ABSTRACT

Title of thesis: THE INFLUENCE OF PARENTAL INVOLVEMENT ON THE EDUCATIONAL ASPIRATIONS OF FIRST-GENERATION COLLEGE STUDENTS

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This study examines the influence of parental involvement on the educational aspirations of first-generation college students. Additionally, the researcher investigates the changes in first-generation students' educational aspirations over time as well as the differences in students' educational aspirations and actual attainment. Differences in educational aspirations and attainment are analyzed by race, gender, and SES.

For this study, longitudinal data from a nationally representative sample of students generated by the National Educational Longitudinal Study 1988-2000 (NELS:88/2000) was used. Statistical measures employed included multiple regression, repeated measures ANOVA, and crosstabulation. Results indicated that parental involvement, among other variables, explained some variance in first-generation students' educational aspirations. Additionally, these students' educational aspirations increased over time, and, for the most part, students did not attain their aspirations. Differences in aspirations and attainment by race, gender, and SES were also discovered.

THE INFLUENCE OF PARENTAL INVOLVEMENT ON THE EDUCATIONAL ASPIRATIONS OF FIRST-GENERATION COLLEGE STUDENTS

by

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Thesis to be submitted to the Faculty of the Graduate School of the
University of Maryland, College Park in partial fulfillment
of the requirements for the degree of
Master of Arts
2004

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ACKNOWLEDGEMENTS

I share this work with my family, particularly my parents, Albert and Teresa, who inspired in me a deep love of learning and a profound appreciation for education. Their support, love, sacrifices, and encouragement have helped to make my successes possible. I also share this work with Keith who has been at my side throughout the entire process and consistently offered his love, strength, and encouragement. A great deal of appreciation I share with my good friends and colleagues who took genuine interest in my research and offered kind words, thoughts, and actions in support of my work. To my thesis committee members, and especially my Chair, I express my deepest gratitude for their consistent guidance, thoughtful feedback, and great care taken in encouraging me to stretch and continually achieve. Finally, I thank God for gifting me the mind, spirit, and personal drive to realize my goals.

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CHAPTER 1

Introduction

The notion of the "American Dream" is a powerful one rooted in the belief that an individual can achieve his or her fullest potential regardless of the circumstances of birth or class position (Billson & Terry, 1982; DeVitis & Rich, 1996). The process of achieving the "American Dream" includes two key elements: climbing the socioeconomic status (SES) ladder and attaining an education beyond that of one's forbears, and both steps are inextricably linked (Clark, 2003). For both immigrants and non-immigrants, the dream of an education for their children is a prevailing one; higher education, especially, can be the key to upward mobility. As commonly noted by higher education scholars and the popular press alike, college degrees serve as "sheepskins" which grant students automatic social status and more opportunities for upward mobility (Clark, 2003; Bernstein, 2003; Farrell, 2003, Leslie & Brinkman, 1988). As Farrell noted, based on U.S. Department of Education figures, the benefits of a college degree are apparent in income and employment measures; college graduates may earn at least 50.0% more in income than their peers who have only a high school diploma.

Clearly, society is changing. In this fast-paced, technologically advanced environment, a high school diploma may no longer be sufficient for securing a professional job (Fallon, 1997; London, 1996; Pratt & Skaggs, 1989). Without a Bachelor's degree, at the very least, fulfilling the American Dream becomes less likely. Students' educational aspirations and attainments must exceed those of their parents' so that students may maintain and improve their relative socioeconomic positions (London, 1996). Greater portions of students from non-college educated families are realizing that

in order to gain equal footing with their peers, a college degree is a must. These students, termed first-generation college students, “are an increasingly significant force in higher education” (Hsiao, 1992, Introduction section, ¶ 1). Kojaku, Nunez, and Malizio (1998) reported that 47.0% of the new students enrolling in college for the 1995-1996 school year were first-generation students. Clearly, as the numbers of first-generation students in the college environment become more significant, so do concerns about their educational aspirations and attainments within that environment.

Background of the Study

The enrollment figures of first-generation college students are growing, yet the graduation rates tell a different tale (Duggan, 2001; Inman & Mayes, 1999; Strage, 1999). Retention rates for these students in college are decreasing (Strage). They are often described as being “at risk,” and therefore, are met with challenges in achieving their educational objectives and aspirations (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). These first-generation students differ significantly from their non-first-generation peers with regard to race/ethnicity, socioeconomic status, academic achievement, level of family involvement, college culture shock, level of involvement in college, and college choice (Terenzini et al.). It is in these areas, that first-generation students face obstacles in their journey toward upward mobility.

With regard to race and ethnicity, Bui (2002) found that first-generation students were more likely to be racial and ethnic minority students from low socioeconomic backgrounds. Lower socioeconomic status can be a powerful force in determining the educational achievements of first-generation students; without resources, college is only a dream (Hansen & McIntire, 1989; Hossler, Schmidt, & Vesper, 1999; Inoue, 1999). For

many first-generation students, federal aid is not enough to combat their limited resources. Even for the intellectually capable first-generation students who make it past admissions, the obstacle becomes paying for their education (Inman & Mayes, 1999).

Academic preparation for college success is another key difference between first- and non-first-generation students (Fallon, 1997; Riehl, 1994; Terenzini et al., 1996). Research by Riehl and Brown and Burkhardt (1999) found that first-generation students had lower high school GPAs and scored below level on standardized tests such as the ACT and SAT. In addition, first-generation students had more modest perceptions of their academic preparation (Brown & Burkhardt). Most research on the attrition rates of first-generation students indicates that they are more likely to drop out during or just after the first year of college (Fallon; McConnell, 2000).

In addition to lower socioeconomic status and poorer academic achievement, first-generation students forging paths to higher education deal with a bittersweet issue; they are pioneers in that they are doing something that their parents did not do, yet the adventure can be a lonely one. Brooks-Terry (1988) notes that parental *influence* and *involvement* play a large role in the college decision process for traditionally aged first-generation students. Especially with regard to first-generation students of color who may already feel marginalized because of race in the college process, friends and family are critical support and guidance structures (Sedlacek, 1999). Overall, evidence suggests that first-generation students encounter a lower perceived level of family support, a lower level of importance placed on college, and less knowledge of the college environment and campus values (Hsiao, 1992; McConnell, 2000; Sherlin, 2002; Terenzini et al., 1996).

Less knowledge of the college environment and campus values leads to college "culture shock" for many first-generation students (Inman & Mayes, 1999; Piorkowski, 1983). These students arrive on campus to find a world that may conflict with their core family values because they have not been exposed to a sense of balance between college culture and family culture. Brooks-Terry (1988) refers to this struggle as the "double assignment" (p. 123), which describes how first generations students live between two worlds as they try to internalize the values of the upwardly mobile world while keeping the values of the family unit. However, commitment to the family may negatively affect campus life for the student in areas of involvement, sense of belonging, and overall development. First-generation students may refrain from engaging in campus activities, which have been found to engender a sense of belonging and feeling of connectedness. Both of these elements are factors in student development and retention (Kuh, Schuh, & Whitt, 1991). In the case of these students, development is seemingly shunned in the face of pragmatism. Brooks-Terry concludes that the "attitudes, values, and behaviors acquired in the process of higher education" are, at times, more valuable than the book learning that is done (p. 127). Parents who have not experienced this kind of college-encouraged personal growth may be at a loss when they are speaking with their children.

For many first-generation students, the non-academic challenges discussed above often limit college choice from four-year institutions to community colleges (Horn & Nunez, 2000). Because these students usually come from poorer families, where proximity to home is critical for helping to sustain the family while in school, first-generation students are working with geographical as well as financial constraints (Inman & Mayes, 1999). Kojaku, Nunez, and Malizio (1998) indicated that, in the 1995-1996

school year, most of these first-generation students, 52.0%, started college at a two-year rather than at a four-year institution.

From the brief profile of first-generation students discussed thus far, no stretches of imagination are necessary to understand the attrition rates of these students. They are contending with a host of challenges as they strive to better themselves and push toward status attainment which includes college choice and upward mobility (Hossler et al., 1999; Sewell, Haller, & Ohlendorf, 1970). The challenges, however, are not limited to the college years; as high school students and earlier, first-generation students begin to shape their academic vision in the context of these obstacles (Fallon, 1997). These academic visions, or educational aspirations, are so salient with regard to first-generation college students because they are a significant component of the status attainment process or the journey toward upward mobility, a constant theme in their lives (Hossler et al.). However, the educational aspirations of these pioneers can easily be influenced by such forces as family involvement, socioeconomic status, and college knowledge.

Family involvement is particularly relevant with regard to the educational aspirations of first-generation students because, as discussed previously, first-generation students feel less supported by their families (Brooks-Terry, 1988). Additionally, prior research has shown that parental encouragement is the best predictor of post-secondary aspirations for all students (Falsey & Heyns, 1984; Hearn, 1984; Inoue, 1999; Sewell & Shah, 1968). For first-generation students, especially, understanding the link between parental involvement and educational aspirations and the implications for policy and practice is critical to dealing with retention and achievement issues so prevalent with this population.

Students' educational aspirations, in general, have been studied repeatedly and linked empirically with variables such as class and parental support (Trusty, 1998). Yet, although the educational aspirations of students have been studied with regard to the status attainment process, these studies have focused more on the *development* of aspirations rather than on the *achievement* of aspirations (Hossler et al., 1999). As such, this gap in the literature does a disservice to first-generation college students with regard to "tracking" the impact of background and environment variables, such as family involvement, on the success of these students. Additionally, first-generation students, in general, have been studied while they are in college; yet, they seem to be forgotten once the hour of commencement has passed (Grayson, 1995). It is not enough to simply research these students' needs as we move them through higher education, we must also consider their educational attainment post-baccalaureate.

Purpose of the Study

First-generation students differ in significant ways from their non-first-generation peers, in areas spanning from academic achievement to family involvement and support (Billson & Terry, 1982; Terenzini et al., 1996). Clearly, these differences may play a significant role in the retention, success, and educational aspirations of first-generation students in the pre-college years, during the college experience, and after graduation. The purpose of this study was to determine if parental involvement had a significant influence on the educational aspirations of first-generation college students as compared to the educational aspirations of non-first-generation college students. The primary research question was:

1. Does parental involvement influence the educational aspirations of first-generation college students?

Three secondary questions were also investigated:

2. Do the educational aspirations of first-generation college students change as these students progress from high school to college?
3. Do the educational aspirations of first-generation college students differ from their actual educational attainments?
4. Is there a difference in educational aspirations and attainment for first-generation students by gender, race/ethnicity, and SES?

Significance of the Study

This study is significant for several reasons. First, research on the needs of first-generation college students in the pre-college years and during the college experience is abundant, yet, the post-college attainments of these students are barely broached (Grayson, 1995). This study may assist practitioners in identifying and defining the holistic needs of first-generation college students in order to improve university services and programs for their high school to college transition and the college to post-baccalaureate transition.

Second, first-generation students cannot be researched in a vacuum; family is crucial in the decision-making of these students. This study may aid practitioners in gaining a better understanding of the role of family influence on the educational aspirations of first-generation college students. Understanding the pre-college and college educational aspirations of first-generation students in the context of family involvement is important for creating success opportunities *before* they begin to think about college.

Third, first-generation students are by and large racial and ethnic minorities or students of color, and the university enrollments for this diverse group is growing (Kao & Tienda, 1998; McConnell, 2000). Paralleled on a national scale, racial and ethnic minorities are also quickly becoming less of a numerical minority; just in the past 20 years, racial diversity has become much more pronounced (Justiz, 1994; U.S. Census Bureau, 2000). These demographic trends indicate that the national workforce will be increasingly dependent on the contributions of persons of color, and, as such, institutions of higher education must respond by creating educated citizens and employees (Justiz). As such, this research on the educational aspirations of first-generation students may aid practitioners in developing educational strategies and competencies for working with students of color to develop such a citizenry (Bui, 2002).

Lastly, many studies have been conducted on the topics of student educational aspirations and parental involvement using the National Center for Education Statistics' (NCES) National Educational Longitudinal Study for 1988-2000 (NELS:88/2000), the dataset that will be used for this study. However, most studies have been conducted with data from early follow-up waves (e.g., 1992 and 1994). Few studies have utilized more recent follow-up wave data, particularly data collected in 2000. Data from 2000, especially, provides significant information about the post-college years and enables researchers to gain a more complete picture of the educational aspirations attained.

Overview of the Methodology

For this study of first-generation students and their educational aspirations, a non-experimental *ex-post facto* research design was employed using existing longitudinal data from a nationally representative sample of students generated by the National

Educational Longitudinal Study (NELS:88/2000). The NELS:88/2000 was distributed by the National Center for Education Statistics (NCES), a division of the U.S. Department of Education, in five survey waves, beginning with the first in the spring of 1988 while students were in 8th grade. Additional follow-up waves occurred in 1990, 1992, 1994, and 2000. For the purposes of this study, an equal sample size of first-and non-first-generation college students was analyzed; attrition and mortality rates prevalent in the survey were taken into account. Additional details with regard to study methodology will be addressed in chapter three.

Definition of the Terms

First-Generation Students and Non-First-Generation Students

The phrase "first-generation college student" was originally developed to refer to students "who do not have at least one parent college graduate" (Billson & Terry, 1985, p. 58). Recognizing the impact that having at least one college-educated parent had in privileging students with an easier assimilation to college life, Billson and Terry did not find them to be true "firsts." They redefined first-generation students as students whose parents have no more than a high school education (Billson & Terry), and most researchers agree with this definition (Brooks-Terry, 1988; Horn & Nunez, 2000; Inman & Mayes, 1999; Terenzini et al., 1996; Warburton, Bugarin, & Nunez, 2001). For the purposes and scope of this study, first-generation college students will be defined as students whose parents have no college experience. Additionally, non-first-generation students will be defined as students who have at least one parent who obtained a Bachelor's degree.

Educational Aspirations and Educational Attainment

As noted by Hansen and McIntire (1989), educational aspirations are often defined as a student's desire to obtain status objectives with regard to a particular level of education (Wilson & Wilson, 1992; Marjoribanks, 1984). For the purposes of this study, this overarching definition was used. This study also examined educational attainment with regard to educational aspirations. Educational attainment was defined as first-generation students' realization of aspirations by which they achieve their place in the educated citizenry. This definition was extracted from the meaning of status attainment, whereby individuals achieve their place in the social hierarchy (Blau & Duncan, 1967; Haller & Portes, 1973; Hossler et al., 1999). Factors such as student's highest postsecondary degree attained were evaluated as a piece of educational attainment.

Parental Involvement

In this study, parental involvement was defined as parental discourse with students about postsecondary studies and preparation as well as parental assistance with schoolwork. The dimension of parental involvement that was assessed was home-based involvement (Hickman, Greenwood, & Miller, 1995; Seginer & Vermulst, 2002; Trusty, 1998). Home-based involvement included direct parental contact with the child at home in the form of frequency of parent-child discussions about post high school plans, discussion of ACT and SAT test preparation, parent-child discussions about college applications, etc. (Trusty).

Cultural Capital and Habitus

Throughout the study, especially with regard to the influence of parental involvement, the term cultural capital was used. Cultural capital was introduced by

Bourdieu (1977, 1986) as the property that middle and upper class families transmit to their children to help them negotiate society and maintain class status. Cultural capital can be pre-existing and includes factors such as socioeconomic status and knowledge about high culture and society (Bourdieu; Coleman, 1988). Cultural capital can be defined in terms of *habitus* or an internalized set of experiences, perspectives, and beliefs that individuals accumulate from their immediate environments (Bourdieu; Perna, 2000). *Habitus* includes knowledge of culture, language, and participation in highbrow activities (e.g. trips to museums and galleries). With regard to first-generation students, cultural capital includes family SES, knowledge of society in terms of college life, and knowledge of the postsecondary admissions process (McDonough, 1997). This cultural capital can provide the framework for advancement and access. The lack of such capital can hinder advancement for first-generation students.

Social Capital

Social capital serves a filter through which other forms of capital, such as cultural capital, can be put to productive use (Coleman, 1988; Teachman, Paasch, & Carver, 1997). Coleman defined social capital as a network of social structures that act as information channels and make possible the achievements of certain ends (e.g. college attendance or aspirations for college attendance). Social capital can be defined as the "currency" students could use to make decisions about college because the network can connect students with resources for advancement and informed decision-making (McDonough, 1997; Hossler et al., 1999). Those with high levels of cultural capital, which includes high SES, can more easily generate and utilize social capital or connections for mobility (Lamont & Lareau, 1988; Richardson, 1995; Sullivan, 2001;

Wall, Ferrazzi, & Schryer, 1998). In this study, the social capital of first-generation students was explored in the context of parental knowledge (or lack thereof) about college related to parental education.

Summary

First-generation college students are a special population facing academic and non-academic challenges to success. However, it is to these students' credit that they dream of attaining an education and pioneering beyond the bounds known to their family. In this study, the educational aspirations of first-generation students were examined in light of family involvement and long-term educational attainments. Using NELS:88/2000 data, this analysis sought to uncover differences in the educational aspirations of first-and non-first-generation students and provide a discussion for future research and practice. The next chapter will discuss the literature associated with first-generation college students, educational aspirations, and parental involvement. The literature will also address the issues of parental cultural and social capital and parental socioeconomic status as they influence educational aspirations.

