostly of Mexican descent, have the highest birth rate of any racial-ethnic group (U.S. Department of Health and Human Services, 2003). This high birth rate for Mexican-descent teenage girls could be necessitating some students to drop out of school to rear their own children.

School systems need to be aware and to investigate why first generation female students are under-enrolled in high school as compared to their first generation

male classmates, and make accommodations to get these females back in school. Specifically, school systems need to increase efforts to keep teen parents in school. Various school systems have early childhood development classes, tied to day care centers within schools, to encourage parenting teens to stay in school and receive free day care while they are enrolled and pursuing a diploma. In addition, school systems need to investigate subsidizing larger day care centers and other arrangements to allow teenagers that would otherwise have to drop out to raise their younger siblings to be able to stay in school and earn their high school diploma.

Interestingly, though a higher percentage of female students missed three or more days of school, there is no significant difference between genders. Both male and female students in this sample missed approximately the same amount of school days. However, it is concerning that 52 percent of male and 54 percent of female students missed 3 or more days of school over the last semester because school attendance has been found to be related to academic achievement and persistence for Hispanic students (Rumberger, 1995; Rumberger & Larson, 1998). Understanding that the main reason Hispanic students disengage and drop out of school is their failure to make connections with school staff and the perception of not feeling supported and cared about in school (Nowicki, Duke, Sisney, Stricker & Tyler, 2004), teachers need to make efforts to engage, connect and support students that appear to be withdrawing from school. If teachers do not make these efforts with students of Mexican-descent, they are denying students the benefits derived from school-based social capital. Some of the benefits of social capital include support, encouragement, tutoring and knowledge of school processes and resources. In addition, due to the

importance of family in the lives of students of Mexican-descent, teachers should also make efforts to engage and create relationships with the families of these students. This may mean inviting parents into schools to meet personally or arranging visits to students' homes. Again, if faculty took the initiative to learn conversational Spanish and attempted to communicate to Mexican-descent parents in their native language, perhaps this might begin to build trust and more parents might be willing to risk getting personally involved with their children's teachers at school, home or in the community.

Male and female students were also compared on their level of educational persistence. The data showed that female students persisted in school at a significantly higher rate than male students. One possible explanation for the higher persistence rate of female students might be that academically weaker female students drop out at a higher rate than their male classmates in the middle grades. Thus, once female students enroll in high school they tend to persist in school more consistently than male students. While focus and commitment are important to educational persistence, there are barriers that discourage Mexican-descent, male students from staying in school and graduating, such as peer pressure, gang involvement, child rearing and full-time employment.

High School teachers, counselors and administrators need to come together and develop plans to support Mexican-descent male students in school. Depending on the size of the school population, internal or external mentors could be assigned to students. Extra-curricular activities, heritage clubs and sports could be used as tools to engage students and to keep them coming to school regularly. Creative scheduling,

to allow specific groups of students to take enrichment classes together, could be empowering. Also, assigning the best and most caring teachers to work with this vulnerable student population might be necessary. Systems could explore hiring retention counselors that focus on a small population of at-risk students. These counselors would have specific training and personal understanding of Mexican history and culture, teen parenting, drug/alcohol addiction, and gang affiliation and identification. In addition, creating programs to increase parent and family involvement might also benefit Mexican-descent students' persistence in school.

The results of Multivariate Analysis of Variance showed that parents of male students possess a significantly higher level of education than the parents of their female peers. This finding appears to be an idiosyncrasy of the sample as there is no logical explanation for this finding, thus no implications are stated.

Even though no differences between male and female Mexican-descent students were found on prior academic achievement, female students in the current sample showed significantly higher educational expectations than their male counterparts. While there is no prior research comparing Mexican-descent students' gender to educational expectations, Trusty (2000) did find that Hispanic females are the most likely of any gender and racial-ethnic group to decrease educational expectations over time. Understanding that Hispanic, and more specifically Mexican-descent, females start high school with greater expectations than males, it is important to find ways to increase male students' educational expectations, as well as find ways to help female students to maintain their expectations through high school and into higher education.

Using Empowerment Theory counselors can help students to develop positive identities and to understand how education can help to change their socio-political position and SES. For example, research shows minority children reduce their efforts in school when they believe that their efforts are not worth the outcome (Ogbu, 1978). Empowerment theory teaches minority students to increase their personal power and to decrease feelings of powerlessness. This process of empowerment is facilitated through increasing students' critical consciousness, developing their positive identity and encouraging students to take social action for the betterment of their community (Hipolito-Delgado and Lee, 2007). Empowerment Theory can also help Mexican-descent students to better understand racism and the invisible forces that affect students in school and in society. This is another example of how possessing social capital through a relationship with a teacher or counselor can benefit Mexican-descent students in school.

In this sample of Mexican-descent students, female students had significantly more favorable perceptions of their teachers than male students. Even though prior research shows that Hispanic students who perceived care and support from staff were more likely to ask for assistance with schoolwork, engage in school, not exhibit problem behaviors, and find school more meaningful (Stanton-Salazar, 2001; Brewster & Bowen, 2004; Ford, 1985; Croninger, 1997), comparisons between male and female students have not been reported in the literature.

Efforts need to be made to help Mexican-descent males to make connections and forge relationships with their teachers. Many of the same recommendations stated above to encourage educational persistence may be beneficial to connect these

male students to their teachers. Some of these recommendations include assigning the best and most caring teachers to work with Mexican-descent males, hiring retention counselors and teachers that are of the same heritage and that speak Spanish, finding teacher mentors within the building that male students personally connect with and training counselors and teachers on Empowerment Theory to help students with increasing their critical consciousness, developing their positive identity and encouraging them to take social action (Hipolito-Delgado and Lee, 2007).

Urbanicity Differences

The data show that first generation, Mexican-descent students are more likely to attend urban schools and second and later generation immigrants are more likely to attend suburban or rural schools. This finding is agreement with national trends (Kaufman, Chavez & Lauen, 1999). Also, native English speakers are significantly more often represented in urban schools than in suburban or rural schools. This finding could be a limitation of the study due to selection bias. Students that did not have a sufficient enough command of the English language to complete the initial questionnaire and achievement test were not allowed to participate in the study. Thus, one needs to take caution in interpreting these findings as it is not known if more native Spanish speakers were deselected from the study potentially based on their limited English proficiency.

Interestingly, students living in suburban and rural areas possessed a significantly more favorable perception of their teachers than students living in urban areas. This finding could be related to prior research that suggests that urban students

are more likely to have less educated and less experienced teachers (Betts, Rueben and Danenberg, 2000). Perhaps first generation students need more guidance and support from their teachers, so teachers may need to be sensitive to this. One can speculate that more educated and experienced teachers may be able to better relate to their students and may be more likely to possess the necessary skills to engage students in instruction. It may be beneficial to make efforts to offer incentives, continued professional development, quality supervision and avid teacher support to attract and retain highly qualified and experienced teachers in urban districts because when teachers are able to forge positive relationships in the eyes of Mexican-descent students, Mexican-descent students are more likely to persist in school. This teacher-student relationship that results in academic success or persistence is social capital theory at work. Social capital theory suggests that low-SES minority students, such as most students of Mexican-descent, need to form an “instrumental relationship with an institutional agent” in order to have access to strategic or culturally important information at school in order to be successful (Stanton-Salazar, 1997).

Results of Multiple Regression Analysis

The school input variables found to be predictive of educational persistence are: prior academic achievement, schools located in suburban or rural area, and parental involvement with homework. These findings are consistent with prior research conducted on heterogeneous groups of high school students (Driscoll, 1999; Catterall, 1998; Orfield, Losen, Wald & Swanson, 2004; Balli, Demo & Wedman, 1998; Steinberg, 1996) as well as specifically on Hispanic or Mexican-descent

students (Velez, 1989; Betts, Rueben & Danenberg, 2000; Valencia, 1997). The school process variables found to be predictive of educational persistence for Mexican-descent students are students' school attendance, their educational expectations and their view of teachers' behaviors, expectations and treatment. These variables and their relationship to prior research will be discussed below with particular attention on how these process variables contribute to a better understanding of Mexican-descent students' persistence in school.

Input Variables

The input variables, consisting of prior academic achievement, school urbanicity and parental involvement with homework, found to be predictive of educational persistence in this study are consistently found to be related to educational achievement and persistence in prior studies. For example, like in the current study, Velez (1989) found that academic achievement is strongly correlated to the educational persistence of Mexican-descent students. On a broader scope, educational persistence has consistently been found to be correlated to prior academic achievement for students of all races (Driscoll, 1999; Catterall, 1998; Rumberger, 1995).

Since prior academic achievement, which was measured in 10th grade for this study, is consistently found to be related to educational persistence, it is vital to find ways to increase students' academic achievement level in 9th grade and before.

Efforts can be made to increase student achievement in elementary and middle school through encouraging more rigorous courses for students, helping students to build social capital networks, parent education programs, as well as through the implementation of extra-curricular activities at elementary and middle schools supported by high school students.

One of the most direct ways to increase student achievement is through encouraging students to enroll in more rigorous courses. More rigorous courses, generally cover more content, go more in-depth and come with greater teacher expectations. It may be most effective to have counselors meet individually with Mexican-descent students and their parents to explain the differences in academic rigor between classes, for example English 9 regular to English 9 Honors, as well as the benefits of taking more challenging classes. These students and their families need to understand the risk and reward of taking the higher level classes and to hear that their counselor has confidence in them and will help to put supports in place if they struggle with the class. In addition, teachers and counselors should understand and respect the cultural norms of the Mexican-descent family and invite families into school when discussing important topics, such as academic intervention, higher education and career planning.

Faculty members can also take action to support the academic achievement of Mexican-descent students through learning conversational Spanish, and studying Mexican history, cultural values and traditions. Faculty will be better able to understand, support and build relationships with Mexican-descent students when they

better understand the differences between acculturation and assimilation as well as the effects that racism has on Mexican-descent students.

If students are motivated to take more rigorous courses but academically do not yet have the skills to succeed at the higher level, administrators need to be creative with scheduling in order to offer Mexican-descent students opportunities to accelerate their skills academically. One suggestion would be to offer a double period of a class, English 9 for example, that allows motivated students twice as much time to learn the content. First, teachers would cover the regular content, then make available an additional period to accelerate students' literature comprehension, grammar and composition skills in order to bring students up to the true honors level for the following year.

Utilizing staff development time to reinforce the importance of interpersonal communication, building supportive teacher-student relationships and helping students to create a network of social capital is important because prior research shows students' are more persistent, engaged, and involved in school when they believe that their teachers care about and support them (Croninger, 1997; Ford, 1985; Brewster & Bowen, 2004). Social capital can provide students with access to tutoring, academic counseling, guidance, encouragement and emotional support (Stanton-Salazar, 1997). Prior research also shows that students that are more engaged and involved in school are more likely to have better attendance and higher grades (Bryk and Thum, 1989). Bryk and Thum (1989) suggest that school experiences for eventual student dropouts follow a path of academic and social disengagement. This progression starts with difficulties in elementary school and

eventually leads to behavioral problems, attendance problems and dropping out of high school. Helping Mexican-descent students to build networks of social capital might decrease students' propensity to disengage from school without adult intervention.