CHAPTER 2

Literature Review

The following literature review examines the body of research available on first-generation college students, educational aspirations, and parental involvement. The review will also address the issues of parental cultural and social capital and parental socioeconomic status as they relate to influence on educational aspirations.

First-generation College Students

Most studies on first-generation college students fall into three broad categories: pre-college demographics, expectations, and influences; transition from high school to college; and college persistence or retention (Bui, 2002; Grayson, 1997; Terenzini et al., 1996). The following section will discuss the variety of studies conducted on first-generation students in these three areas.

Pre-College Demographics and Dispositions

Ethnicity and Race

In the years since World War II, university enrollment figures for diverse students have swelled; in the decade from 1984 to 1994, White undergraduate students increased by 5.1% while the number of Asian American, Hispanic, African American, and Native American undergraduate students increased by 61.0% (McConnell, 2000). As familiarity with first-generation students grew, higher education administrators found a strong correlation between the increase in diversity and the increase in first-generation students (McConnell, 2000). In their study on the demographics of first-generation students, Brown and Burkhardt (1999) found that first-generation students were more likely to be ethnic minorities than non-first-generation students. Although Brown and Burkhardt's

sample was taken from a community college population, making generalizability to four-year institutions questionable, Bui (2002) confirmed these findings with his study of first-generation students at UCLA.

Additionally, using nationally representative NCES data, Horn and Nunez (2000) and Choy (2001) found that first-generation college students were more likely to be African American and Latino. Therefore, ethnic and racial diversity is apparent in this population, bringing to the forefront issues of immigrant status and English as a second language, particularly for Latino and Asian populations (Hune, 2002; Brown & Burkhardt, 1999). Interestingly, Perry and Schachter (2003), as part of their U.S. Census Bureau report, noted that the largest immigrant populations in the U.S. are from Mexico and Latin America, which may speak to the large numbers of first-generation Latino students, and possibly, lack of English proficiency.

Socioeconomic Status

By the sheer nature of their definition, first-generation students come from families where the lack of a college education for parents may not have done much to benefit family class and employment opportunities. As cited earlier in this study, college degrees boost income levels and employment options (Leslie & Brinkman, 1988). Therefore, issues of lower income in the pre-college period for first generation students may be prevalent. In 1996, Terenzini et al. published a study on the characteristics of first-generation students using data from the National Study of Student Learning sponsored by the National Center on Postsecondary Teaching, Learning, and Assessment (NCTLA). These characteristics included factors of socioeconomic status and results were based on a national sample of 825 first-generation students. Terenzini et al. found

that one of largest differences between first-and non-first-generation students was total family income: first-generation students were more likely to come from lower-income homes. These findings corroborated Choy's (2001) results showing that 51.0% of parents of first-generation, 1992 high school graduates had incomes less than $25,000. Nunez and Cuccaro-Alamin's (1998) study's findings are congruent with Choy's results; the researchers found that nearly 25.0% of first-generation students had family incomes in the lowest quartile compared with 5.0% of non-first-generation families.

It is important to note that research has uncovered an interesting element with regard to the issue of lower income and first-generation student status. In their study of nearly 2,000 first-generation community college students, Inman and Mayes (1999) found that these students had little family income but *more* personal income (i.e. spending money for school and personal expenses) than more traditional, non-first-generation students. These findings can be explained by the fact that first-generation students often come from families with lower socioeconomic statuses, and, therefore, must work more than non-first-generation students in order to earn their own money for supporting themselves and, possibly, their families (McConnell, 2000).

The Role of Family

As evidenced by prior discussion, the role of family is a critical ingredient in the success formula of first-generation students. Research by Hossler and Stage (1992) indicates that in the pre-college years, most high school students formalize educational plans between 8th and 10th grade. Choy's (2000) research showed that 83.0% of students whose parents held a Bachelor's degree or higher enrolled in college while only 54.0% of students whose parents held a high school diploma enrolled in college. Parents who have

earned a college degree are more likely to transmit the value of higher education to their children in the form knowledge-based resources such as guidance with SAT tests and college applications (Fallon, 1997; Hossler et al., 1999; Pratt & Skaggs, 1989; Stanton-Salazar & Dornbusch, 1995; Terenzini et al., 1996). Terenzini et al.'s longitudinal research on the pre-college characteristics of first-generation students found that they felt less supported and encouraged by parents to attend college. A smaller, yet significant study, by York-Anderson and Bowman (1991) also showed a strong relationship between lack of support for attending college and first-generation status. Thus, at an early stage, first-generation students may not be receiving messages that college is even an option for them because parents may not be familiar with the benefits themselves (Duggan, 2001; McDonough, 1997).

Academic Preparation and Access

Access to college for first-generation students is not as high as that of their non-first-generation peers (27.0% as compared to 71.0% for 1994 college enrollments), due in part to poor academic preparation in the pre-college years (Choy, Horn, Nunez, & Chen, 2000). With regard to preparation for college, Warburton et al. (2001) found that compared with non-first-generation students, first-generation students were less likely to have taken rigorous coursework in high school, which Adelman (1999) cites as a critical key to college entry and success. Additionally, this nationally representative study of students at four-year institutions reported that first-generation students were less likely to take SAT and ACT tests and, if they took them, scored lower than non-first-generation peers (Warburton et al.).

Riehl (1994) and Brown and Burkhardt (1999) further confirmed that first-generation students had lower high school GPAs and had more modest perceptions of their academic preparation; they were more doubtful than their peers that they were prepared for college. All of these findings were congruent with the results of Choy's (2001) study of 1992 first-generation high school graduates, of which 49.0% of the group were only "marginally or not qualified" (p. 11) for college, as categorized by Choy based on student, parent, and school administrator responses.

College Choice

Hossler et al. (1999) proposed a model of college choice, which describes three stages students go through in the pre-college period: predisposition, search stage, and choice. All three phases of the model are linked to the student's environmental and demographical factors such as family background, socioeconomic status, family support, and high school academic performance (Horn & Nunez, 2000; Hossler et al.). Some researchers have made specific ties between socioeconomic status and postsecondary pursuits, which is especially salient with regard to first-generation students. While Yang (1981) found little relationship between the two factors, Hearn (1984; 1991) proposed that college choice is linked with socioeconomic status: more financially privileged students attend prestigious, four-year institutions. As addressed earlier in this study, first-generation college students may find themselves disadvantaged in the areas of income. Therefore, community colleges are more prudent than four-year institutions (Bui, 2002; Nunez & Cuccaro-Alamin, 1998; Warburton, et al., 2001). Yet, it is important to note that income may not be the sole reason for this choice. Because first-generation students find

themselves underprepared academically, two-year institutions make for a smoother transition (Warburton et al., 2001).

In their research based on results from the NCES's 1989-90 Beginning Postsecondary Students study and the 1993 Baccalaureate and Beyond study, Nunez and Cuccaro-Alamin (1998) found that nearly 51.0% of first-generation students who attend college choose to attend public two-year institutions as compared to 37.0% of non-first-generation students who do so. Nunez and Cuccaro-Alamin's study was based on a nationally representative group of students and, therefore, permits generalizeable results. The results of this study were further verified by Kojaku, Nunez, and Malizio's (1998) study, which showed that, for the 1996-1996 school year, 52.0% of first-generation college students enrolled in community colleges.

Of those first-generation students who do attend four-year institutions (28.0% as opposed to 55.0% of their non-first-generation counterparts), they are still constrained by issues of cost, parental support, proximity to home, and academic preparation (Inman & Mayes, 1999). Therefore, as confirmed by Warburton et al.'s (2001) study of the 1995-1996 school year, most choose public four-year institutions as opposed to research or private universities.

High School to College Transition

College Culture Shock

In the transition from high school to college, first-generation students are leaving the cultures of their families and entering into college environments that are new and, perhaps, intimidating. Success in this environment demands adjustment both academically and socially if students hope to persist (Tinto, 1993). Tinto termed this

adjustment “integration,” whereby students assimilate into the college culture and diminish their chances of withdrawal. According to Tinto’s research on student departure and retention, over 75.0% of students leave institutions because they do not feel socially integrated. Because first-generation students must often choose between family and college culture, this social integration can be especially difficult for them (Brooks-Terry, 1988). Researchers have termed this difficulty with integration “culture shock” (London, 1989; McConnell, 2000)

As discussed previously in this study, first-generation students are less likely to have college knowledge as transmitted through parental cultural and social capital, and this culture shock can be particularly painful. They may lack elements of this cultural and social capital such as knowledge of the campus environment and campus values, access to human and financial resources, familiarity with terminology, processes, and general functioning of a higher education setting (McConnell, 2000). As these students attempt to integrate academically and socially, they are especially torn with regard to personal relationships with family, experiencing incongruence between the individual and the institution (Tinto, 1993). Hsiao (1992) noted that students straddle two cultures, that of their family and that of their college as they “‘renegotiate relationships’ with friends and relatives” (Introduction section, ¶ 1) and attempt to internalize the values of the upwardly mobile world while keeping those of the family unit (Brooks-Terry, 1988).

In their respective studies, Bui (2002) and York-Anderson and Bowman (1991) reported that first-generation students felt they knew less about the college environment and university than other students. Although both of these studies were relatively small and included less than 65 subjects each, the results are good indicators of the “fish out of

water" sentiment first-generations students feel as the culture of college greets them. In London's (1989) qualitative study in which he followed the lives of 15 first-generation students for several years, London paid particular attention to the issue of college culture shock and family separation dynamics. He found that these factors were at the center of the "drama" for many of the first-generation students. Unease and anxiety associated with unfamiliarity with the college environment can only be compounded by the guilt of leaving family. London (1996) described this value clash as a "'leaving off' and a 'taking on,' a shedding of one's social identity and the taking on of another" (p. 12).

Although Tinto's (1993) research seemed to suggest that integration is best achieved by this "shedding of one's social identity and the taking on of another" (London, 1996, p. 12), Tierney (1992) disagreed and noted students should not be expected to integrate in such a conformed manner, especially racially and ethnically diverse students. He reported that race, class, gender, and a host of other individual cultural characteristics must be evaluated and that the student's home culture is just as valuable as the college culture (Tierney). Especially for the first-generation student population, which is so diverse, understanding culture shock may be not as simple as using one constructed model (Brown & Burkhardt, 1999; Bui, 2002).

First-Year Persistence and Academic Experience

Poor academic preparation in the pre-college period has shown to have a distinct impact on the first-year persistence and performance of first-generation college students. Adelman (1999) found that high school curriculum, for students in general, was the single most influential predictor of college success. Success can include both grade performance and overall persistence. With regard to persistence, Choy (2001) found that

first-generation students are more than twice as likely than non-first-generation students to leave four-year institutions before the second year. Duggan (2001), using Choy's data, also found that persistence in college was related to the rigor of high school curriculum, where students with slightly/less rigorous courses had an 83.0-88.0% persistence rate and students with moderately rigorous/rigorous had a 92.0-97.0% persistence rate. In her study, Choy implied that simply having college-educated parents could boost retention, assumingly through support and identification with the college experience.

In addition to persistence and retention, research has also shown that high school curriculum may impact the first year grades of first-generation students. Choy (2001) reported that first-generation college students who did not have a rigorous high school program earned a lower average GPA than their non-first-generation peers. However, Brown and Burkhardt's (1999) study disagreed with these results, finding that first-generation student status had a negligible relationship with first-term GPA. Although this study of 300 students was helpful, there is much more generalizability in Choy's nationally representative sample.

From most the research presented thus far, it is clear that high school course rigor is connected with college success is some way. However, for first-generation students, rigorous high school course-taking is an anomaly (Warburton et al., 2001). This lack of a college preparatory curriculum may be attributed to both parental and institutional influences regardless of student ability. With regard to parents, they may not know the high school formula for college success because they have not experienced college and are unaware of requirements; thus, they do not know to encourage course rigor. Secondly, parents of first-generation students may not know about the importance of high school

coursework because they choose to be less involved in their children's high school experiences (Hossler et al., 1996; Pratt & Skaggs, 1989; Terenzini et al., 1996; Trusty, 1998). Institutionally, first-generation students' high schools may also play a role in the students' course-taking patterns. As discussed previously, many first-generation students are economically disadvantaged and may be schooled in economically disenfranchised school systems with fewer resources (Choy, 2001; Stanton, 1997; Terenzini et al., 1996). Therefore, as noted by Fallon (1997), high school counselors may not see these students as "college material" or have such resources to offer. These first-generation students are then not prepared for college with adequate coursework. In her study of 25 school's curriculum tracks, Oakes (1985) found a similar pattern: disproportionately large numbers of poor and minority students were assigned to lower, non-pre-college tracks.

Additionally, once in college, Nunez and Cuccaro-Alamin (1998), using the1989/1990 Beginning Postsecondary Students study, found that in the delicate transition to college, first-generation students were more likely than their peers to take remedial coursework. Additionally, Nunez and Cuccaro-Alamin found that in terms of academic integration (e.g. attended study groups, met with advisors/faculty), first-generation students scored lower than non-first-generation peers at both four-year and two-year institutions. First-generation students were less likely to meet with faculty or advisors, attend career-related lectures, or discuss academic matters with faculty (Nunez and Cuccaro-Alamin).

College Persistence

Role of Family: Misconceptions about College

First-generation students progress through pre-college periods to periods of transition and, finally, to college, but then the work of sustaining that education begins. Family continues to play a role in the persistence of these students. Students may still not feel supported in their endeavors, as noted by York-Anderson and Bowman's (1991) study showing a significant difference in the area of perceived support between first-and non-first-generation students. York-Anderson and Bowman linked the lack of perceived family support to added stress for the students, which contributed to possible attrition. A lack in support was especially visible with regard to parental capital and knowledge about the demands on and developmental opportunities for college students.

Families may understand the practical need for college but their misconceptions about the importance of the social and intellectual college experience endanger students' retention. Brooks-Terry (1988) reported that development goals such as personal learning are valued less; career preparation is the primary reason for first-generation college attendance, as opposed to personal growth for the non-first-generation. In their study of intellectual orientation versus career preparation of first-generation students, Billson and Terry (1982) did not find large differences in views of career preparation between first-and non-first-generation students, both groups scored quite high. However, in both groups, and even less so for first-generation dropouts, intellectual growth was not seen as a significant college gain (Billson & Terry). From these results, evidence is presented that intellectual development is less of a goal for first-generation students, a perspective possibly encouraged by parents. Students may not be receiving messages that college is

also about personal growth and intellectual and social adjustment, without these concessions, students may never gain the confidence and stability that they need to succeed (Tinto, 1993).

College Involvement and Social Integration

From prior discussion, it is evident that first-generation students arrive on college campuses with competing loyalties, misconceptions about the values of the college experience, and hefty commitments to family. Social integration becomes difficult and college involvement may seem unimportant; yet, research by Astin (1984) shows that involvement is critical to satisfaction with campus life, which leads to persistence. In their national study, Nunez and Cuccaro-Alamin (1998) operationalized involvement and social integration as participation in school clubs, interaction with faculty outside of class, and outings with friends. Their study of thousands of first-generation students found that these students had lower levels of social integration than non-first-generation peers (Nunez & Cuccaro-Alamin). Additionally, Terenzini, Rendon, Upcraft, Millar, Allison, Gregg, and Jalomo (1994) found that first-generation students had more trouble adjusting socially to college than other students. Pratt and Skaggs (1989) also found that although first-and non-first-generation students placed similar importance on campus activities, first-generations students were much less likely to join these activities.

Conversely, Inman and Mayes (1999) reported that institutional commitments were stronger among first-generation students. “Commitments,” however, were measured in terms of academics in a community college environment, thus, findings may have been positive because students were concerned with earning a degree, not participating in campus activities. Similar to Inman and Mayes, Bui (2002) also found that his sample of

first-generation students at UCLA felt quite connected to the campus. Yet, he surmised that this anomalous connectivity could be a result of students' enrollment at a highly competitive university where admitted first-generation students shared the same motivation and knowledge as non-first-generation students.

Yet, despite a few contradictory studies, this lack of institutional connection and activity "joining" for first-generation students is an issue and a challenge. It can be attributed to several factors, but, perhaps, extra-curricular employment is one of the most salient factors. In their study, Terenzini et al. (1996) found that first-generation students were more likely to be employed and to be employed off-campus than their peers. Based on the Beginning Postsecondary Students study, Nunez and Cuccaro-Alamin (1998) reported that nearly 33.0% of 1989/1990 beginning first-generation students worked full-time while enrolled in school as compared to 24.0% of their peers. Duggan (2001) found that, in general, students who worked 1-10 hours per week were more likely to persist than those who worked 31 full time hours or more per week. As students struggle to study and work, some full-time, the priorities of an education become hazy, especially if a family is relying on the additional income the student's job is generating. When all factors are accounted for, this lack of involvement has shown to be a result of the delicate balancing act many first-generation students perform, juggling their familial, social, and educational responsibilities.