A third strategy to increase student achievement may be through the implementation of parent education programs. By providing parents with the skills necessary to operate computers, access email and school related websites, as well as to improve their English communication skills, parents may be better equipped to have the knowledge and skills to support their students with test preparation and homework.

Another strategy to increase student achievement in elementary and middle school is the implementation of extra-curricular activities that are supported by high school students. High school students can help to engage younger students in their schools through a variety of after school programs. These programs could be related to athletics, music, the arts, crafts, fitness, home economics and book clubs to name a few. In addition, mentoring, tutoring, volunteering and service learning programs could directly help students to engage in their schools, thereby increasing their likelihood to have greater achievement because students that are engaged in their schools, academically or otherwise, are more likely to attain higher levels of achievement.

Similarly to prior academic achievement, being enrolled in an urban school predicts non-persistence for students in the current study. This finding is in agreement with prior research that shows students in urban schools are significantly

more likely to drop out of high school than students in suburban or rural schools (Orfield, Losen, Wald & Swanson, 2004). In the current study, students in urban schools also tended to be first generation Mexican descent, which relates to the findings in Betts, Rueben and Danenberg's (2000) study who suggested in their study of California high schools, that urbanicity is related to dropout because urban schools possess larger numbers of disadvantaged students and that these students are more likely to have less educated and less experienced teachers.

Traditionally, urban school systems are more likely to possess fewer certified and less qualified teachers than suburban or rural systems. On a larger scale, politicians need to address this inequity if they are going to address the achievement gap. On a smaller scale, principals need to ensure that they are placing their socially and academically neediest students with their most qualified and experienced teachers. Too often the weakest academic students are assigned to teachers who are uncertified or inexperienced, thus making it more challenging for struggling students to make the necessary academic gains to close the achievement gap. In fact, when the weakest students are given inexperienced or uncertified teachers, students risk falling further behind. This phenomenon could be related to the power of teacher unions, seniority systems and school culture. The culture in many schools allows department chairs to assign teachers to classes as opposed to principals making these decisions. In these cases, seniority often plays a factor which allows the most senior teachers to teach the upper level courses and requires the newest and uncertified teachers to teach the regular and below level classes.

A second reason that being enrolled in urban schools is related to non-persistence might be that urban districts generally have smaller per capita budgets and fewer resources for student achievement and support. For example, there are generally less advanced academic classes and smaller ratios of school counselors to students in suburban and rural districts than in urban school districts. More advanced academic classes allows for greater student choice and for better opportunities to prepare students for higher education. The smaller counselor-student ratios in suburban and rural districts allow for counselors to spend more time with individual students, better understand student needs and build better relationships with students and families, which is particularly important for students of Mexican-descent. These counselor-student and family relationships provide students with an important form of social capital that might aid students in finding academic guidance, support and success. In addition, this support is especially important for Mexican-descent students who want to pursue higher education but do not have parents or siblings that have been successful in college.

Understanding that urbanicity is related to non-persistence, or dropping out of school, urban districts need to make efforts to attract and retain higher quality teachers and counselors. Research has shown that urban students are more likely to have less educated and less experienced teachers (Betts, Rueben and Danenberg, 2000). Offering higher starting salaries, continued professional development, quality supervision, mentoring and avid teacher support would be a step in the right direction toward attracting and retaining highly qualified teachers in urban districts. Moreover, offering incentives to encourage the most competent teachers to teach the lowest

performing students in their schools, as well as encouraging the most competent teachers to transfer to the lowest performing schools might have a positive impact on student achievement.

Another variable found to be predictive in the logistic regression analysis is parental involvement with homework. This finding confirms earlier research on the positive relationship between school persistence and parental involvement with homework for students (Balli, Demo & Wedman, 1998; Steinberg, 1996; Coleman, 1988) and for immigrant students specifically (Valencia, 1997).

The finding that parental involvement with homework was found to be related to school persistence in the current study can be utilized to encourage parents and community members to involve themselves more actively in supporting their students with their homework. Understanding that many immigrant parents face great barriers in supporting their students with homework, such as low-English proficiency, little personal education and the necessity of working multiple jobs (Tinkler, 2002), sharing the significance and benefits of this form of parental involvement might encourage parents to increase the amount of time and effort they contribute to their students' studies. In addition, it might encourage parents to make an effort to find other adults to fill this support role for their children if they are incapable or unavailable to do it themselves.

Schools can make efforts to increase the educational persistence of students through understanding the concept of familism and through encouraging and increasing the number of parents that assist their children with homework. Familism is a social concept that stresses putting the needs of the family ahead of the personal

needs or desires of any of its members. Through cultural proficiency training at schools, faculties can begin to understand that familism (Eggers-Pierola, 2002) is a core foundation of Mexican culture and that families need to be included as part of a comprehensive plan to increase the educational persistence for Mexican-descent students. Traditionally, each member of the Hispanic family is supported and held responsible through the concept of family interdependence (Eggers-Pierola, 2002). Through the process of inviting, including and educating parents and perhaps older siblings of Mexican-descent students, an effort can be made to build a more comprehensive support system.