Degree Attainment

A less than rigorous high school course-taking pattern, family obligations, low college GPAs, and work responsibilities combine to create attrition-prone first-generation students (Riehl, 1994; Terenzini et al., 1996). Most researchers agree that first-generation

students are at risk. In her study of first-generation students who started at four-year institutions in 1995-1996, Choy (2001) found that after three years, first-generation students were less likely than non-first-generation peers to remain on a persistence track to a Bachelor's degree. Warburton et al.'s (2001) study is congruent with Choy's results: 60.0% of first-generation students attain a degree as compared to 73.0% of non-first-generation students. Nunez and Cuccaro-Alamin (1998) also found that, with all else held constant (i.e. socioeconomic status, attendance status and institution type), first-generation status still had a negative effect on persistence.

Summary

First-generation college students face a host of challenges on the path toward college and while in college. Research has shown that competing priorities and difficulties with social and intellectual adjustments create barriers to access and persistence for these students. From prior discussion, the one variable consistently intermingled with the students' pre-college, transition, and college experience stages is the variable of family or parental involvement. In order to better understand the dynamics of parental involvement in the education of children, the following discussion addresses the specific role of parental involvement in educational pursuits.

Educational Aspirations and Parental Involvement

Sewell and Hauser (1980) and Qian and Blair (1999) identified educational aspirations as the most important variable affecting actual education obtained. As discussed in chapter one, educational aspirations can be addressed in the context of status attainment, the process by which individuals achieve their place in the social hierarchy (Blau & Duncan, 1967; Haller & Portes, 1973; Hossler et al., 1999). According to Blau

(1975), social hierarchy, or class, is constituted by factors such as education, occupation, and income. Aspirations are the stepping-stone to achieving social class. As conceptualized by Farmer (1985), the degree to which those aspirations are attained depends on a variety of elements including background (i.e. socioeconomic status), race, gender, and environmental variables (i.e. family).

Some researchers have found that this environment variable of "family," in the form of parental encouragement and involvement, is the best predictor of postsecondary educational aspirations (Falsey & Heyns, 1984; Sewell & Shah, 1968). Yet, the relationship between parental involvement and educational aspirations is consistently reshaped because parental involvement can be defined in many ways. Some qualify involvement as a positive attitude towards schoolwork, while others measure involvement in terms of SES, and still others qualify involvement in terms of direct participation in school activities (Conklin and Dailey, 1981; Garg, Kauppi, Lewko, & Urajnik, 2002; Hossler et al., 1999; Seginer & Vermulst, 2002; Teachman & Paasch, 1998; Trusty, 1998). The following review of the literature will show that far more researchers have focused on parental involvement in terms of SES, rather than in terms of attitudes and engagement in school activity, certainly a gap. However, for those who defined involvement as SES, there is a debate over whether SES can be directly responsible for aspirations development or if it merely acts indirectly via parental participation and concern for the student (Farmer 1985; Smith 1981; Trusty). For the purposes of this discussion, literature will be reviewed that speaks to multiple definitions and interpretations of parental involvement.

Defining family/parental involvement in terms of family background characteristics, including factors such as SES, Marjoribanks (1998) examined the combined impact of family background and individual student characteristics (i.e. ability) on adolescent aspirations. The family background variable included family social status and parents' educational and occupational attainments. In his sample of nearly 8,000 students taken from the Longitudinal Study of Australian Youth, he found that family background had a large association with adolescent educational aspirations. However, Marjoribanks also discovered that influence of family SES was moderated by students' innate abilities. Therefore, if students were naturally inclined to do well in school, low family income would have less impact on aspirations.

Additionally, Kao and Tienda (1998), using NELS:88/2000 data, examined how educational aspirations of minority youth were formed and maintained with regard to family influence. With family SES used as a specific measure, Kao and Tienda found that high family SES contributed to the formation of high aspirations and to the maintenance of aspirations throughout the high school years. Kao and Tienda further reported that students from high SES backgrounds aspired to graduate school, whereas students from low SES backgrounds were less likely to do so. Yet, in addition to SES, Kao and Tienda parceled parental involvement into a second category: parental encouragement. Using Conklin and Dailey's (1981) definition, parental encouragement was defined as a long-standing attitude towards higher education. With both financial and psychological resources controlled, Kao and Tienda found that consistency of parental encouragement was positively associated with aspiration achievement such as college entry.

Similar to Kao and Tienda's (1998) measure of parental attitudes towards higher education, Trusty (1998) defined parental involvement as attendance at students' extra-curricular activities and found the variable to have an impact on students' educational aspirations. Additionally, he examined the role of SES and found that high parental involvement counteracted lower SES and that, at the lowest levels of SES, parental involvement predicted educational aspirations more strongly. According to Trusty's research, parents are a viable source for preventing loss of students' aspirations because of SES.

In alignment with Trusty (1998) and Kao and Tienda (1998), Hossler et al. (1999) qualified parental involvement in terms of parental encouragement (i.e. attitudes towards education), stating that parental encouragement was a different construct than parental SES in the aspirations development process. They found that, with regard to educational aspirations development, parental encouragement in the arena of support with schoolwork was more important than family income. Hossler and Stage (1992) and Bateman (1990), however, reported different results with regard to educational aspirations. They found that parental income had profound impact with regard to educational attainment, but parental income had little to do with children's educational plans or dreams.

Congruent with Hossler et al. (1999), Garg, Kauppi, Lewko, and Urajnik (2002) also made the distinction between SES and other forms of involvement. They found that SES alone had no significant, direct influence, yet, combined with parental involvement such as parental concern for school, it had an impact on the student's personal characteristics (e.g. interest and value in education). Similarly, in 1999, Inoue (1999)

separated family SES and other forms of family influence and found that higher levels of SES and family influence correlated with higher aspiration levels. Although Inoue's study was nationally representative, it is important to note that family influence was consolidated in a larger category of "significant other" influence and, as such, may be slightly diluted.

Hearn (1984), however, consolidated parental income and education into SES and did not examine other forms of parental involvement. In his study of nearly 5,000 high school students, he found that students whose parents had lower incomes and lower educational attainments were somewhat less likely to go to highly selective institutions. Congruent with Hearn, in their study of Israeli students, Seginer and Vermulst (2002) found that family background (i.e. income, status, and education) had a direct relationship to educational aspirations of students. Somers, Cofer, and Vanderputten's (2002) findings were similar, students in the highest-income quartile were much more likely to aspire to and attend some type of postsecondary institution as opposed to low-income quartile students.

Also using income as a basis for research, in their study based on the NCES's High School and Beyond database, Teachman and Paasch (1998) found that families are closely linked to the educational aspirations of their children. Teachman and Paasch defined the family environment using factors such as SES and parental education, both critical to obtaining a better understanding in the variation of educational aspirations. Yet, they did not go so far as to state that SES and parental education were the only constructs explaining the development of education aspirations in children. Hansen and McIntire (1989), however, using the same data, set SES as a primary variable of family structure

for predicting the educational aspirations of high school seniors. They found that one fourth of the quartile of the lowest SES students did not expect to go beyond high school. Valadez (1998) investigated the variables that influenced the higher education decisions of thousands of 8^{th}-12^{th} grade students to attend college and found that SES played a central role. The study concluded that students from low SES did not have access to important resources and were not as skilled at capitalizing on available resources as students from higher SES backgrounds.

Differing from the findings of Hansen and McIntire (1989), Teachman and Paasch (1998), and Valadez (1998), Davies and Kandell (1981), in their sample of 700 students from five New York public secondary schools, found that SES did not have a direct effect on student aspirations. Rather, they found that it had more of an indirect effect through parents' aspirations for their children. Yet, regardless of magnitude of impact, using the SES component of parental involvement as a predictor of educational aspirations shows that SES does have an impact.

Parental Education as a Factor of Parental Involvement

A common thread throughout this discussion of parental involvement with children's educational aspirations is the use of parental education as a predictor of educational aspirations. First-generation student status is determined by parental education; therefore, reviewing prevalent studies that identify parental education as predictors of educational aspirations is necessary. The following section will discuss studies that have examined parental education as a predictor of educational aspirations.

Parental education, specifically father's educational attainment, as an influence on students' educational aspirations, surfaced as a major topic of study with regard to

aspirations in the early 1970s. Duncan, Featherman, and Duncan (1972) found that background factors had a causal effect on educational attainment, and of these factors, education of parents was a primary concern. In a later, but related study, Wilson and Wilson (1992) used the High School and Beyond data to examine the home environment (i.e. parents' educational level) of students and found that adolescents whose parents' educational level was high were more likely to have high aspirations. Students with parents of low educational attainment (i.e. high school) were more likely to have modest aspirations about higher education.

Similarly, Hossler and Stage (1992) sampled 2,500 students attending high school in Indiana, and their sample indicated that parents' combined educational level related to students' aspirations for college. They found a positive relationship between the level of parental education and predisposition to pursue post secondary education, congruent with earlier research (Yang, 1981). In alignment with Hossler and Stage, Hossler et al. (1999) found that, in addition to positive parental attitudes towards schoolwork as boosts in aspiration development, parental education also had an effect. In addition, Hossler et al. showed that parental education had an impact on their students' actualized plans based on aspirations. These researchers found that students' lower educational aspirations were related to their parents' lower educational attainment. Somers, Cofer, and Vanderputten's (2002) findings, however, differed slightly from those of other researchers with regard to parental education. They found that although parental education was an influence in student aspirations, SES, college reputation, and expenses were much more pronounced influences than parental education.

Summary

The issues of educational aspirations and parental involvement are nearly inseparable and tightly linked from study to study, as discussed previously in this chapter. Parental involvement, whether defined as financial support or a set of attitudes towards the higher education experience, clearly impacts educational aspirations. Additionally, parental involvement as linked to parental education deserves greater discussion. In the next section, the literature presented will explore the intersection between parental involvement, parental education, and the educational aspirations of the first-generation student. Specifically, factors such as cultural and social capital will be addressed to enhance the understanding of first-generation students.

The Influence of Parental Involvement on the Educational Aspirations of First-Generation Students

Conklin and Dailey (1981), Garg, Kauppi, Lewko, and Urajnik (2002), Hossler et al. (1999), Kao and Tienda (1998), and Trusty (1998) expanded the financial support definition of parental involvement to include parental attitudes about school and parental interest and participation in students' educational pursuits. Although this study will operationalize parental involvement in a similar way as these researchers, it is critical to note that for first-generation students, parental involvement constantly intersects with and includes other factors. As noted in the literature early on in chapter one, the role of family is a main ingredient in the success (or failure) formula of first-generation students. Hossler and Stage (1992) indicated that in the pre-college years, parental involvement is integral to the perceptions and decision-making of students. Yet, studies have shown that the ability of first-generation students' parents to be involved may be constrained by a

host of other variables that accompany “first-generation” status, such as lower SES, fewer resources, less parental integration into the professional workforce, and less familiarity with the college-going process (Duggan, 2001; McDonough, 1997; Terenzini et al., 1996; Warburton et al., 2001). Given these constraints, it is understandable why the educational aspirations of first-generation students may suffer. The following section will address the peripheral factors inherent to parental involvement in first-generation students’ educational aspirations.

Educational Aspirations of First-Generation Students

Few studies have examined the link between first-generation students and educational aspirations. To provide a stronger foundation for this study, research on first-generation students will include studies on the aspirations of students of color and low-income students. Most first-generation students are identified as students of color and/or students with financial disadvantage (Perna, 2000). Choy (2001) showed, in a nationally representative study, that 51.0% of parents of first-generation 1992 high school graduates had incomes less than $25,000. Nunez and Cuccaro-Alamin (1998) also found that nearly 25.0% of first-generation students had family incomes in the lowest quartile compared with 5.0% of non-first-generation families, and Terenzini et al.’s (1996) study corroborated these results. With regard to race, Horn and Nunez (2000), Choy (2001), and Perna (2000) found that first-generation college students were more likely to be African American and Latino. Brown and Burkhardt (1999) agreed with these findings, reporting that first-generation students were more likely to be ethnic minorities than non-first-generation students. Bui (2002) confirmed these results in his own study at UCLA.

As a basis for this study, educational aspirations research will not focus purely on first-generation students but also focus on low income and minority students.

First-Generation Students

Although few studies have researched the educational aspirations of first-generation students, for the studies that have broached this topic, results have been rather consistent. Horn and Nunez (2000), using NELS:88/2000 data, sampled a cohort of first-generation students in 1988 while in the 8th grade. These students reported relatively high educational aspirations; over 40.0% aspired to a Bachelor's degree and nearly 15.0% to an advanced degree. Yet, first-generation students' aspirations for a Bachelor's degree were still lower than those of their peers whose parents had a college education, non-first-generation. Furthermore, when surveyed as 10th graders in 1990, the same cohort of first-generation students were found to be less likely than non-first-generation students to expect to attain a Bachelor's degree (29.0% versus 40.0%, respectively). The study showed that as parental education decreased, so did aspirations for more than a high school diploma. Additionally, the research planted the seed that as first-generation students progress through high school, aspirations become more modest. This change may be attributed to a better understanding of the resources and requirements associated with college attendance (Horn & Nunez)

As a compliment to Horn and Nunez's (2000) study, Nunez and Cuccaro-Alamin (1999) found similar results with regard to the educational aspirations and attainment of first-generation students. Based on data from the 1989/1990 Beginning Postsecondary Student study, Nunez and Cuccaro-Alamin reported that of the students who indicated plans to attend a vocational certificate, associates, or Bachelor's degree program, first-

generation students were less likely to achieve those credentials than their non-first-generation peers. Additionally, Hossler and Stage (1992), with their sample of high school students, found that parents' combined educational level related to students' aspirations for college. More parental education equated to higher levels of aspirations.

The Intersection Between First-Generation Status,Minority Status, and SES

In examining how educational aspirations are formed and maintained for minority students, Kao and Tienda (1998) found that family SES contributed to the formation of high aspirations and to their maintenance throughout the high school years. Additionally, the researchers hypothesized, but did not prove, that parental investment in educational resources and positive parental attitudes would mediate the mal-effects of lower income levels. More broadly, Hansen and McIntire (1989) examined the family setting variable of SES as a predictor of educational aspirations of high school seniors. They found that students from the highest quartile SES backgrounds were three times as likely to expect to complete a PhD as those from first quartile backgrounds. They also found that one fourth of lowest quartile students do not expect to go beyond high school. For the 25.0% of first-generation college students who are categorized in this quartile, college may not be an aspiration (Nunez and Cuccaro-Alamin, 1998). Low SES students are more likely to view a high school diploma as the norm (Lareau, 1987).

Congruent with previous findings, Walpole (1997), also found that low SES was equated to low educational aspirations (Astin 1993; DiMaggio & Mohr 1985; Pascarella & Terenzini, 1991). Using Cooperative Institutional Research Program (CIRP) longitudinal data from 1985-1994, Walpole found that students from low SES backgrounds had lower levels of educational attainment, aspirations, and graduate school

attendance than students from high SES backgrounds. She further found that resource deficits associated with low SES impacted students long after college. Specifically, low SES students were less likely to attend graduate school. Walpole defined, in part, the resource deficit in terms of social and cultural capital.

The terms cultural capital and social capital are both relevant to first-generation students in that social and cultural capital embody the "insider information" parent's have about college: first-generation students most likely do not have this information (Sharp, Johnson, Kurotsuchi, & Waltman, 1996). High levels of social and cultural capital incorporate financial resources, a deficit for many first-generation students. Valadez (1998) connected social and cultural capital with SES and concluded that students from low SES backgrounds did not have access to important resources and were not as skilled at capitalizing on available resources as students from higher SES backgrounds. Social and cultural capital will be further defined and addressed in-depth in the following section.

Cultural Capital and Social Capital

Theorists Pierre Bourdieu (1977) and James Coleman (1988) originally derived the concepts of cultural capital and social capital. Both forms of capital are inherent in the role parents play in influencing the educational aspirations of their children because social and cultural capital serve as conduits through which parents transmit the value of education to their children (Hossler et al., 1999). Both are relevant to the parents of first-generation students, in particular, because social and cultural capital are developed and maintained through the college experience, of which the parents of first-generation students have none (Duggan, 2002; York-Anderson & Bowman, 1991). Cultural capital is

defined by parental or family status and knowledge about society, while social capital is defined as social networks, which lead to an individual's advancement (Coleman, 1988; Hossler et al., 1999; McDonough, 1997). These two forms of capital are often used interchangeably, however, some scholars agree that adequate cultural capital leads to the development of social capital (Coleman; Perna, 2000; Richardson, 1995; Wall et al., 1998). For the purposes of this study, this hypothesis will stand. The following sections will discuss social and cultural capital in the context of parental involvement in the educational aspiration development of the first-generation student.

Cultural Capital and the First-Generation Student

Pierre Bourdieu (1977, 1986) introduced cultural capital as the property that middle and upper class families transmit to children to help them negotiate society and maintain class status. Cultural capital is pre-existing and includes such factors as social class mobility (i.e. SES) and knowledge about high culture and society, while social capital is defined as a network or information channels that can facilitate advancement (Bourdieu; Coleman, 1988; Hossler et al., 1999). According to Bourdieu, cultural capital is a system of factors derived from parents that construct class status and can be defined in terms of *habitus* or an internalized set of experiences, outlooks, and beliefs that individuals accumulate from their immediate environments (Bourdieu; Perna, 2000). *Habitus* includes knowledge of culture, language, and participation in highbrow activities (e.g. trips to museums and galleries).

Social networks or social capital are activated by *habitus* and can connect members or students with resources for advancement (McDonough, 1997). Put simply, those with high levels of cultural capital, such as high SES, can more easily generate and

utilize social capital or connections for mobility (Lamont & Lareau, 1988; Richardson, 1995; Sullivan, 2001; Wall et al., 1998). Bourdieu hypothesized that this advantage associated with class led to the reproduction of social inequalities, which were transformed to academic inequalities by the transmission of cultural capital (Swartz, 1977).

With regard to first-generation students, cultural capital includes family SES, knowledge of society in terms of college life, and knowledge of the postsecondary admissions process (McDonough, 1997). In the case of first-generation students, parents may not be able to transmit this knowledge because they themselves have not experienced the college process. Therefore, parental involvement in terms of interest in and participation in school activities may be limited. McDonough (1991), in her study of high school women, found that these parental messages, as part of students' total resources, affect the decision to go to college as indicated by educational aspirations. In her qualitative study of elementary education, Lareau's (1987) results, later confirmed by DeGraaf (2000), indicated that less privileged parents with low parental educational attainment held low levels of information about their children's schooling and low levels of participation in their children's school activities. Lareau drew on Bourdieu's concept of cultural capital and attributed low parental involvement to lower levels of cultural capital in the home. With regard to educational aspirations of these children, one can expect low educational aspirations because of the little value placed on school in terms of parental involvement. Low aspirations may lead to low attainment. Somers, Cofer, and Vanderputten's (2002) agreed with this statement: students in the highest income quartile

were much more likely to aspire to and attend some type of postsecondary institution as opposed to low-income quartile students.

Speaking to educational attainment and the low SES aspect of cultural capital, DiMaggio and Mohr (1985) reported, after controlling for ability, positive impacts of cultural capital on students' educational attainment. Jencks (1972) corroborated these findings and reported that children with economically successful parents were more advantaged. These parents were more likely well educated and possibly had more cultural capital. He reported that nearly half of the variation in educational attainment found was explained by family background. Hurtado, Inkelas, Briggs, and Rhee (1997) also reported the importance of SES in student college choice or attainment. Hossler and Stage's (1992) research supported this finding; they reported a positive relationship between the level of parental education and children's predisposition to pursue postsecondary education. Additionally, Sullivan (2001) also examined the impact of parental education on cultural capital. She surveyed 557 students across social class and parents' educational credentials. She defined cultural capital by activities, such as literature, cultural knowledge, and comfort with language. Sullivan's reports showed that students whose parents had more education possessed more cultural capital.

Yet, DiMaggio's (1982) results were contrary to Jencks (1972) and DiMaggio and Mohr (1985). He tested if cultural capital was highest for students from high status families and lowest for students from low status families, using parental education as a variable. Operationalizing cultural capital, as Bourdieu had done, as involvement in art, music, and literature, DiMaggio found low correlations between parental education and cultural capital. His results translate to mean that parents of first-generation students have

similar levels of cultural capital as parents of non-first-generation students. Although a valuable study with a large sample of nearly 3,000 students, results may have been skewed by the highbrow measures of cultural capital (e.g. art, literature, and music) and the fact that all respondents were White**.**

As discussed earlier, a large segment of first-generation college students are students of color. Research reviewed in this chapter thus far has shown that students of color possess less cultural capital, and, therefore, are less advantaged in the college process. Using NELS:88/2000 data, Roscigno and Ainsworth-Darnell (1999) found that students of color, Black students in particular, had less exposure to family cultural capital than White students. Roscigno and Ainsworth-Darnell also found that family SES influenced the cultural capital of students because they did not participate a great deal in activities such as educational or cultural trips. By Bourdieu's (1977) definition then, these students and their parents would possess less general cultural awareness, less information about school systems, and fewer educational credentials, all variables that would hinder high levels of educational aspirations for these students (Boatsman, 1999; Swartz, 1997). With regard to the educational credentials, the crux for first-generation students, in his study, Smith (1981) discovered that the transmission of educational goals was more profound when parents themselves were educated, a finding supported by Seginer and Vermulst (2002).

Social Capital and the First-Generation Student

Social capital has its roots in the work of theorist James Coleman (1988). Coleman defined social capital as a network of social structures that act as information channels that make possible the achievements of certain ends (e.g. college attendance or

aspirations for college attendance). More simply, Hossler et al. (1999) defined it as the "currency" students could use to make decisions about college. Nord, Brimhall, and West (1997) further defined social capital as the manner in which parents interact with children and with each other. Coleman noted that the more educated parents were, the more human capital, financial capital, and cultural capital was available to students. Social capital was a filter through which other forms of capital, such as cultural capital, would be put to productive use (Coleman; Teachman et al., 1997). He found that social capital in the family was a resource for education of the family's children.

The development of educational aspirations of first-generation students, as it relates to social capital, is critical to understanding the role of parental involvement. Without a college education, parents may not be able to understand the needs of their students as they "dream" about higher education. Stanton-Salazar and Dornbusch (1995) defined social capital as the support providing practical, knowledge-based resources such as guidance counselors or parents helping students with the admissions process. As discussed previously, parents of first-generation students may not have the cultural capital (i.e. SES and societal knowledge) to identify the information channels that would offer such support to their students. York-Anderson and Bowman (1991) found that the parents of first-generation students lacked the knowledge about school and school resources that they could share with their children because the parents had not experienced college themselves. Ellwood and Kane (2000) also discovered that college educated parents had a better understanding of college and could be more willing to help students with the resources necessary to meet aspirations.

Additionally, Pratt and Skaggs (1989) discovered that college attendance appeared less important to the parents of first-generation students than to the parents of non-first-generation students, who seemed to value education more. In terms of value, Perna (2000) found social capital to incorporate a sense of value for education; if parents do not place value on education, then students may not aspire to it. Therefore, if first-generation students are less advantaged with regard to information about higher education, their levels of educational aspirations may suffer, or at the very least, become more modest as the lack of information becomes evident.

As further evidence of the impact of parental value placed on higher education, York-Anderson and Bowman's (1991) research on first-generation students indicated that the college plans and thoughts of this population were more misguided because these students had less knowledge of or fewer experiences with college related activities, skills, and role models. This research also indicated that students who perceived positive family involvement, as it related to college attendance, had more factual information about college than those students who perceived negative family involvement. Factual information is a critical aspect of a strong social network with institutional agents, such as teachers, guidance counselors, and/or college representatives (Stanton-Salazar & Dornbusch, 1995).

The low SES situation of first-generation students has already been addressed, and the following studies further clarify the connection between SES and social capital. Teachman and Paasch (1998), using NELS:88/2000 data, found that students with greater financial and human capital (i.e. skills and competencies for success), both pre-cursors to social capital, were less likely to drop out of school. In this study of students at Catholic

high schools, financial capital and human capital were based on parental income and education. Teachman and Paasch determined that the forms of parental involvement inherent with the possession of social capital, such as parent-school connectivity (i.e. contacting school) and parent-child connectivity (i.e. discussing school) contributed to the well being of the student. Teachman and Paasch's results showed that positive parental involvement, where parents showed engagement with their children's school, were related to possession of social capital: educated parents made for more involved parents. This involvement may lead to grander, long-term educational aspirations. Hossler et al. (1999) echoed these findings and reported that, with regard to educational aspirations development, parental encouragement in the arena of support with schoolwork and positive attitude about school was critical to the aspirations development process.

Revisiting the link between first-generation students and racial/ethnic minority status in the context of social capital, Qian and Blair (1990) leant credence to Hossler et al.'s (1999) hypothesis in their study which explored how human, financial, and social capital affected educational aspirations across ethnic groups. They found that parental human and financial capital (part of cultural capital), as measured by parental educational attainment and income, could provide the social capital or the environment of networks supporting children's development of aspirations. Social capital is a way to transmit resources and advantages to children, thus, influencing higher levels of educational aspirations. Although she did not study first-generation students directly, McDonough (1997) also reported that low-income (i.e. having low financial capital) and underrepresented students lacked social capital. As discussed earlier in chapter two, the

link between first-generation students, students of color, and low-income students is a viable one. In terms of low-income and minority students, Stanton (1997) found that social capital is an issue for African American and Latino students, especially, because these students live in economically disenfranchised urban communities.

With regard to Latino students, Stanton-Salazar and Dornbusch (1995) examined how the educational and occupational expectations of students from Mexican origins were shaped by resources gained through social capital (i.e. relationships with others). They investigated the value of the networks with the institutional agents such as teachers and counselors. They found that for these 205 students from working-class, possibly first-generation, backgrounds, school personnel represented the most readily available source of professionally based information and guidance, a finding corroborated by Perna (2000). Clearly, parents could not be as helpful. Yet, even though these students had access to school information, they had less access than students from high SES backgrounds. In this case, Stanton-Salazar and Dornbusch found that social capital was aided by the possession of cultural capital or general cultural awareness, information about school systems, educational credentials, and verbal facility (i.e. knowledge of the English language) (Swartz, 1977).

Congruent with Stanton-Salazar and Dornbusch's (1995) research, Tornatzky, Cutler, and Lee (2002) also surveyed over 1,000 Latino parents in three metro cities with regard to their "college knowledge" or social capital. He found that their college knowledge was low which hurt their children's chances of being prepared for college. The college knowledge scores were especially modest for families with low SES and low parental educational backgrounds. Similarly, Sharp et al. (1996) identified the concept of

"inside information" which influenced students' perceptions of and enrollment in college. Insider information consisted of student knowledge that rigorous high school courses, entrance exams, and Advanced Placement classes could improve chances of college entry. They reported that parents were main conveyors of this information, the lack of which could jeopardize college attendance. Parental involvement as defined by the role of "informer" could be damaging or advantageous to students. First-generation students, whose parents may not have "insider information," are less prepared for college and, therefore, may have lower educational aspirations (Choy, Horn, Nunez, & Chen, 2000; Nunez & Cuccaro-Alamin, 1999; Warburton et al, 2001)

Summary

The literature reviewed in this chapter has addressed the three main periods of a first-generation student's path to higher education: pre-college, to-college transition, and college persistence. Additionally, general studies describing the nature of the relationship between educational aspirations and parental involvement were discussed in the context of differing operationalizations of parental involvement. Finally, educational aspirations and parental involvement were synthesized with the situation of the first-generation student through scholarship reporting on the influence and intersection of cultural capital, SES, and social capital.

Based on the literature presented, first-generation students are at risk for attrition at any time during the educational process. By identification as mostly racial/ethnic minorities and as a population that is economically disadvantaged, these students face resource and support issues, including less cultural and social capital and less effective parental involvement. All of these variables can severely curb their educational

aspirations. The literature discussed in chapter two has provided a broad base for the understanding of the first-generation student situation, yet, gaps still exist. Primarily, in examining the educational aspirations of this population, especially post-college, few studies exist and nearly none have surfaced in recent years. Additionally, prior literature has redefined parental involvement in a variety of inconsistent ways, making the investigation into the effects of parental involvement on educational aspirations even more difficult. This study will address such gaps, and, perhaps, a sense of consistency in terminology will emerge as well as more recent, applicable information.

The following methodology chapter will explain the manner in which such gaps will be filled by presenting a map of the hypotheses, sampling, instrumentation, data collection procedures, and data analysis techniques.

CHAPTER 3

Methodology

In the following chapter, the methodology for collecting and analyzing the data for this study will be discussed. The research questions and corresponding hypotheses will also be re-addressed. Particular attention will be given to statistical methods employed for data analysis.

Research Questions and Hypotheses

The purpose of this study was to determine if parental involvement had a significant influence on the educational aspirations of first-generation college students as compared to the educational aspirations of non-first-generation college students. For the purposes and scope of this study, first-generation college students were defined as students whose parents have no college experience. Additionally, non-first-generation students were defined as students who have at least one parent who obtained a Bachelor's degree. Student's whose parents experienced some form of college but did not attain a Bachelor's degree were not included in this study because the researcher hypothesized that issues of cultural and social capital that would provide for greater contrast between first-and non-first-generation students would be most apparent in the two extremes: parents with at least four years of college and parents with no college.

The primary research question was:

1. Does parental involvement influence the educational aspirations of first-generation college students?

Three secondary questions were also investigated:

2. Do the educational aspirations of first-generation college students change as these students progress from high school to college?
3. Do the educational aspirations of first-generation college students differ from their actual educational attainments?
4. Is there a difference in educational aspirations and attainment for first-generation students by gender, race/ethnicity, and SES?

The primary research question asked if family or parental involvement influence the educational aspirations of first-generation students. Later in this chapter, the measures used for parental involvement will be addressed in detail, however, to aid in current understanding, measures used included parental assistance with homework as well as discussions with children about the college-going process. Literature discussed in the previous chapter indicated the importance of positive parental involvement on positive educational aspirations (Falsey & Heyns, 1984; Sewell & Shah, 1968; Teachman & Paasch, 1998). The literature also discussed the social and cultural capital deficit the parents of first-generation college students face and, thus, the difficulties in transmitting the value of higher education to children through attitudes and participation. Therefore, hypothesis one was:

> There will be a positive relationship between parental involvement and educational aspirations for first-generation students.

The next research question sought to determine if the educational aspirations of first-generation college students changed as these students progressed from high school to college. Research has indicated that younger students are more optimistic with regard to educational aspirations because they are not aware of the "real world" challenges

associated with college or graduate school attendance such as financial issues and admissions criteria (Horn & Nunez, 2000). Therefore, hypothesis two was:

> First-generation students' educational aspirations will decrease as they progress from high school to college.

As a follow-up to question two, the third research question sought to determine if there were differences between educational aspirations and actual educational attainment of first-generation students. Therefore, hypothesis three was:

> First-generation students' educational attainment is less than their actual educational aspirations.

Research question four sought to determine if there were differences in educational aspirations and attainment for first-generation students by gender, race/ethnicity, and SES. Hypothesis four was:

> There are differences in educational aspirations and attainment for first-generation students by gender, race/ethnicity, and SES.

Description of Sample

Quantitative analysis of the research questions was based on the student sample surveyed via the National Educational Longitudinal Study, NELS:88/2000, distributed by the National Center for Education Statistics (NCES), a division of the U.S. Department of Education. Beginning in the spring of 1988, (with follow-up survey waves in 1990, 1992, 1994, and 2000), NCES launched the NELS:88/2000 with a clustered, stratified national probability sample of 24,599 8^{th} grade students from across all fifty states and the District of Columbia. These students were selected to represent the three million eighth grade students attending private and public schools in the U.S during 1988. NELS:88/2000

selected a sample of 1,052 private and public schools from a pool 40,000 schools. From each of these 1,052 schools, 24 students were randomly selected from each 8th grade roster and an additional two to three Asian American and Latino students were selected to provide over-sampling for underrepresented groups.

Although the base year sample was 24,599 students, this number dropped significantly over the course of the twelve years of the NELS:88/2000. The final year (i.e. 2000) sample of all students numbered 12,144. For this study, students with first-generation status working toward degrees at four-year and two-year colleges or universities (as of 1994 or two years out of high school) were chosen. Therefore, of the 12,144 total students, this study focused on a smaller sample of 1,879 first-generation students. In order to provide a control group of non-first-generation students, an equal sample size of these students was selected randomly from the NELS:88/2000 sample. Additionally, only participants who responded to all survey waves were selected.

These sample sizes were appropriate for this study because they provided a greater number of cases than most institution-specific data could. Additionally, because the NELS:88/2000 sample was designed to represent all students nationally, results determined with this sample could be generalized to the entire first-generation student population. One limitation of this longitudinal sample was that student attrition did occur from 1988 to 2000 due to student drop out rates, relocations, mortality rates, and NCES budgetary constraints. Additionally, although Asian Americans and Latinos were over-sampled, there was no mention of Native American student over-sampling. There was also no mention of African American student over-sampling; it was assumed that these students were well represented in the original random sample. Furthermore, the

NELS:88/2000 did not sample regional or area vocational schools, which may have enrolled large numbers of first-generation students.

Research Design

A causal-comparative or *ex-post facto* research design was employed in this study because existing, longitudinal data was utilized to determine causes of differences in educational aspirations between two, non-equivalent groups: first-generation and non-first-generation college students. The non-experimental *ex-post facto* research design was appropriate for this study because it attempted to determine cause-and-effect relationships, especially important in studying the impact of parental involvement on student educational aspirations. Additionally, the design was based on existing data, which enabled creativity with regard to shaping the analysis to evaluate many different relationships.