In addition, school systems can sponsor adult education classes to help parents to learn English, to understand how the public education system works and where to go to get resources to assist their children. Schools could offer evening tutoring sessions for students at the same time that adult education classes are being offered. Adult education classes might include basic computer courses, including how to register and use email, on-line access to teachers' grading systems, teachers' web pages and schools' newsletters. School systems could go a step further and visit parents in their homes to offer forms of training and support.

It is equally important that while Mexican-descent parents are encouraged to learn the English language, technology resources used at schools and how our school system works, faculty need to be educated and trained on learning conversational Spanish as well as Mexican history, cultural values and the importance of family. It would also benefit faculty to learn about the invisible barriers that racism creates for our Mexican-descent students and their families. Faculty should also be trained to

reflect on their own biases of which they might not even be aware. In addition, faculty need to be aware of the biases that students hold toward each other and the effect that peer isolation and alienation can have on Mexican-descent students. Gaining a better perspective of our Mexican-descent students and their daily challenges might help faculty and students to come together to build positive teacher-student relationships, ultimately resulting in social capital for students.

School process variables

The school process variables found to be predictive of educational persistence in the logistic regression were students' degree of school attendance- those students that missed 2 days or less were more likely to persist in school than those that missed 3 or more days of school in the previous semester. Similarly, those students that expected to pursue higher levels of education were more likely to persist in school than students with lower level of educational expectations. And finally, those that perceived their teachers to be fair, caring and supportive were more likely to persist in school than those who did not hold the same beliefs.

Student attendance was found to be a significant predictor of educational persistence in this study which is consistent with prior research and has been well documented (Lee & Burkam, 1992; Bryk & Thum, 1989). Likewise, research has found absenteeism to be the single greatest predictor of dropping out of school (Lee & Burkam, 1992; Bryk & Thum, 1989). Research suggests that the relationship between attendance and dropping out of school could be reflective of students' engagement in school (Rumberger & Thomas, 2000; Roderick & Cambrun, 1999).

Bryk and Thum (1989) propose that dropping out consists of a gradual drifting away from school over time, thus distancing one's self from schools' academic and social activities.

In order to address students that are disengaging from school, teachers could make efforts to engage, connect and support those students that appear to be withdrawing from their classes and extra-curricular activities. Like in the current study, research shows that students who perceive their teachers as attentive and caring are more likely to be enthusiastic about school and to engage in school-related activities (Ford, 1985), such as participation in classroom lessons as well as after school clubs, athletics and student government. The main reason Hispanic students give for disengaging and eventually dropping out of school is their failure to make connections with school staff and the perception of not feeling supported and cared about in school (Nowicki, Duke, Sisney, Stricker & Tyler, 2004; Fine, 1987; Conchas, 2001; Rumberger, 1987, Kitchen, Velasquez & Myers, 2000). With this understanding, systemic efforts need to be made to encourage faculty to interact and develop instrumental relationships with Mexican-descent students that will ultimately help students to engage in school, thus increasing students' desire to attend school regularly and persist.

Faculty members might attempt to engage students through a variety of curricular and extra-curricular activities. Extra-curricular activities might include clubs, the arts, athletics, student government and service projects. Faculty need to remove barriers and increase the opportunities for students and staff members to build

positive, trusting relationships at school in order to increase students' social capital as well as their engagement and attendance.

Educational expectations, a school process variable, were found to be a significant predictor of educational persistence for Mexican-descent students in this study. Since research shows SES is correlated with educational expectations (Trusty, 1998) and Mexican-descent students are disproportionately represented in the two lowest SES quartiles, it is to be expected that Mexican-descent students possess lower educational expectations than the average student. In addition, Rumberger (1995) found that low educational expectations were related to dropping out of high school for all students, including Hispanics. Thus, it would be beneficial for faculty to actively engage the Mexican-descent population, and all students, through a process of investigating higher education and potential careers.

This process of investigating higher education and potential careers could include using interest inventories with groups to determine personal work-related preferences, then technology to investigate careers. Next, the teacher or counselor could facilitate discussion to engage students personally and to have them share their findings with their peers. Guest speakers, field trips and group research projects could all help to engage students and facilitate the process of career exploration. Respecting the centrality of family in the Mexican culture, families should be invited into school for evening programs that are related to career exploration and future planning. The culminating activity for investigating higher education and potential careers would be an exercise in personal and professional goal-setting.

Students' goals could then be made available for faculty and used for many purposes, such as to help drive student registration, extra-curricular offerings, field trips as well as being used as another vehicle to help connect faculty to students personally. School counselors, teachers and administrators could utilize students' goals when lesson planning, working to motivate students or trying change a student's behavior. Having additional, personal information about students is also one more way to help faculty to find commonalities and to make connections with their students. These positive connections could be classified as social capital and might ultimately aid Mexican-descent students to find academic success in school.

Knowing that educational expectations are grounded in a concrete, personal understanding of the opportunities and resources that individuals have available to them through their immediate social context (Mickelson, 1990), it is important that educators provide children of all races and ethnicities the opportunity to see adults of similar backgrounds finding success in higher education, the workforce and life. When Mexican-descent students see only few others like themselves, of their ethnicity or nationality, benefitting from educational success, their educational expectations are usually lowered. Moreover, Mexican-descent students living in low SES communities might have little contact with other Mexican-Americans that have benefitted from educational persistence and post-graduate study. Mexican-descent high school students, like all minority students, need to see personally and concretely that adults that come from the same backgrounds they do, were able to attain higher levels of education, workforce success and social mobility.

It is the responsibility of the school system to provide a rigorous and relevant curriculum for all students and to help students to see themselves in the curriculum. Providing students with a diverse group of mentors and mentorships, career days, guest speakers and field trips to universities, businesses and community organizations throughout the course of the year might enrich the curriculum and facilitate Mexican-descent students seeing others like themselves benefiting from higher education. This process would also help make the benefits of higher education more concrete and less abstract. Mexican-descent students need to see that education is “the great equalizer” and that it is worth the investment.

In addition to seeing adults from similar backgrounds succeed in higher education and the workforce, and seeing themselves in their curriculum, Mexican-descent students may also benefit from being exposed to empowerment groups that help marginalized and disenfranchised students to increase their personal power and decrease feelings of powerlessness (Hipolito-Delgado and Lee, 2007). Professional school counselors need to be proficiently trained in Empowerment Theory in order to help students to understand the socio-political culture in which they live. This process may help students to believe they have control over their future, their education and their social mobility (Hipolito-Delgado and Lee, 2007). Empowerment Theory can also help Mexican-descent students to better understand racism and the invisible forces that effect students in school and in society.

The third school process variable found to be significant in the logistic regression was students’ perceptions of teachers. In this study, students’ perceptions of teachers along with items reflecting student-teacher conversations outside of the

classroom measured school-based social capital. Students' perceptions of teachers were found to be significantly related to educational persistence while student-teacher conversations outside of the classroom were not.

Probably the most important finding in this study was that after all other demographic and school factors were controlled for, students' perceptions of teachers were still found to be significant. This finding reinforces the importance of social capital theory as well as creates a greater need to encourage positive teacher-student relationships. School-based social capital in this study was defined as the benefit derived from students developing positive relationships with members of the school community. Faculty members often have access to strategic or culturally important information about school that could aid students in finding academic success.

Mexican-descent students in the current study who perceived positive relationships with teachers experienced better attendance and greater persistence in school. This finding is in agreement with prior research on minority students, Hispanic students and on a heterogeneous grouping of students. These studies showed that students are more persistent, engaged, and involved in school when they believe that their teachers care about and support them (Croninger, 1997; Ford, 1985; Brewster & Bowen, 2004). Ford (1985) showed that students who perceive their teachers as attentive and caring were more likely to be enthusiastic about their school and to get involved in school-related activities while students who found their teachers to be inconsiderate and uncaring were more likely not to enjoy school or to get involved.

Since historically a level of distrust exists between Mexican-descent students and their mostly white teachers, it is relevant to emphasize the damage that can occur when Mexican-descent students feel “put-down” by their teachers. Bi-variate correlations in the current study show that feeling “put-down” in the classroom by teachers is related to student perceptions, such as “teaching is good”; “students get along well with teachers”; “teachers praise effort”; “teachers are interested in students”; “punishment is the same for everyone”; and “teachers expect success.” Thus, teachers need to be especially sensitive to the things they say and do that make Mexican-descent students feel put-down in the classroom because this might affect the student’s personal view and relationship with the teacher as well as the likelihood that the student would ask for help or accept assistance from the teacher (Stanton-Salazar, 2001), resulting, ultimately, in academic failure.

Another large scale study by Stanton-Salazar (2001) showed how trust and confidence are important to Latino students in the classroom, as social capital theory would predict. Results from this study showed that Latino students would not ask for assistance from adults at school if they had not first developed a trusting relationship. In addition, the same study found that students often did not ask for assistance with schoolwork because they possessed feelings of shame, confusion and powerlessness (Stanton-Salazar, 2001). This author suggests that while building trusting relationships between students and staff is to be recommended, it is also important to begin the process of empowering students that have historically been marginalized or disenfranchised.

The results of the current study suggest the need to increase positive relationships between students and faculty as well as the need to empower Mexican-descent students to gain, or increase, control over their lives. School staff members need to remove barriers and increase the opportunities for students and staff to build positive, trusting relationships. One of the best ways to begin removing these barriers would be for faculty to begin learning conversational Spanish, as well as studying Mexican history, cultural values, traditions and the importance of family. In addition, creative scheduling, advisory groups and increased extra-curricular involvement are all strategies that may increase positive relationships between Mexican-descent students and staff.

It is incumbent on educational administrators and staff to understand the importance of helping students to build social capital networks at school and to begin building structures that support and encourage positive student-staff interactions and relationships. Understanding that school faculty can influence attendance, educational expectations and students' perceptions of their teachers, and that these factors have been found to be related to persistence in high school for all groups, including Mexican-descent students, it is necessary to begin implementing strategies for change.

Some potential structures that might begin to bridge the gap between Mexican-descent students and their teachers could be found through creative scheduling, advisory groups and increased extra-curricular involvement. Finding ways to encourage student-teacher interaction at school, but outside the confines of the traditional classroom setting, might be a good place to start. On-going advisory

groups that give students an outlet to discuss troubling things and that promotes open discussion could be a benefit. Advisors could stay with the same group of students over students' 4 years of high school. Another idea might be to have every teacher run a club or organization that meets once per week during the school day where students can choose which activity, with which teacher, they want to attend. This type of creative scheduling would encourage students to spend time with an adult in the building that they feel comfortable with, participating in an activity or discussion that interests them personally. Other types of creative scheduling could help to facilitate positive student-teacher interaction but are going to vary greatly based on the size of the school, resources, faculty and the specific programs that each school offers.