Description of Instrument and Measures

The NELS:88/2000 consisted of over 6,000 variables and included surveys for teachers, parents, and school administrators in follow-up waves. Students reported on a range of topics including: student demographics; socioeconomic status; financial aid; school, work, and home experiences; parents' role in education; educational resources and supports; drug and alcohol perceptions; and educational aspirations. All of the items on the questionnaires were multiple-choice (i.e. scantron) items to facilitate paper and pencil distribution. The response rate for each wave was nearly 90.0%. This response rate seems contradictory to the rapid decrease in sample numbers from the first to the last wave (i.e. 24,599 to 12,144). Therefore, it is important to note that the reduction in sample was not due to respondent return rates but rather to an intentional decreasing of

the sample by NCES in order to control survey costs. This decrease, however, still maintained sample generalizability (Curtin, Ingels, Wu, & Heuer, 2002).

The base year instrument and follow-up instruments were developed to meet the research objectives of NELS:88/2000, which included consistency with prior studies, specifically the National Longitudinal Study of 1972 (NLS-72) and the High School and Beyond study (HS&B). The instruments were designed to address areas of educational policy concern and discoveries in educational theory. Additionally, a major objective of the instruments was to provide teachers and other educators with additional information on the high school experiences of students, although, the instruments gauged much more. Although a non-NCES contractor developed the instruments, NCES staff did create the list of topics of interest and gained insight on such topics from government agencies and policy groups. To ensure face and content validity as well as internal consistency of items (i.e. reliability), NCES appointed a NELS:88/2000 Technical Review Panel, an independent group of technical experts, to scrutinize the instruments. Subsequent revisions resulted from this review and from field-testing of the collection procedures and the instruments one year before each main wave of the NELS:88/2000. The first field-test of the NELS:88/2000 occurred with the 8th grade class of 1987.

Variables Utilized in the Study

With regard to measures, several NELS:88/2000 survey items were utilized to operationalize the following variables: first-generation student status; non-first-generation student status; demographic characteristics including gender, race/ethnicity, and socioeconomic status; parental involvement; educational aspirations; and educational attainment. First-generation student status was measured with NELS:88/2000 survey

items F1N20A and F1N20B, both asked in 1990. F1N20A and F1N20B asked respondents how far their fathers and mothers went in school and included options ranging from less than high school to terminal degree completion. The responses to these items indicating first-generation student status were: less than high school or high school diploma/GED.

Race and gender for respondents were measured with the NELS:88/2000 variables F3RACE and F3SEX both measured in 1994 in order to incorporate any adjustments made on the part of the respondent. Additionally, SES was measured via the 1990 variable F1SESQ which categorized SES into four quartiles: 1) Quartile 1 Low, 2) Quartile 2, 3) Quartile 3, and 4) Quartile 4 High. F1SESQ was constructed by recoding F1SES into quartiles. The original variable of F1SES was constructed which using parent questionnaire data, when available. The following parent data were used: father's education level, mother's education level, father's occupation, mother's occupation, and family income.

Parental involvement, pertinent to research question one, was measured by NELS:88/2000 survey items presented to students in 1990 as sophomores in high school. Parental involvement was analyzed beginning early in the students' educational career, as 10^{th} graders, because prior literature reviewed has shown the impact of parental involvement as early as elementary school (Lareau, 1987). Parental involvement measures included: frequency of students discussing courses with parents, frequency of students discussing plans or preparation for ACT or SAT with parents, frequency of students discussing plans about going to college with parents, and parents helping

students with their homework. NELS:88/2000 measures used for the parental involvement variable are outlined in Table 3.1.

In order to examine the relationship between parental involvement and educational aspirations, the researcher analyzed aspirations of students as 10th graders in 1990. Research shows that students formalize educational plans between 8th and 10th grade, and as 10th graders, students are more realistic with regard to aspirations, which may provide better data (Horn & Nunez, 2000; Hossler & Stage, 1992). Additionally, in order to address the second research question, which spoke to the changes in students' educational aspirations as they progress from high school to college, student aspirations in 1990 and 1994 (i.e. sophomore year of high school and four years out of high school) were examined. The educational aspirations questions asked respondents the following: how far the respondent thought he or she would get in school (1990) and their highest level of education expected (1994). Because the aspirations questions were not asked in the same manner in 1990 and 1994 and because the response choices also differed from 1990 to 1994, the researcher recoded the response choices for consistency. Specific NELS:88/2000 measures used for the aspirations variables are outlined in Table 3.2.

In order to address the third research question, which broached the differences in first-generation students' educational aspirations and actual educational attainment, a specific NELS:88/2000 educational attainment measure was used. Respondent answers to their degree attained as of 2000 (i.e. eight years out of high school) were analyzed to determine if students attained the educational aspirations disclosed in 1990 as high school sophomores. It was also important to compare post-baccalaureate educational aspirations (e.g., graduate school) with attainment. Because the attainment and aspirations questions

were not asked in the same manner in 1990 and 2000 and because the response choices also differed, the researcher recoded the response choices for consistency. NELS:88/2000 measures for the aspirations and attainment variables are outlined in Table 3.2.

Table 3.1 Description of Study Independent Variables

Study Variable	NELS:88/2000 Item	NELS:88/2000 Item Description	Year Measured	NELS:88/2000 Response Choices	Study Response Recode
First-generation student status (IV)	F1N20A	How far in school did R's father go?	1990 (Students as HS sophomores)	1 Did not finish HS 2 HS diploma/GED 3 Voc/ jr coll/2 yr school 4 Some college, no degree 5 College Graduate 6 Master's degree or equivalent 7 MD/PhD/LLB/Other	
Non-first-generation student status (IV)	F1N20B	How far in school did R's mother go?	1990 (Students as HS sophomores)		N/A
Parental Involvement (IV)	F1S100B	How often parents help R with HW?	1990 (Students as HS sophomores)	1 Often 2 Sometimes 3 Rarely 4 Never	1 Never 2 Rarely 3 Sometimes 4 Often
	F1S105A	How often discussed school courses with parents?	1990 (Students as HS sophomores)	1 Never 2 Sometimes 4 Often	
	F1S105F	How often discussed prep for the ACT/SAT test with parents?	1990 (Students as HS sophomores)		
	F1S105G	How often discussed going to college with parents?	1990 (Students as HS sophomores)		N/A
Sex (IV)	F3SEX	Gender	1994 (Students two years out of HS)	1 Male 2 Female	N/A
Race (IV)	F3RACE	Race	1994 (Students two years out of HS)	1 API 2 Hispanic 3 Black, not Hispanic 4 White, not Hispanic 5 Native American 6 Other	N/A
SES (IV)	F1SESQ	SES Recoded by NCES (composite variable)	1990 (Students as HS sophomores)	1 Quartile 1 Low 2 Quartile 2 3 Quartile 3 4 Quartile 4 High	N/A

Table 3.2 Description of Study Dependent Variables					
Study Variable	**NELS:88/2000 Item**	**NELS:88/2000 Item Description**	**Year Measured**	**NELS:88/2000 Response Choices**	**Study Response Recode**
Educational Aspirations (DV)	F1S49	How far in school R thinks s/he will get?	1990 (Students as HS sophomores)	1 Less than high school 2 Finish HS 3 1-2 yrs Voc/trade/bus school 4 2+ yrs Voc/trade/bus school 5 <2 yrs College 6 2+ yrs College 7 Bachelor's degree 8 Master's degree 9 CPh.D. or M.D.	1 Less than BA 2 Finish BA 3 Finish MA 4 Finish Ph.D. or other professional degree
	EDEXPECT	Highest level of education expected?	1994 (Students two years out of HS)	1 Some high school 2 Finish HS or earn HS equivalency diploma or certificate 3 Voc/trade/bus school after high school - less than 2 years 4 Voc/trade/bus school after high school - 2 or more years 5 College program - less than 2 years 6 College program - 2 or more years - Associate's degree 7 College program - finish college - Bachelor's degree 8 College program - Master's degree or equivalent 9 College program - Ph.D. or equivalent 10 College program - M.D., L.L.B., J.D., D.D.S. or equivalent	1 Less than BA 2 Finish BA 3 Finish MA 4 Finish Ph.D. or other professional degree
Educational Attainment (DV)	F4HHDG	Highest PSE degree attained?	2000 (Students eight years out of HS)	1 Some PSE, no degree 2 Cerificate/license 3 Associates' degree 4 Bachelor's degree 5 Masters degree/equiv 6 PhD or professional degree	1 Less than BA 2 Finish BA 3 Finish MA 4 Finish Ph.D. or other professional degree

Data Collection Procedures

The NELS:88/2000 study took place nationally in the U.S., and launched its base year with participation from 1,052 private and public schools enrolling 8th grade students. The population surveyed by the NELS:88/2000 remained the same longitudinally in terms of general demographics but changed over time in terms of the students' place in the educational process. Initially, in its base year, spring of 1988, the survey was distributed to 8th grade students. However, in subsequent follow-ups, subjects were sampled while in high school, college, or as dropouts.

For the three in-school rounds (i.e. 1988, 1990, and 1992), the same student survey data collection methods were used by the NELS:88/2000 research team. NELS:88/2000 student questionnaires were accompanied by the administration of four

cognitive tests in the areas of math, science, reading and social studies for additional research. Students were first given the survey and then allowed a ten-minute break before the tests. During the break, data collection personnel reviewed questionnaires for invalid data. The paper and pencil surveys were administered in group sessions, normally conducted in a school classroom or library. For students who were absent during the survey administration day, make-up sessions were arranged. For make-up sessions with less than five students, school personnel would manage NELS:88/2000 administration. For make-up sessions containing more than five students, field data collection personnel would return to the school. Absent or dropout students were also surveyed off-site and via telephone.

NELS:88/2000 also required surveying subjects in two out-of-school rounds (i.e. 1994 and 2000). For these two waves, students had moved on to postsecondary education, dropped out, or moved into the workforce. Due to the dispersion of the subjects, Computer-Assisted Telephone Interview (CATI) was used as well as self-administered surveys and field personnel administered surveys. Field personnel were assigned to uncompleted CATI cases for special follow-up in locating subjects. Subjects were located through national commercial databases and government databases such as that offered by the Department of Motor Vehicles.

Data Analysis Technique

For the independent variables of first-and non-first-generation students, descriptive statistics such as means and percentages were used to convey demographic information of both groups. Descriptive statistics such as frequencies were helpful in analyzing the sample by race/ethnicity, gender, and SES.

For research question one, which sought to determine if there was a relationship between parental involvement and educational aspirations, the researcher utilized multiple regression as a means of assessing the validity of the hypothesis. The independent variable was parental involvement and the dependent variable was educational aspirations. Parental involvement was constituted by four variables, and as illustrated in Table 3.1, the four variables were: 1) How often parents helped the respondent with homework, 2) How often school courses were discussed with parents, 3) How often preparation for the ACT/SAT test was discussed with parents, 4) How often the respondent discussed going to college with parents.

The researcher found that the four variables were so closely correlated that a composite variable was created: PARINV. In order to create the PARINV or parental involvement composite variable, factor analysis was performed on the four individual parental involvement variables. After factor loading and an examination of the variance explained by each of the components, only one component was extracted, and, thus, one composite variable was created. Reliability was tested for the parental involvement variable via Cronbach's alpha and was found to be a modest but acceptable .6469 for the first-generation sample and .6065 for the non-first-generation sample.

In order to test for other individual differences that could contribute to the variance in addition to the total variance explained by parental involvement, four other independent variables were factored into the multiple regression. These variables included SES, gender, race, and respondent perceptions on the importance of good grades. SES and race variables were chosen as a result of the literature presented in chapter two which outlines the economic and racial/ethnic marginality of first-generation

students. Gender was chosen as a variable in order to test for differences between males and females in the areas of aspiration and attainment response to "gender identity" issues which suggest males underachieve when compared to females (King, 2000). Additionally, "respondent perceptions on the importance of good grades" was chosen as a variable in order to determine if self-perceptions could be more powerful than life circumstances and parental involvement. The researcher elected to use the variable in order to add richness to the regression and follow-up on research such as Rendon's (1994), which suggests that non-traditional students, of which first-generation students are a part, want to succeed, want doubts erased, and can be transformed into powerful learners despite setbacks.

In order to ensure a sound multiple regression, a correlation was performed on the parental involvement and perceptions variable to make certain that the variables were not highly correlated. Results indicated a moderate relationship/correlation of .328 between parental involvement and student perceptions of the importance of good grades. This slight correlation was both acceptable and commonsensical as students whose parents were most invested in their children's education would certainly care about school.

Independent variables were entered into the multiple regression in "blocks" with the three blocks designated as follows: Block 1) SES, race, and gender, Block 2) respondent perceptions on the importance of good grades, and Block 3) Parental involvement. Parental involvement was entered as the last block because the researcher wished to test the relationship between parental involvement and educational aspirations, over and above demographic and academic differences.

With regard to the second research question, the researcher examined differences in the educational aspirations of first-generation students as these students progressed from high school to college. The two main NELS:88/2000 educational aspiration variables utilized for this analysis were: student aspirations as high school sophomores (i.e. F1S49) and student aspirations two years after high school graduation (i.e. EDEXPECT). The variables were gathered in 1990 and 1994 respectively. A repeated measure ANOVA was utilized to search for differences/changes from year to year. However, once differences were identified, crosstabulations were performed.

In order to examine differences in educational aspirations from 1990 to 1994, the two variables were recoded for consistency. Both variables measured educational aspirations and offered respondents answer choices ranging from "less than high school" to "terminal degrees" but both items varied in format and degree of the response choices. Therefore, both variables were recoded to a similar format indicating four response choices or value labels: 1) Less than Bachelor's (BA), 2) Finish BA, 3) Finish MA, 4) Finish Ph.D. or other professional degree.

The third research question examined differences in educational aspirations and educational attainment for first-generation students. The two main NELS:88/2000 educational variables utilized for this analysis were: students' educational aspirations as high school sophomores (i.e. F1S49) and student's educational attainment eight years after high school graduation (i.e. F4HHDG). The variables were gathered in 1990 and 2000 respectively. Both variables measured educational aspirations and attainment via a variety of response choices ranging from "less than high school" to "terminal degrees" but both items varied in format and degree of the response choices. Therefore, both

variables were recoded to a similar format indicating four response choices or value labels: 1) Less than BA, 2) Finish BA, 3) Finish MA, 4) Finish Ph.D. or other professional degree. Once the variables were recoded, crosstabulations were performed to test for differences.

The fourth research question sought to determine if there were differences in educational aspirations and attainment for first-generation students by gender, race/ethnicity, and SES. In order to determine the relationship, crosstabulations were performed between each demographic variable (i.e. gender, SES, and race) and each aspiration or attainment variable: students' educational aspirations as high school sophomores (i.e. F1S49) and student's educational attainment eight years after high school graduation (i.e. EDEXPECT). The recoded measures outlined above were used for the aspiration and attainment variables. All racial groups were included in the crosstabulation tests except for Native Americans who constituted less than 1.0% of the sample, and, therefore, whose responses could not be widely generalized.

Limitations

One major limitation of the research methodology for this study included the high attrition rates for the NELS:88/2000 longitudinal sample. Between 1988 and 2000, due to student drop out rates, relocations, mortality rates, and NCES budgetary constraints, the sample shrank from 24,599 to 12,144. Although still generalizeable because of weighted and adjusted sampling, a large section of the original subjects were missing. Additionally, although Asian Americans and Latinos were over-sampled in the NELS:88/2000, Native American were not; thus, this population may have been underrepresented. Another limitation of the methodology was the research design chosen, the *ex-post facto design.*

Because this study was reliant on existing data, experimental procedures were limited. The researcher could not control the randomness in assignment or selection of the first- and non-first-generation college student variables.

Furthermore, due to the nature of the paper and pencil test and the need for quick responses, much of the data collected by the NELS:88/2000 was categorical in nature. Although still extremely helpful in developing sound and applicable findings, the researcher was limited in using statistical procedures, which called for more continuous-level variables.

The *ex-post facto* research design also had limitations. First, the researcher had limited control over the randomness in assignment or selection of the independent variables, particularly the first-and non-first-generation college student variables. Second, because this design was based on existing data, manipulation of conditions did not occur and true experimentation was limited. Third, the researcher's study was limited by the variables available in the dataset. Study questions were bound by existing variables and the manner in which they were originally operationalized by NCES.

Threats to External and Internal Validity

For this study, threats to internal and external validity were few because of the rigorous and strict instrumentation, data collection, and data analysis procedures followed by the U.S. Department of Education. Threats to external validity with regard to generalizability and broad inferences across populations were slight because care was taken in making the sample mostly nationally representative. However, external validity may have been jeopardized in terms of using the data to generalize to Native Americans, since this group was not over sampled in the initial sample. It is important to address

another possible threat, one to internal validity in the form of testing effects. The NELS:88/2000 was a longitudinal study and, as such, subjects were asked similar or identical questions from wave to wave. Therefore, subjects may have recalled how they answered questions in the last wave and responded similarly in the current wave, even though their feelings about the question may have changed.