In addition to building positive relationships between students and staff, teachers, counselors and administrators need to be better trained to understand the diverse cultural needs of the students in their schools. Training staff members on the concept of "culturally proficient teaching" could go a long way in showing marginalized students that staff members care about them. When staff members take the time to learn about various students' cultures and then bring this information into the classroom, students may feel a greater level of mutual respect and understanding with their teachers. Culturally proficient teaching is more than just "best practices" and teaching strategies, it is a model for empowering students in the classroom.

In conjunction with training staff members on the concept of culturally proficient teaching, professional school counselors could begin running empowerment groups for marginalized students in middle school. High school

counselors would continue this process from the beginning of high school and students that have been marginalized or disenfranchised in the past might begin to believe in themselves. Stanton-Salazar (2001) found that teachers and counselors who are functioning as institutional agents at school can help students believe that they do have control over their future, their education and their social mobility. The process of empowerment and increasing the educational persistence of Mexican-descent students is going to take the support of all stakeholders, including teachers, counselors, administrators, coaches, parents and students.

Finally, another way to examine the findings of this study would be to look at them through the framework of Cultural-ecological theory. Cultural-ecological theory posits that the way a minority group interprets their history of incorporation into the U.S., along with the impact of society's subsequent treatment, shapes how minorities view problems, barriers and solutions (Ogbu, 2003). Cultural-ecological theory suggests that Mexican-Americans maintain high levels of pessimism toward White Americans and are often resistant to assimilation and schooling (Ogbu, 1987; Ogbu, 2003).

Through the framework of Cultural-ecological theory, this study also looks at various levels of context and their influences on the persistence in school of students of Mexican-descent, from broad community factors to social factors, to classroom-level factors to interpersonal factors. Ultimately, after considering, or controlling for, all community, social and classroom factors- this study investigates if students' interpersonal relationships with their teachers are having significant impact on whether or not students persist in school.

This model will approach the data from a socio-cultural perspective, looking first from a macro lens of community, then down toward a micro lens of individual perceptions. From a community perspective, a Mexican-descent student in the current study that is enrolled in a suburban or rural school is 256%, or more than two and a half times, more likely to persist in school than if he/she were enrolled in an urban school. Thus, this community factor has a significant and large impact on Mexican-descent students' persistence in school. While staff in schools are not able to change the locale or urbanicity of a school, there are policy implications associated with this finding. As noted previously, urban schools may benefit from additional counselors and staff specifically trained to work with students of Mexican descent. In addition, additional supports, such as an increase in college-preparation courses and counseling may counteract some of the effects associated with urban schools.

It is not only macro community factors that influence Mexican-descent students' persistence in school; the social factor of SES also contributes uniquely to the outcome variable, even though not significantly. From a social perspective, for each quartile increase in SES level, a student is 41% more likely to persist in school. Similarly, a Mexican-descent student that is in the third SES quartile is 82% more likely to persist in school than his or her classmates that reside in the lowest SES quartile. It is plausible, though not demonstrated in this study, that the effects of concentrated poverty would further exacerbate this finding. Accordingly, both community and social factors influence a Mexican-descent student's persistence in school. Again, while school staff are not able to change students' SES, staff may increase their supports to Mexican-descent students to influence their persistence.

While community and social factors impact Mexican-descent students' persistence in school, what happens at the classroom-level is also significant. A Mexican-descent student's achievement in school, specifically his or her prior achievement, impacts his or her likelihood of persisting in school. Mexican-descent students increase their likelihood of persisting in school by 111% for each one quartile increase in prior achievement. Thus, Mexican-descent students in the highest quartile of prior achievement are more than 3 times more likely to persist in school than their lowest achieving classmates. This finding illustrates the importance of what happens at the classroom-level and shows that teachers, and what they do in their classroom to impact a student's achievement, may have meaningful implications on a student's persistence in school.

Factors at the classroom-level impact Mexican-descent students' decision to persist in school. Yet it is not only a student's prior academic achievement that impacts persistence. What happens at the inter-personal level within the classroom also has a significant influence on the likelihood that a Mexican-descent student will persist in school. Said more simply, the relationships within a classroom are of importance. Looking from an inter-personal perspective, for each one unit increase in favorable perceptions of teacher (on a 4 point response scale), students are 34% more likely to persist in school. After controlling for community, family and classroom achievement factors, this study finds that Mexican-descent students' interpersonal relationships with their teachers are still having a significant impact on whether or not students persist in school, which is evidence of the validity of social capital theory.

This finding that Mexican-descent students are still significantly impacted by their relationships with their teachers even after community, family and school achievement factors are controlled for, reinforces Cultural-ecological theory and illustrates the substantial impact that a teacher, through his or her interactions with Mexican-descent students, may have on the students' persistence in school. Mexican-descent students might still maintain high levels of pessimism toward White Americans and be resistant to assimilation and schooling (Ogbu, 1987; Ogbu, 2003) but when Mexican-descent students perceive positive relationships with their teachers they are more willing to accept teacher support, and ultimately access to social capital. Social capital allows Mexican-descent students to receive many forms of support and advice through their instrumental relationships with adults at school. School-based social capital, including tutoring, academic counseling, support and encouragement, is especially important to Mexican-descent students who may not have access to this type of social capital elsewhere (Croninger, 1997).

Limitations

There are several limitations that need to be considered when interpreting the findings of this study. First, it must be recognized that the ELS:2002/2004 data relied on self-reported responses from students, parents, teachers and others which implies a response bias. Students, parents and teachers may have desired to be seen in a socially desirable light and this could have affected their responses. For example, the 2004 Census Bureau found that just under 8 percent of Mexican-descent parents had earned a 4-year degree, while the ELS:2002 data shows that just over 18 percent

responded to having earned at least a 4-year degree. The U.S. Census Bureau however, operates under the same set of limitations that the majority of other agencies and research studies do; they can only ask individuals to self-identify what their race and ethnic background are and there is no process to check for accuracy of responses. Thus, for all of these reasons caution does need to be used when drawing generalizations from these outcomes.

A second limitation to consider is that non-English speaking students and severely cognitively disabled students were not selected for the ELS:2002 base-year questionnaire, creating another selection bias. Although these students could potentially have been “freshened back” into the sample in the first follow-up if they were deemed capable, they were deselected from the initial survey. This creates a level of selection bias toward choosing students that are slightly more acculturated and cognitively more capable, and perhaps overstates significant findings. Whether acculturation makes students more likely to persist in school (Martinez, DeGarmo & Eddy, 2004; Ogbu, 1999; Steinberg, 1996) or to drop out (Grogger & Trejo, 2002; Kao & Tienda, 1995; White & Kaufman, 1997) is still being debated, but in general, more acculturated students have a greater likelihood to be proficient in English and students that are more assimilated typically are more resilient in school and less likely to drop out (De la Rosa, 2002).

The third limitation to this study deals with the questions used to measure social capital. The question: “Does this student talk to you outside of class about school work, plans for after high school or personal matters” was asked to each student’s English and math teacher. In this study the assumption was made that when

a teacher talks with a student outside of class this conversation would be viewed as a positive talk that would support the student, make the student feel connected to the teacher and build school-based social capital. It might be possible that some of the conversations that students and teachers had outside of the classroom might not have been positive and left the students feeling less than supported and disconnected from their teacher. Examples of these neutral or negative conversations could be teachers discussing negative behaviors with students, as well as topics such as missing homework, inappropriate language or absences from class. Or, marginalized, angry students may address concerns with teachers outside of class, thus creating additional tension and distance in the classroom. The fact that the ‘teacher talks’ item did not significantly predict educational persistence in the regression analysis suggest that these variables may not necessarily be experienced as positive.

The prior academic achievement variable must also be considered as a limitation in this study. The prior academic achievement score was developed through students’ performance on an English and a mathematics test where both tests were scored using IRT, which uses patterns of correct, incorrect and omitted answers, to find ability estimates which are comparable across differing test forms within a domain (Ingels, Pratt, Rogers, Seigal & Stutts, 2004). Standardized T-scores were obtained from the results and split into quartiles to make students’ scores easily comparable to their peers. Accessing and using exact, individual, continuous test scores would be a more accurate reflection of academic ability for future research.

The students’ perceptions of teachers variable was used as a measure of school-based social capital in this study. The students’ perceptions of teachers

variable was created as a proxy, from 7 student questionnaire items, to measure the level of care and support that students perceived from teachers at school. Using a proxy to measure school-based social capital is a limitation of this study. A more effective way to measure school-based social capital would be to conduct qualitative analysis and ask students specific questions about their relationships with faculty. Specifically, do students perceive that faculty members within their school care about them personally as well as their academic success?

Areas of Future Research

Contrary to prior research findings (Rumberger, 1995; Kao & Tienda, 1995; Portes & MacLeod, 1996; Bryk & Thum, 1989), neither SES nor parent education level proved to be significant in predicting the educational persistence of Mexican-descent students in the current study. It is possible that SES and parent education level are not significant predictors of educational persistence for the Mexican-descent population because middle and high SES students in this population still face the same structural barriers and prejudices in schools that their low SES peers face. This finding may also be an idiosyncrasy of the sample or a statistically-related issue because the sample of Mexican-descent students in the middle and upper SES quartiles was small. Regardless, further research is suggested to confirm whether or not SES and parent education level are significant predictors of educational persistence for the Mexican-descent population.

Future research also needs to expand the variables used to measure school-based social capital. The current study used students' perceptions of teachers and

teacher-student conversations outside of the classroom to measure social capital. Future studies should also include “student participation in school-related activities (clubs, athletics, SGA, ect.)” and “students’ possession of close friends” at school as additional measures of school-based social capital. Also, since the current study showed students’ educational expectations and perceptions of their teachers was related to educational persistence, further research needs to explore which factors positively and negatively influence students’ educational expectations and perceptions of their teachers.

In the current study, female students showed a significantly higher level of educational expectations than their male classmates. Further, educational expectations were found in the logistic regression to be predictive of educational persistence. Even though female students were more likely to persist in school than their male classmates as shown through a Chi-square analysis, gender was not found to be a significant predictor of educational persistence in the logistic regression. Perhaps female students in this study were affected by issues in their lives not related to school which may have discouraged them from persisting in school, thus negating the advantage in persistence that females have due to their relatively high level of educational expectations and their positive perceptions of teachers. A more thorough understanding of the relationship between educational expectations, students’ perceptions of teachers, gender and educational persistence is needed in the future.

The current study looks at educational persistence for Mexican-descent students between the spring of 10th and 12th grade. Future research should consider looking at educational persistence starting in middle school and tracking students

through high school graduation. One concern regarding the No Child Left Behind act is that teachers and administrators are discouraging and “pushing out” students that they fear might not be on track to pass their mandated assessments.

A final limitation would be that the current study examined all students of Mexican-descent without differentiating whether they were enrolled in public, private or Catholic schools. Future research should disaggregate school type to determine if possessing school-based social capital is more readily present in either public, private or Catholic schools.