Summary

This chapter has explained the methodologies used in this quantitative study of the role of parental involvement on the educational aspirations of first-generation college students as compared to their non-first-generation counterparts. This study used existing, national data derived from the NELS:88/2000 survey, following an *ex-post facto* research design. The sample was, however, generalizeable to the national population of first-generation students, which was helpful for the application of findings. Study results were determined using such statistical methods as correlation, multiple regression, repeated measures ANOVA, and crosstabulation. The next chapter will present the results obtained through the use of the methodologies discussed.

CHAPTER 4

Results

As addressed in the previous three chapters, the purpose of this study is to determine if parental involvement has a significant influence on the educational aspirations of first-generation college students as compared to the educational aspirations of non-first-generation college students. Data analysis for this study was based on the NELS:88/2000 dataset and was accomplished with a variety of statistical measures. The following chapter will outline the results as determined by those statistics. For reference, a listing of variables and response choices is shown in Tables 3.1 and 3.2 in chapter three.

Characteristics of the Sample

Although not specific to any research question, it is imperative to report the fundamental results of the descriptive statistics utilized to characterize the first-generation and non-first-generation college student sample. Descriptive statistics were calculated for sample race/ethnicity, gender, and SES. The researcher found that of the 1,879-subject first-generation student sample, 790 subjects were female and 1089 were male, 42.0% and 58.0% respectively. For the equally sized non-first-generation student sample, 902 subjects were female and 977 were male, 48.0% and 52.0% respectively. There was no "transgender" response choice for study participants.

Additionally, with regard to race/ethnicity, White participants constituted the majority in both samples while Native Americans represented the smallest racial/ethnic group in the sample. As exhibited by Table 4.1, Asian/Pacific Islanders doubled in proportion from the first-generation student sample to the non-first-generation student sample. Hispanic students were over three times as prevalent in the first-generation

student group than in the non-first-generation student group while Black students stayed nearly consistent.

Table 4.1
First-generation and non-first-generation students: race demographics (*n* =1879)

	First-generation		Non-first-generation	
	N	%	N	%
Asian/Pacific Islander	99	5.3	190	10.1
Hispanic	342	18.2	110	5.9
Black	160	8.5	137	7.3
White	1260	67.1	1431	76.2
Native American	18	1.0	11	0.6

Chapters one and two addressed the economic marginality of first-generation students, therefore, SES was also investigated as a portion of the student demographics. The non-first-generation student sample showed a significantly larger percentage of respondents in the high SES quartile, over 21.4% as compared to 2.8% for the first-generation student sample. However, first-generation students constituted a larger percentage of the lowest SES quartile, 38.7% as compared to 27.6% of non-first-generation students. Table 4.2 illustrates these frequencies as well as provides additional details for middle quartiles.

Table 4.2
First-generation and non-first-generation students: SES quartiles (*n* =1879)

	First-generation		Non-first-generation	
	N	%	N	%
Quartile 1 Low	728	38.7	487	27.6
Quartile 2	682	36.3	492	27.8
Quartile 3	416	22.1	409	23.1
Quartile 4 High	53	2.8	379	21.4
Missing			112	6.3

Research Question One and Hypothesis One

The primary research question asked if family or parental involvement influences the educational aspirations of first-generation students. Literature discussed in chapter two indicated the importance of parental involvement in the development of children's educational aspirations. The literature also discussed the social and cultural capital deficit that parents of first-generation college students face and, thus, the difficulties in transmitting the value of higher education to children through attitudes and participation. Therefore, hypothesis one was:

> There will be a positive relationship between parental involvement and educational aspirations for first-generation students.

Results of the multiple regression for first-generation students with an N of 1543, as indicated by Table 4.3, showed that the total variance explained by all of the variables was 16.1%. The percent variance explained by the demographic variables (block 1) was 3.8%, the additional variance explained by perception of the importance of good grades (block 2) was 6.5%, and the variance explained by the parental involvement variable (block 3) was 5.9%. F-tests were significant for all predictors at the $p<.05$ level. By a slight margin, more of the variance in educational aspirations was explained by perception of the importance of good grades (6.5%) than parental involvement (5.9%). However, it is important to note that although the combined variables explained 16.1% of the variance, there are other factors that contribute to students' educational aspirations left unexplained by this study's model.

Table 4.3
First-generation students: multiple regression variance (*n* =1543)

Model Summary				ANOVA	
Model	Variable Entered	R Square	R Square Change	F	Sig.
1	SES, Gender, Asian, Black, Hispanic, White	0.038	0.038	10.098	0.000
2	Perception of importance of good grades	0.103	0.065	25.128	0.000
3	Parental Involvement	0.161	0.059	23.920	0.000

Additionally, significance (at p<.05) associated with beta coefficients for each variable indicated that in the last multiple regression block where all variables were present, three variables in addition to parental involvement were good predictors of educational aspirations. Those variables were: Asian, SES, and respondent perceptions on the importance of good grades as indicated in Table 4.4.

Table 4.4
First-generation students: multiple regression beta coefficients (*n* =1543)

	Coefficients	
Model 3	Beta	Sig.
Asian	0.124	0.039
Black	0.089	0.318
Hispanic	0.045	0.507
White	0.061	0.581
Gender	0.019	0.430
SES	0.132	0.000
Importance of good grades	0.216	0.000
Parental involvement	0.247	0.000

Multiple regression results for non-first-generation students with an N of 1539, as indicated by Table 4.5, showed that the total variance explained by all of the variables was 8.1%. The percent variance explained by the demographic variables (block 1) was 2.8%, the additional variance explained by perception of the importance of good grades (block 2) was .1%, and the variance explained by the parental involvement variable (block 3) was 5.2%. F-tests were significant for all predictors at the p<.05 level. More of the variance in educational aspirations was explained by parental involvement (5.2%)

than any other variable. However, although the combined variables explained 8.1% of the variance, there are other factors that contribute to students' educational aspirations left unexplained by this model.

Table 4.5
Non-first-generation students: multiple regression variance (*n* =1539)

	Model Summary			ANOVA	
Model	Variable Entered	R Square	R Square Change	F	Sig.
1	SES, Gender, Asian, Black, Hispanic, White	0.028	0.028	7.249	0.000
2	Perception of importance of good grades	0.029	0.001	6.507	0.000
3	Parental Involvement	0.081	0.052	16.777	0.000

In addition, as shown by Table 4.6, significance (at $p<.05$) associated with beta coefficients for each variable indicated that in the last multiple regression block where all variables were present, two variables in addition to parental involvement were good predictors of educational aspirations: Asian and gender. As a follow-up to this analysis a crosstabulation was performed between gender and the educational aspiration variable in order to determine how results varied by gender. The test indicated that although males and females had similar aspirations to finish a BA, 52.0% of females aspired to finish MAs and Ph.D.s while 44.6% of males did. Additionally, a greater portion of males, 14.1%, aspired to less than a BA than did females, 10.0%.

Table 4.6
Non-first-generation students: multiple regression beta coefficients (*n* =1539)

	Coefficients	
Model 3	Beta	Sig.
Asian	0.260	0.010
Black	0.132	0.092
Hispanic	0.107	0.214
White	0.206	0.133
Gender	0.084	0.001
SES	0.047	0.059
Importance of good grades	0.031	0.210
Parental involvement	0.229	0.000

Research Question Two and Hypothesis Two

The next research question sought to determine if the educational aspirations of first-generation college students changed as the students progressed from high school to college. Research has indicated that younger students are more optimistic with regard to educational aspirations because they are not aware of the "real world" challenges associated with college or graduate school attendance such as financial issues and admissions criteria (Horn & Nunez, 2000). Therefore, hypothesis two was:

> First-generation students' educational aspirations will decrease as they progress through high school and from high school to college.

The two main NELS:88/2000 educational aspiration variables utilized for this analysis were: student aspirations as high school sophomores (i.e. F1S49) and student aspirations two years after high school graduation (i.e. EDEXPECT). The variables were gathered in 1990 and 1994 respectively. Initially, a test of differences from 1990 to 1994 was conducted with a repeated measures ANOVA. The ANOVA showed both a strong F-test score of 27.454 and a significance of .000 (below $p<.05$) for the Huynh-Feldt within subjects test. However, although this test showed that a difference existed from 1990 to 1994, the nature of the differences was not evident. Therefore, the researcher elected to perform a crosstabulation test for both variables: student aspirations as high school sophomores and student aspirations two years after high school graduation.

The crosstabulation test for first-generation students showed that 38.5% of the total sample (N of 1724) of first-generation students increased their aspirations from 1990 to 1994. Of this group, the greatest jump in aspirations was in the "finish a MA" category. As Table 4.7 indicates, in 1990 219 subjects, or 12.7% of the sample, aspired to

finish a MA, but when surveyed in 1994, 466 subjects, or 27.0% of the sample, expected to finish a MA. Additionally, the table shows that 23.0% of the total sample decreased their aspirations. A significant portion of this decrease occurred in the "finish a Ph.D." category where aspirations changed from 12.2% of the sample aspiring to this degree to 7.3% of the sample aspiring to finish a Ph.D. four years later. Furthermore, 38.5% of the sample remained consistent, neither increasing nor decreasing in their expectations over time. Therefore, the sum of these data results counter the original hypothesis. (See Table 4.7.)

Table 4.7
First-generation students' educational aspirations in 1990 and 1994 (*n*=1724)

	Educational aspirations as HS sophomores (1990)									
	Less than bachelors		Finish bachelors		Finish masters		Finish Ph.D. /prof. degree		Totals	
	N	%	N	%	N	%	N	%	N	%
Educational aspirations two years after HS (1994)										
Less than bachelors degree	239	54.7	122	27.9	18	4.1	58	13.3	437	100.0
Finish bachelors degree	260	37.4	305	43.8	74	10.6	57	8.2	696	100.0
Finish masters degree	98	21.0	208	44.6	92	19.7	68	14.6	466	100.0
Finish professional or terminal degree	12	9.6	51	40.8	35	28.0	27	21.6	125	100.0
Totals	609		686		219		210			

Pearson Chi-Square = 208.450; Sig. = .000 @ p<.05

The crosstabulation test for non-first-generation students showed that 34.7% of the total sample (N of 1819) of non-first-generation students increased their aspirations from 1990 to 1994. Of this group, the greatest jump in aspirations was in the "finish a MA" category. As Table 4.6 indicates, in 1990 443 subjects, or 24.4% of the sample, aspired to finish a MA, but when surveyed in 1994, 765 subjects, or 42.1% of the sample, expected to finish a MA. Additionally, an average of nearly 80.0% of the sample in both

1990 and 1994 aspired to greater education than "less than a BA," over 10.0% more than did in the first-generation student sample (not shown in Table). The table also shows that 28.6% of the total sample decreased their aspirations. A significant portion of this decrease occurred in the "finish a Ph.D." category where aspirations changed from 24.3% of the sample aspiring to this degree to 14.7% of the sample. Furthermore, 36.7% of the sample did not change its aspirations over the four-year period.

Table 4.8
Non-first-generation students' educational aspirations in 1990 and 1994 (*n*=1819)

	Educational aspirations as HS sophomores (1990)									
	Less than bachelors		Finish bachelors		Finish masters		Finish Ph.D. /prof. degree		Totals	
	N	%	N	%	N	%	N	%	N	%
Educational aspirations two years after HS (1994)										
Less than bachelors degree	52	19.5	59	27.9	45	4.1	111	13.3	267	100.0
Finish bachelors degree	102	19.7	272	43.8	91	10.6	54	8.2	519	100.0
Finish masters degree	53	6.9	325	44.6	227	19.7	160	14.6	765	100.0
Finish professional or terminal degree	6	2.2	65	40.8	80	28.0	117	21.6	268	100.0
Totals	213		721		443		442			

Pearson Chi-Square = 284.077; Sig. = .000 @ p<.05

Research Questions Three and Hypotheses Three

The third research question sought to determine if there was a difference between the actual educational attainments of first-generation students and their educational aspirations. Based on the hypotheses one and two, hypothesis three was:

> First-generation students' educational attainment is less than their actual educational aspirations.

The two main NELS:88/2000 educational variables utilized for this analysis were: students' educational aspirations as high school sophomores (i.e. F1S49) and student's educational attainment eight years after high school graduation (i.e. F4HHDG). Both

variables were gathered in 1990 and 2000 respectively, therefore, if NELS participants went straight to a postsecondary institution from high school, they would have eight years to finish some form of college.

The crosstabulation test for first-generation students showed that 49.1% of the total sample (N of 1692) of first-generation students did not attain their original aspirations from 1990 by 2000. Of this group, the greatest change in aspirations versus attainment occurred in the "less than a BA" category. As Table 4.9 indicates, in 1990, 589 subjects, or 34.8% of the sample, aspired to less than a BA, but when surveyed in 2000, 1144 subjects, or 67.6% of the sample attained less than a BA, a result in alignment with hypothesis three. Individuals who had aspired to higher levels such as "finish a BA, MA or a Ph.D." actually did not attain those levels but fell into "less than a BA".

A portion of this lack of attainment also occurred in the "finish a BA" and "finish a MA" categories where sample responses changed from 40.2% and 12.8% of the sample, respectively, aspiring to this degree in 1990 to 29.5% and 2.6% of the sample, respectively, actually attaining the degree by 2000. This change from aspiring to higher levels and attaining at lower levels is evidenced again in the table as it shows that 6.5% of the total sample actually attained higher than their original aspirations. Furthermore, 44.4% of the sample attained exactly what they aspired to attain in 1990. (See Table 4.9.)

Table 4.9
First-generation students' educational aspirations and attainment in 1990 and 2000 (*n* =1692)

	Educational aspirations as HS sophomores (1990)									
	Less than bachelors		Finish bachelors		Finish masters		Finish Ph.D. /prof. degree		Totals	
	N	%	N	%	N	%	N	%	N	%
Educational attainment eight years after HS (2000)										
Less than bachelors degree	502	43.9	422	36.9	108	9.4	112	9.8	1144	100.0
Finish bachelors degree	81	16.2	236	47.3	95	19.0	87	17.4	499	100.0
Finish masters degree	6	13.6	19	43.2	12	27.3	7	15.9	44	100.0
Finish professional or terminal degree	0	0.0	3	60.0	1	20.0	1	20.0	5	100.0
Totals	589		680		216		207			

Pearson Chi-Square = 143.972; Sig. = .000 @ p<.05

As indicated previously, there was a large difference in the proportion of subjects aspiring to a BA when sampled in 1990 (34.8%) and those who attained less than a BA when sampled in 2000 (67.6%). As a follow-up analysis aimed at better evaluating "where" first-generation respondents who aspired to but never attained a BA actually settled in the educational system, frequencies were calculated for this group. As table 4.10 shows, the largest proportion (65.8%) of respondents who did not earn a BA still attempted some sort of postsecondary education aimed at a degree other than an Associate's or Certificate, but they did not finish. Additionally, 34.1% of those who did not attain a BA completed an Associate's degree or Certificate at a two-year institution.

Table 4.10
Attainment (2000) of first-generation students aspiring to a BA in 1990 (*n* =680)

Degree	N	%
Some PSE, no degree	278	40.9%
Certificate/license	66	9.7%
Associate's degree	78	11.5%
Bachelor's degree	236	34.7%
Master's degree	19	2.8%
Ph.D. or professional	3	0.4%
Total	680	100.0%

The crosstabulation test for non-first-generation students showed that 66.0% of the total sample (N of 1850) of non-first-generation students did not attain their original aspirations from 1990 by 2000. Of this group, the greatest change in aspirations versus attainment occurred in the "finish a BA" category. As Table 4.8 indicates, in 1990, 525 subjects, or 28.4% of the sample, aspired to finish a BA, but when surveyed in 2000, 1035 subjects, or 55.9% of the sample attained a BA. This 55.9% also included 48.6% of subjects who aspired to a MA or Ph.D. in 1990; therefore, for these subjects the BA may have only served as a stepping-stone to their final degree aspiration.

A portion of this lack of attainment also occurred in the "finish a MA" category where responses changed from 41.9% of the sample aspiring to this degree in 1990 to 8.3% of the sample actually attaining the degree by 2000. This change from aspiring to higher levels and attaining lower levels is evidenced in the table where 8.9% of the total sample actually attained higher than original aspirations. Also, 25.0% of the sample attained exactly what they aspired to attain in 1990. (See Table 4.11.)

Table 4.11
Non-first-generation students' educational aspirations and attainment in 1990 and 2000 (*n*=1850)

	Educational aspirations as HS sophomores (1990)									
	Less than bachelors		Finish bachelors		Finish masters		Finish Ph.D. /prof. degree		Totals	
	N	%	N	%	N	%	N	%	N	%
Educational attainment eight years after HS (2000)										
Less than bachelors degree	130	20.5	258	40.8	187	29.5	58	9.2	633	100.0
Finish bachelors degree	108	10.4	253	24.4	505	48.8	169	16.3	1035	100.0
Finish masters degree	19	12.4	14	9.2	75	49.0	45	29.4	153	100.0
Finish professional or terminal degree	16	55.2	0	8.2	8	12.1	5	17.2	29	100.0
Totals	273		525		775		277			

Pearson Chi-Square = 203.122; Sig. = .000 @ p<.05

Research Question Four and Hypothesis Four

Research question four sought to determine if there were differences in educational aspirations and attainment for first-generation students by gender, race/ethnicity, and SES. Based on hypothesis three, hypothesis four was:

> There are differences in educational aspirations and attainment for first-generation students by gender, race/ethnicity, and SES.

In order to determine the relationship, crosstabulations were performed between each demographic variable (i.e. gender, SES, and race) and each aspiration or attainment variable: students' educational aspirations as high school sophomores (i.e. F1S49) and student's educational attainment eight years after high school graduation (i.e. EDEXPECT).

Gender

The crosstabulation performed on the first-generation student sample (N=1754) to determine the differences between educational aspirations and gender showed that within the male group, more males aspired to finish a BA than did females in the female group. For higher degrees such as MA and Ph.D., the percentage of females aspiring was greater than males, 14.4% versus 9.8% and 14.0% versus 9.1% respectively. Therefore, the greatest proportion of first-generation male students aspired to a BA (45.2%), while a greater proportion of first-generation female students aspired to a degree beyond the BA (28.4%). (See Table 4.12.)

Table 4.12
First-generation students' educational aspirations (1990) by gender (*n* =1754)

	Gender					
	Male		Female		Totals	
	N	%	N	%	N	%
Educational aspirations as HS sophomores (1990)						
Less than bachelors degree	263	35.9	369	36.1	632	100.0
Finish bachelors degree	331	45.2	362	35.5	693	100.0
Finish masters degree	72	9.8	147	14.4	219	100.0
Finish professional or terminal degree	67	9.1	143	14.0	210	100.0
Totals	733		1021			
Pearson Chi-Square = 25.761; Sig. = .000 @ p<.05						

Crosstabulation results for the first-generation student sample (N=1803) showed that that first-generation males and females tended to have similar levels of attainment. As indicated by Table 4.13, females showed slightly higher attainment for degrees such as MA and Ph.D while males showed slightly higher attainment for a BA. The chi-square significance of .289 (at p<.05) also indicates this lack of difference. (See Table 4.13.)

Table 4.13
First-generation students' educational attainment (2000) by gender (*n* =1803)

	Gender					
	Male		Female		Totals	
	N	%	N	%	N	%
Educational attainment eight years after HS (2000)						
Less than bachelors degree	522	69.0	724	69.2	1246	100.0
Finish bachelors degree	217	28.7	291	27.8	508	100.0
Finish masters degree	18	2.4	26	2.5	44	100.0
Finish professional or terminal degree	0	0.0	5	0.5	5	100.0
Totals	757		1046			
Pearson Chi-Square = 3.755; Sig. = .289 @ p<.05						

SES

Crosstabulations for the first-generation student sample (N=1754) performed to determine the differences between educational aspirations and SES showed that of all the students in the lowest SES quartile, the largest number (303 subjects or 45.5%) aspired to less than a BA. Table 4.14 also illustrates that of the student in the highest quartile, most (22 subjects or 42.3%) aspired to finish their BA. Additionally, the largest number of students fell in the lowest quartile, 38.0%.

Table 4.14
First-generation students' educational aspirations (1990) by SES (*n* =1754)

	SES									
	Quartile 1 Low		Quartile 2		Quartile 3		Quartile 4 High		Totals	
	N	%	N	%	N	%	N	%	N	%
Educational aspirations as HS sophomores (1990)										
Less than bachelors degree	303	45.5	195	30.5	122	30.7	12	23.1	632	100.0
Finish bachelors degree	217	32.6	278	43.5	176	44.3	22	42.3	693	100.0
Finish masters degree	81	12.2	75	11.7	53	13.4	10	19.2	219	100.0
Finish professional or terminal degree	65	9.8	91	14.2	46	11.6	8	15.4	210	100.0
Totals	666		639		397		52			
Pearson Chi-Square = 49.079; Sig. = .000 @ p<.05										

Crosstabulation results for the first-generation student sample (N=1803) performed to determine the differences between educational attainment and SES showed that of all the students in the lowest SES quartile, the largest number, 525 subjects or 76.6%, attained less than a BA. Table 4.15 also illustrates that regardless of SES status, 69.1% of the first-generation students attained less than a BA. Of all the students who attained a BA or MA most, 36.4% and 47.7%, fell into the second to lowest quartile.

Table 4.15
First-generation students' educational attainment (2000) by SES (*n*=1803)

	SES									
	Quartile 1 Low		Quartile 2		Quartile 3		Quartile 4 High		Totals	
	N	%	N	%	N	%	N	%	N	%
Educational attainment eight years after HS (2000)										
Less than bachelors degree	525	76.6	452	68.6	245	59.9	24	48.0	1246	100.0
Finish bachelors degree	144	21.0	185	28.1	155	37.9	24	48.0	508	100.0
Finish masters degree	14	2.0	21	3.2	7	1.7	2	4.0	44	100.0
Finish professional or terminal degree	2	0.3	1	0.2	2	0.5	0	0.0	5	100.0
Totals	685		659		409		50			

Pearson Chi-Square = 51.544; Sig. = .000 @ p<.05

Race/Ethnicity

Crosstabulations for the first-generation student sample testing differences between educational aspirations and race showed that within all aspiration categories, White subjects were in greatest proportion. This result could be due to the majority of White respondents in the sample. Within racial groups, Black and White subjects mostly aspired to less than a BA (34.2% and 36.5% respectively) and to finish a BA (38.4% and 41.9% respectively). Table 4.16 shows that within the Hispanic group, most respondents aspired to less than a BA, 39.7%. Within the Asian group, the largest number by far, 43.3%, aspired to finish their BA. Most of the sample, 75.5% aspired to finish BA or less.

Table 4.16
First-generation students' educational aspirations (1990) by race (*n*=1754)

	Race									
	Asian		Hispanic		Black		White		Totals	
	N	%	N	%	N	%	N	%	N	%
Educational aspirations as HS sophomores (1990)										
Less than bachelors degree	19	19.6	120	39.7	50	34.2	435	36.5	624	100.0
Finish bachelors degree	42	43.3	90	29.8	56	38.4	500	41.9	688	100.0
Finish masters degree	18	18.6	37	12.3	22	15.1	141	11.8	218	100.0
Finish professional or terminal degree	18	18.6	55	18.2	18	12.3	116	9.7	207	100.0
Totals	97		302		146		1192			

Pearson Chi-Square = 42.505; Sig. = .000 @ p<.05

Crosstabulations for the first-generation student sample (N=1803) testing differences between educational attainment and race showed that within their own racial group, Black and White subjects attained less than a BA, 76.5% and 66.6% respectively. Table 4.17 also shows that within the Hispanic group, most respondents attained less than a BA, 79.3%. Within the Asian group, the largest percent, 41.8%, actually attained their BA. Most of the sample, 69.1% attained a BA or less.

Table 4.17
First-generation students' educational attainment (2000) by race (*n*=1803)

	Race									
	Asian		Hispanic		Black		White		Totals	
	N	%	N	%	N	%	N	%	N	%
Educational attainment eight years after HS (2000)										
Less than bachelors degree	52	53.1	261	79.3	114	76.5	807	66.6	1234	100.0
Finish bachelors degree	41	41.8	62	18.8	31	20.8	371	30.6	505	100.0
Finish masters degree	4	4.1	6	1.8	4	2.7	30	2.5	44	100.0
Finish professional or terminal degree	1	1.0	0	0.0	0	0.0	4	0.3	5	100.0
Totals	98		329		149		1212			

Pearson Chi-Square = 39.062; Sig. = .000 @ p<.05

Summary of Hypotheses

This study presented a variety of results that both confirmed and rejected the stated hypotheses. Multiple regression statistics for both first- generation and non-first-generation samples confirmed hypothesis one: there is a positive relationship between parental involvement and educational aspirations for first-generation students. Crosstabulation tests examining the differences in first-generation students' educational aspirations over time resulted in a rejection of hypothesis two: first-generation students' educational aspirations will decrease as they progress from high school to college. In fact, 38.5% of first-generation students' aspirations actually increased from 1990 to 1994, as opposed to 23.0% of first-generation students whose aspirations decreased.

Additionally, crosstabulation tests comparing first-generation students' educational aspirations and attainment confirmed hypothesis three: first-generation students' educational attainment is less than their actual educational aspirations. Finally, crosstabulation tests used to examine differences in educational aspirations and attainment by gender, race/ethnicity, and SES partially confirmed hypothesis four: there are differences in educational aspirations and attainment for first-generation students by gender, race/ethnicity, and SES. With regard to race, students of color, particularly African American and Hispanic students, aspired and attained at lower levels than White students. Results also indicated that with regard to SES, lower SES first-generation students aspired and attained at lower levels. However, hypothesis four did not hold in the case of differences in educational attainment by gender. Although the female students' educational aspirations, as measured in 1990, were higher than the male students' aspirations, there was no significant difference in attainment.

Summary

This chapter has reviewed the results of the data analysis as they pertain to the four research questions and corresponding hypotheses. The next chapter will interpret the study findings within the framework of the literature presented. In addition, implications for practice, suggestions for further research, and study limitations will be discussed.

CHAPTER 5

Summary and Discussion

Discussion of Results and Interpretation of Findings

The following section will provide a summary of the results accompanied by the researcher's interpretation of the findings where appropriate. Results and interpretations will be organized by the four research questions and their corresponding hypotheses. General demographics addressing sample gender, race, and SES will also be discussed at the beginning of this section.

Demographics

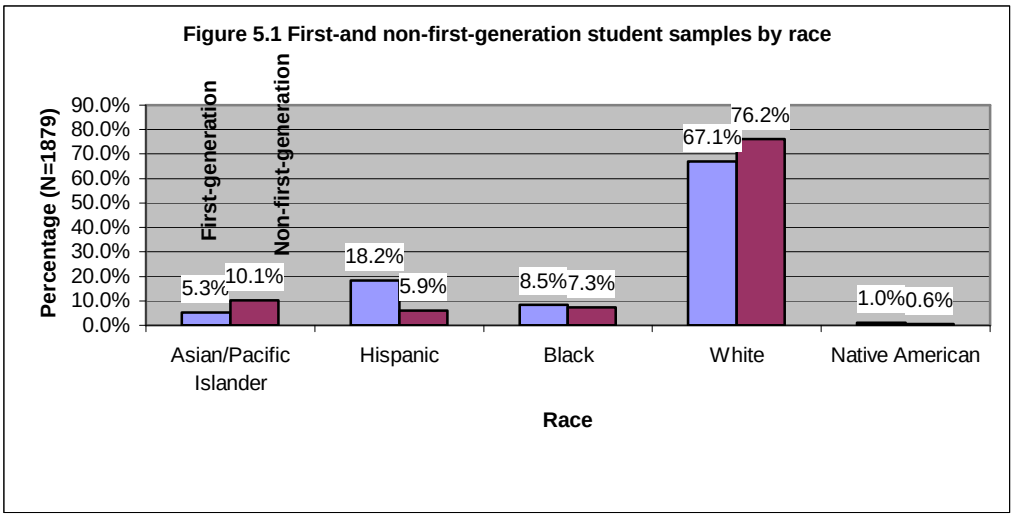
Gender

The researcher found that females constituted a larger portion of both the first-and non-first generation student samples (sample Ns of 1879). In the first-generation group, 42.0% were males and 58.0% females. In the non-first-generation group, 48.0% were males and 52.0% were females. These findings concur with prior research indicating that first-generation students are more likely to be women (Terenzini et al., 1996). Additionally, current data suggests that men constitute a smaller proportion (43%) of the enrolled population in higher education; therefore, this majority female study sample reflects national enrollment data (King, 2000).

Race

White participants constituted the majority in both the first-and non-first generation student samples while Native Americans represented the smallest group. As exhibited by Figure 5.1, the percentage of Asian/Pacific Islander and Hispanic subjects doubled and tripled, respectively, in proportion from the first-generation student sample

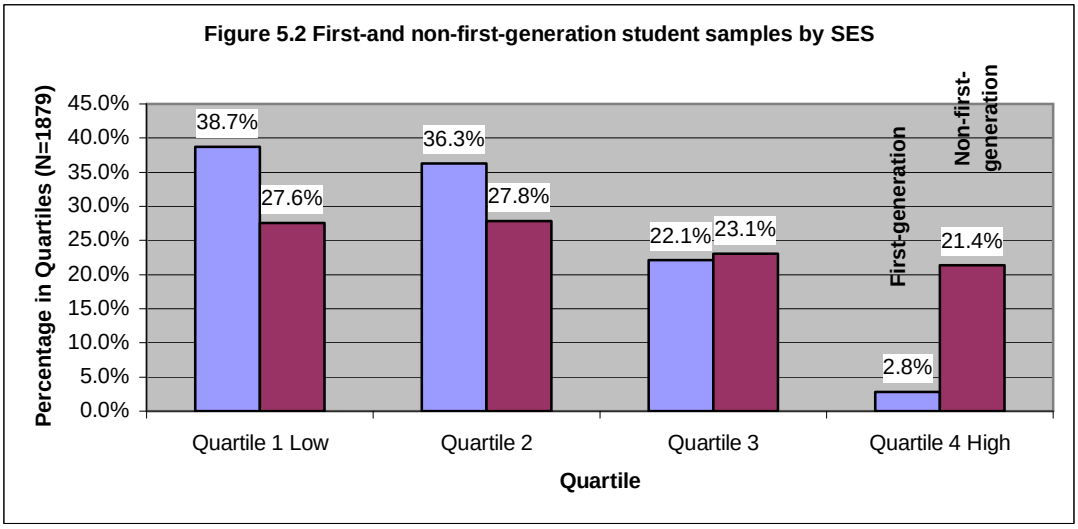
to the non-first-generation student sample, while Black students stayed nearly consistent. However, it is important to note that when comparing the first-generation sample to the non-first-generation sample, Hispanic, Black, and Native American subjects decreased. Although research by scholars such as Brown and Burkhardt (1999), Bui (2000), and Terenzini et al. (1996) suggests that most first-generation students are ethnic and racial minorities, the results generated by the nationally generalizeable NELS data used in this study indicated that most first-generation students (67.1%) were White. This nationally based finding is contrary to the results concluded from individual institution studies such as those conducted by Brown and Burkhardt and Bui.



SES

With regard to SES, the non-first-generation student sample showed a significantly larger percentage of respondents in the high SES quartile, over 20.0% as compared to 2.8% for the first-generation student sample. First-generation students constituted a larger percentage of the lowest SES quartile, 38.7% as compared to 27.9% of non-first-generation students. Figure 5.2 illustrates these frequencies. These results align well with the current scholarship on first-generation populations, which notes that

one of largest differences between first-and non-first-generation students is total family income (Choy, 2001; Cuccaro-Alamin, 1998; Terenzini et al., 1996). The difference may arise for several reasons, the main reason suggests that first-generation students come from families where the lack of a college education for parents may not have done much to benefit family employment opportunities and social capital. As cited earlier in this study, college degrees boost income levels and employment options (Leslie & Brinkman, 1988). (See Figure 5.2.)



Research Question One and Hypothesis One

The primary research question asked if family or parental involvement influences the educational aspirations of first-generation students. Therefore, hypothesis one was:

> There will be a positive relationship between parental involvement and educational aspirations for first-generation students.

First-Generation Sample

Results of the multiple regression for first-generation students (N = 1543) showed that the total variance explained by all of the variables was only16.1%. The percent variance explained by the SES, gender, and race (block 1) was 3.8%, the additional

variance explained by perception of the importance of good grades (block 2) was 6.5%, and the variance explained by the parental involvement variable (block 3) was 5.9%. Interestingly, although blocks two and three are very close in terms of explaining variance, parental involvement was not the main predictor, student perceptions of the importance of good grades was. Yet, parental involvement, although not the main predictor, was still quite strong, and this finding supports prior research that parental involvement is a predictor of postsecondary aspirations (Falsey & Heyns, 1984; Hearn, 1984; Inoue, 1999; Sewell & Shah, 1968). Additionally, significance of the beta coefficients for all variables present in the last regression block showed that Asian and SES were also viable predictors of educational aspirations. (See Table 4.3.)

These results could be attributed to several factors. One, the manner in which parental involvement was operationalized was not inclusive enough of other factors that make a difference in student aspirations. For example, this study examined home-based involvement such as discussions between children and parents about school matters; yet, the study did not examine school-based involvement such as parents taking an active role in interacting with teachers, counselors, etc. Perhaps, because of the "up-hill" battle fought by first-generation students, this active involvement inspires educational aspirations much more so. Second, the study results may be showing the importance of student perceptions about academics and the possibility that students' "I can do it" attitude outweighs any lack or abundance of parental involvement.

Asian racial identification and SES were strong predictors of educational aspirations for first-generation students as well. In follow-up crosstabulation tests, as shown in Table 4.16, between race and educational aspirations, a greater percentage of

Asians aspired (as high school sophomores in 1990) to finish a BA, a MA, or a Ph.D. than any other racial group. Perhaps this aspiration is linked to the "American Dream" work ethic closely connected with the immigrant roots of the Asian population. Between 1980 and 1990, the decade leading up to administration of the NELS:88/2000 in 1988, the Asian population nearly doubled in the United States due to a high level of immigration (U.S. Census Bureau, 2000). Asian students responding to the survey may have been closely connected to the immigrant desire for education.