Appendix A

Student Demographic Variables

o Gender (Student Questionnaire)

What is your sex (BYSEX)?

Male or Female

o Generational Status (Parent questionnaire)

Was your 10th grader born in the United States (that is, any of the fifty states or the District of Columbia) in Puerto Rico, or in another country or area (BYP23)?

-He/she was born in the United States;

-He/she was born in Puerto Rico;

-He/she was born in another country/area.”

o Prior Academic Achievement (Achievement Tests)

Standardized test composite score-math/reading

Students' prior academic achievement is measured using the average of the standardized scores on the math and reading tests (not from questionnaires) that were administered before the student questionnaire during the 10th grade school year (BYTXCSTD). The resulting scores were then re-standardized to a national mean of 50 and a standard deviation of 10. Composite scores were then placed into quartiles. The standardized T score provides a norm-referenced measurement of achievement which is relative to the entire national 10th grade population (ELS:2002 Cognitive Tests).

o Native Language (Student Questionnaire)

Is English your native language (the first language you learned to speak when you were a child) (BYS67)?

Yes or No

o Nativity (Student Questionnaire)

If you are Hispanic or Latino/Latina, which one of the following are you (BYS16)?

-Mexican, Mexican-American, Chicano

-Cuban

-Dominican

-Puerto Rican

-Central American (Guatemalan, Salvadoran, Nicaraguan, Costa Rican, Honduran, ect.)

-South American (Columbian, Argentinian, Peruvian, ect.)

o Urbanicity (School File)

Urbanicity of school locale as indicated in the source data (BYURBAN).

-Urban

-Suburban

-Rural

Parent Demographic Variables

o Parental Education Level (Parent Questionnaire)

What is the highest level of education that you and your spouse/partner have reached (BYPARED)?

- Did not finish high school
- Graduated from high school or equivalent (GED)
- Attended a two-year school, no degree
- Graduated from a two-year school
- Attended college, no 4- year degree
- Graduated from college
- Completed a Master's degree or equivalent
- Completed a Ph.D., M.D., or other advanced professional degree

(BYPARED= is the greater of - BYMOTHEd and BYFATHED)

(This means that Parent Ed Level is the greater of either Mother or Father Ed Level)

o Parental Involvement (Parent Questionnaire)

1. In this school year do you or your spouse/partner...attend meetings of the parent-teacher association (BYP54B)?

”yes, no or don’t know.”

2. In this school year do you or your spouse/partner... act as a volunteer at the school (BYP54D)?

”yes, no or don’t know.”

3. How often do you discuss your 10th grader’s report card with him/her (BYP55B)?

“never, seldom, usually and always.”

4. How often do you check that your 10th grader has completed all homework (BYP55A)?

“never, seldom, usually and always.”

5. Looking back over the last year, how frequently did you and your 10th grader participate in the following activities together...working on school projects (BYP57B)?

“never”, “rarely”, “sometimes” and “frequently”.

o Socio-Economic Status (BYSES1QU) (Parent Questionnaire)

SES is based on five equally weighted, standardized

components: father’s/guardian’s education (FATHED), mother’s/guardian’s education (MOTHEd), family income (INCOME), father’s/guardian’s occupation (OCCUFATH), and mother’s/guardian’s occupation

(OCCUMOTH). SES is than broken into quartiles- (lowest, second, third, highest)

School Process Variables

o Social capital (Student and Teacher Questionnaires)

Social capital is broken down into a factor as well as 2 additional items that did load onto this factor.

Students' perceptions of teachers (Social Capital Factor)

1. "When I work hard on my schoolwork, my teachers praise my effort;" (BYS20G)
"strongly agree, agree, disagree and strongly disagree."
2. "Teachers are interested in students;" (BYS20F)
"strongly agree, agree, disagree and strongly disagree."
3. "I go to school because my teachers expect me to succeed; (BYS27H) and
"strongly agree, agree, disagree and strongly disagree."
4. "In class I often feel 'put down' by my teachers". (BYS20H)
"strongly agree, agree, disagree and strongly disagree."
5. "The punishment for breaking school rules is the same no matter who you are;"
(BYS20B) "strongly agree, agree, disagree or strongly disagree."
6. "The teaching is good;" (BYS20E)
"strongly agree, agree, disagree and strongly disagree."
7. "Students get along well with teachers;" (BYS20A)
"strongly agree, agree, disagree and strongly disagree."

Teacher/student talks

"Does this student talk to you outside of class about school work, plans for after high school or personal matters?" (BYTE07- English Teacher)
"yes", "no" or "don't know"

"Does this student talk to you outside of class about school work, plans for after high school or personal matters?" (BYTM07- Math Teacher)
"yes", "no" or "don't know"

o Attendance (Student Questionnaire)

How many times did the following things happen to you in the first semester or term of this school year? (BYS24C)

b. I was absent from school

(Never; 1-2 times; 3-6 times; 7-9 times; 10 or more times)

o Educational expectations (Student Questionnaire)

As things stand now, how far in school do you think you will get (BYSTEXP)?

Less than high school graduation

High school graduation or GED only

Attend or complete a 2-year school course in a community or vocational school

Attend college, but not complete a 4-year degree

Graduate from college

Obtain a Master's degree or equivalent

Obtain a Ph.D., an M.D. or other advanced degree

Dependent Variable

Educational Persistence (F1DOSTAT)

Status indicator for the spring term, 2004:

0 = Drop out (non-persistence)

1 = Currently persisting in school (12th grader)

2 = Alternative completer

3 = Student prior report of drop out

4 = Out of scope

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