Follow-up crosstabulation tests, as shown in Table 4.14, between SES and educational aspirations showed that of all the students in the lowest SES quartile, the largest number (45.5%) aspired to less than a BA. Of the students in the highest quartile, a combined 34.6% aspired to a MA or Ph.D., while the greatest portion still only aspired to finish a BA (42.3%). This is surprising considering that financial privilege may induce students to reach for higher levels of education. This finding may also indicate that regardless of financial privilege, students; educational aspirations may be more closely linked with the educational attainment of their parents rather than other facets of their SES. Perhaps this result suggests that students assess the success (as suggested by high SES) that their parents had without a college education and conclude that attaining a BA, MA, or Ph.D. is not equated with life success.

Non-First-Generation Sample

Results of the multiple regression for non-first-generation students (N = 1539) showed that the total variance explained by all of the variables was only 8.1%. The percent variance explained by the SES, gender, and race (block 1) was 2.8%, the additional variance explained by perception of the importance of good grades (block 2)

was .1%, and the variance explained by the parental involvement variable (block 3) was 5.2%. In this sample, parental involvement was clearly the best predictor. Additionally, significance of the beta coefficients for all variables present in the last regression block showed that gender and Asian were also viable predictors of educational aspirations. Although these results support the hypothesis in that there is a positive relationship between parental involvement and educational aspirations, clearly, the model leaves over 90.0% of the variance unexplained. (See Table 4.5.)

It is interesting to note that, for the non-first-generation sample, parental involvement explained most of the 8.1% of the variance in educational aspirations unlike in the first-generation group. Here, the researcher can surmise that meaningful and knowledgeable parental involvement boosted by parental education and richness in social capital plays a larger role in the aspirations of children.

With regard to the gender predictor variable, results of follow-up crosstabulation tests between gender and aspirations indicated that although "finish a BA" aspirations were similar between males and females, a greater portion of females, 52.0%, aspired to finish a MA and a Ph.D. than did males (44.6%). Additionally, a greater portion of males, 14.1%, aspired to less than a BA than did females, 10.0%. These findings suggest that the higher female aspirations can be linked to the "gender gap" issue in postsecondary achievement for males and females. The "gender gap" is defined as an imbalance in the achievement and enrollment rates between men and women in institutions of higher education; research indicates that women are achieving at higher rates than men in postsecondary education (King, 2000). Therefore, it is logical to assume that higher achievement for females begins with higher aspirations as indicated in this study.

Research Questions Two and Three and Hypotheses Two and Three

The next research questions sought to determine if the educational aspirations of first-generation college students changed as the students progressed from high school to college and if educational attainments of first-generation students and their educational aspirations differed. Hypotheses two and three were:

> First-generation students' educational aspirations will decrease as they progress from high school to college.
>
> First-generation students' educational attainment is less than their actual educational aspirations.

The crosstabulation test for first-generation students showed that 28.6% of the total first-generation sample (N of 1724) decreased their aspirations from 1990 to 1994, while 38.5% of the total sample increased their aspirations from 1990 to 1994, a greater percentage than non-first-generation students (34.7%). This finding runs counter to hypothesis two and is especially interesting because a greater proportion of students became more optimistic about the educational process rather than more conservative as some research indicates (Horn & Nunez, 2000; Hossler & Stage, 1992).

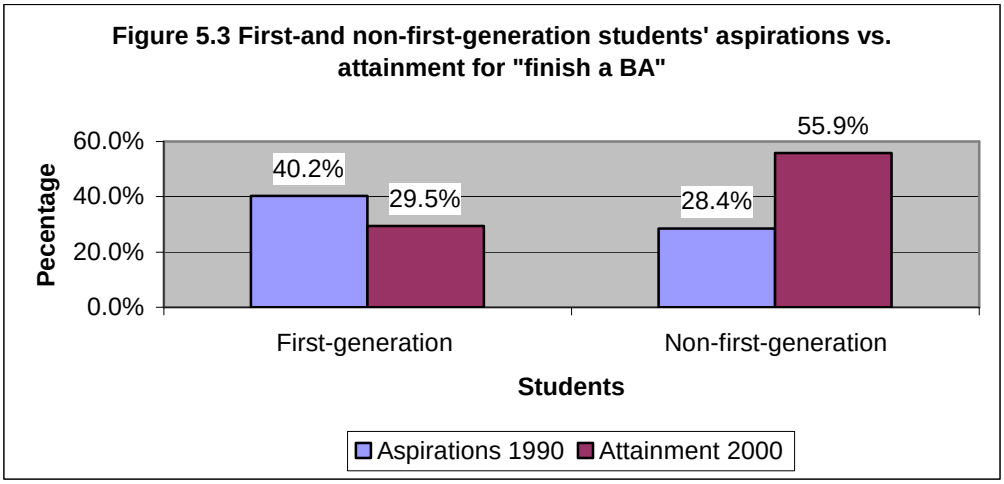
Additionally, of the first-generation group, the greatest jump in aspirations was in the "finish a MA" category. As Table 4.7 indicates, in 1990 12.7% of the first-generation sample aspired to finish a MA and in 1994, 27.0% of the sample expected to finish a MA. It is surprising that student aspirations grew so dramatically in the MA category between 1990 as high school sophomores and 1994, two years out of high school. Yet, attainments by 2000, as indicated by Table 4.9, show that 2.6% of the first-generation sample actually attained a MA, which was far fewer. This result is alignment with hypothesis three.

In 1994, students may have been in their second year of enrollment at a 2-year or 4-year institution where environmental and socially desirable behavior pushed them to answer more positively with regard to aspirations. Yet, once academic realism or college "culture shock" set in with regard to environment and academic performance, students that were once confident enough to aspire to a MA only attained a BA or did not complete a postsecondary degree at all by 2000 (Choy, 2001; Duggan, 2001). By 2000, eight years out of high school, some first-generations students are still struggling to realize their educational dreams. Therefore, by the time first-generation students get to a postsecondary institution, they may already be nontraditional, adult students with needs very different than those of a traditional undergraduate. First-generation students attending their institutions may not be aged 18-22 but rather 26 and over. (See Table 4.9.)

In examining actual attainment by 2000 (i.e. eight years out of high school) more in depth, the results from Table 4.9 showed that 49.1% of the total sample (N of 1692) of first-generation students did not attain their original educational aspirations from 1990 by 2000, a result consistent with hypothesis three. Within the first-generation group, 40.2% of the sample aspired to finish a BA, but when surveyed in 2000, only 29.5% actually attained a BA. Of the students who aspired to a BA but did not attain one, 65.8% did attempt some form of postsecondary education for a degree other than an Associate's or a Certificate, as indicated by Table 4.10. Yet, these students did not finish their education. It is clear that these subjects were driven by aspirations enough to seek out a degree within eight years after high school graduation but left the postsecondary institution for some reason. Additionally, 34.1% of those who did not attain a BA did complete an

Associate's degree or Certificate program at a two-year institution, which indicates that resources should be better focused in the two-year area for first-generation students.

However, for non-first-generation students, as Table 4.11 indicates, in 1990, 28.4% of the sample, aspired to finish a BA, but when surveyed in 2000, 55.9% of the sample attained a BA. As discussed previously, this 55.9% also included 48.6% of subjects who aspired to a MA or Ph.D. in 1990; therefore, for these subjects the BA may have only served as a stepping-stone to their final degree aspiration. Of the non-first-generation sample, a surprising 66.0% of the total sample (N of 1850) did not attain their original aspirations from 1990 by 2000. This finding suggests that although non-first-generation students may have the social and cultural capital associated with parental education, a lack in the perception of the importance of grades plays a role in subsequent educational attainment. As Table 4.3 indicates, most of the variance in educational aspirations for first-generation students was explained by perceptions of the importance of getting good grades in school, yet this result was not evident for non-first-generation students. Perhaps then, perceptions of good academic performance can drive aspirations much more powerfully. It is also interesting to note, as indicated by Figure 5.3, that even when non-first-generation students fall short of aspirations, they still attain at higher levels than first-generation students. (See Tables 4.3, 4.11, & Figure 5.3.)



In fact, eight years after high school, 67.6% of the first-generation sample attained less than a BA. As indicated in Figure 5.3, only 29.5% of the first-generation sample attained a BA by 2000 whereas 40.2% aspired to it in 1990. These findings suggest that even though students had eight years to complete college, first-generation students either do not go straight to college from high school or they begin college sometime in the years after high school but do not eventually finish within eight years. These results may support two additional points: 1) first-generation students are not being supported for success adequately once they are in the college environment and/or 2) first-generation students are not receiving clear messages about the demands and expectations of higher education while at the high school level. (See Table 4.9.)

Figure 5.3 also indicates that in the non-first-generation sample, 55.9% of the sample attained a BA by 2000 while only 28.4% actually aspired to a BA in 1990. As evidenced by Table 4.11 and as addressed previously, for these subjects, the BA may have only served as a stepping-stone to their final degree aspiration.

Research Question Four and Hypothesis Four

Research question four sought to determine if there were differences in educational aspirations and attainment for first-generation students by gender, race/ethnicity, and SES. Hypothesis four was:

> There are differences in educational aspirations and attainment for first-generation students by gender, race/ethnicity, and SES.

Gender

Analysis by gender for first-generation students, as indicated in Table 4.12, showed that more males aspired to finish a BA than did females. Yet, although the greatest proportion of first-generation male students aspired to a BA (45.2%), a greater proportion of first-generation female students aspired to a degree beyond the BA (28.4%). This finding supports the hypothesis for aspirations. Yet, there were no significant differences in attainment between males and females in the first-generation group. This result is not only contrary to the hypothesis for attainment, but also to the gender gap research addressed earlier, which posits that women achieve at greater levels than men in postsecondary environments (King, 2000). However, it is important to note that the gender gap scholarship specifically indicated that men of color achieve at lower levels than women and White men (The ominous gender gap in African-American higher education; 1999). In order to assess fully if this study contradicts prior research on the gender gap, individual analyses comparing men of color, women, and White men are recommended.

Furthermore, with regard to first-generation women and attainment, findings indicated that first-generation females aspired to higher levels of education than first-

generation males, but by 2000 (i.e. eight years out of high school) females did not attain at higher levels than males. Clearly something is happening to women in higher education. This "something" may be related to several factors: 1) women are not being supported in their academic pursuits and, therefore, are relinquishing aspirations, 2) women may be taking longer than eight years to complete their BAs (as measured by attainment in 2000), and/or 3) first-generation women have competing priorities such as caring for a family, etc. and choose not to pursue higher education. These points are supported by Arnold's (1993) research with the Illinois Valedictorian project in which she found that high achieving minority female high school students struggled with higher aspirations because of culture-specific gender expectations, family dictates, chilly work climates, and few finances. (See Tables 4.12 & 4.13.)

SES

Analysis by SES for first-generation students, as indicated in Table 4.14, showed that of all the students in the lowest SES quartile, the largest proportion (45.5%) aspired to less than a BA. Table 4.14 also illustrates that of the students in the highest quartile, most (22 subjects or 42.3%) still only aspire to finish their BA. This result not only suggests that students with the lowest SES have the lowest aspirations, but that aspirations are still quite conservative for first-generation students despite a high SES. With regard to SES and attainment, results showed that of all the students in the lowest SES quartile, the largest proportion, 76.6%, attained less than a BA. Table 4.15 also illustrates that regardless of SES status, 69.1% of the first-generation students attained less than a BA. Even in highest SES quartile, 48.0% of first-generation students had not yet completed a BA by 2000. This point readdresses the suggestion that parental

education is more strongly related to student aspirations and attainment than other factors related to SES. A college degree may be seen as less of a necessity for high-SES first-generation students, especially if their parents have succeeded financially with a BA. (See Tables 4.14 & 4.15.)

Race

Differences in student aspirations and attainment with regard to race were also apparent in the first-generation student sample; therefore, hypothesis four was supported. Results showed, as outlined in Table 4.16, Black and White subjects mostly aspired to finish their BA (38.4% and 41.9% respectively), with more White subjects aspiring to that degree. In terms of attainment, 76.5% of Black subjects actually attained less than a BA by 2000, as did 66.6% of Whites. These results indicate that even though the overall educational attainment landscape is disheartening for Blacks and Whites, Whites still attain higher education than Blacks, which could speak to inherent White privilege.

Hispanic subjects had the lowest aspirations and attainment; most respondents aspired to less than a BA (39.7%) and 79.3% attained less than a BA. To an extreme contrary, within the Asian group, the largest number by far, 43.3%, aspired to finish their BA and 41.8% actually attained a BA. Both groups struggle with cultural and social capital deficits associated with first-generation status and both groups contend with English as a second language issues associated with immigrant status (Hune, 2002; Brown & Burkhardt, 1999). In addition, the "American Dream" may be a desire for both. Yet, Asians clearly dominate in the attainment category and Asian racial identification was a key predictor in educational aspirations. These results call for additional research in order to assess the influences on the incredible success of Asians (See Table 4.16.)

Implications for Practice

Overall, the results of this study indicate that student perceptions of the importance of academic success, parental involvement, gender, race, and SES are all important factors in predicting educational aspirations or assessing differences in educational aspirations and attainment for first-generation students. As a special population mostly seen as students "at risk," the needs of first-generation students are broad and require practitioners to engage in an intensive process in order to meet those needs (Terenzini et al., 1996). The following implications for practice are based on the findings of this study and hope to provide a framework for transforming this data into meaningful, intentional interventions.

Student Perceptions of Good Grades as a Strong Predictor of Educational Aspirations

Regression results for this study indicated that, for first-generation students, respondent perceptions about the importance of good grades explained more variance in educational aspirations than any other variable entered. This finding suggests that students' own drive and appreciation for education can be a powerful force in developing aspirations. Therefore, it is the role of practitioners, both at the high school and postsecondary education levels to determine methods for inspiring and sustaining a passion for learning and commitment to academic excellence for first-generation students (Rodriguez, 2003). As Rendon (1994; 1995) noted, nontraditional students, of which first-generation students are a part, want "doubts about being capable of learning erased" (p. 37). Thus, faculty must be more actively involved in the academic success of these students via out-of-class support groups, one-on-one advising sessions, ESL resources, and monthly progress reports. Additionally, group and peer advising, campus resources

such as tutoring, career, and financial assistance programs as well as counseling opportunities should be easy to access (Rendon, 1994).

A partnership between practitioners and faculty would allow for the sharing of information such as high school performance and areas of need, which is critical to individual student development. This study found that 65.8% of first-generation students aspiring to complete a BA actually enrolled at a postsecondary institution but did not finish by 2000, clearly, personal challenges and difficulties with self-efficacy are an issue. Perhaps lack of encouragement and investment by faculty, staff, and administrators compounds the challenges. Intentional interventions aimed at helping students keep aspirations high will no doubt contribute to increases in retention and attainment rates.

Parental Involvement as a Strong Predictor of Educational Aspirations

Results presented in this study point to the positive relationship between parental involvement and educational aspirations. Although parental involvement did not surface as the strongest predictor of educational aspirations for first-generations students, it was of import. Therefore, for more traditionally aged, first-generation students who rely on the support and active engagement of their parents in order develop lofty aspirations, practitioners must assist in fortifying the student-parent relationship. It is the responsibility of high school teachers and counselors as well as facilitators of bridge and orientation programs to encourage more school-and home-based involvement (Gardner, 1996). Such involvement can include parenting programs, student-parent counseling sessions, and more inclusive programming catering to English as a second language households and immigrant families (Fallon, 1997; Ramos & Sanchez, 1995). Additionally, it is critical that educators engage in “socializing family and students into

the larger institution of education" (Trusty, 1998, p. 268) with frequent and intentional contact exploring the practical and developmental importance of postsecondary education (London, 1996).

Discrepancies in Educational Aspirations and Attainment

Lack of Postsecondary Degree Completion in a Traditional Timeframe

Results for this study also indicated that educational aspirations increased for first-generation students over time (i.e. 1990 to 1994). Yet, for the most part, first-generation students did not attain the degree to which they aspired by 2000 (i.e. eight years out of high school). These findings suggest that first-generation students crave an education but are contending with a host of challenges that inhibit completion of their postsecondary degrees in the traditional timeline. Therefore, it is critical for practitioners to understand that the by the time first-generation students get to a postsecondary institution they are classified as nontraditional, adult (e.g., 26 years of age and above) students with needs very different than those of a traditional undergraduate.

Therefore, thoughts must shift to easing these students' transitions and providing support for life circumstances such as full-time jobs, children, partners, and other obligations. "Learning and teaching" may need to be redefined to include child day care, campus work placement programs, online courses and advising, better career counseling for nontraditionally aged students and returning students who stop out and return. Practitioners cannot envision a student who completes coursework in four continuous years; they must make better provisions for leaves of absence, stop-outs, and part-time students. Additionally, advisors and other practitioners must encourage and validate these first-generation students as they strive to realize their aspirations (Rendon, 1994).

Degree Completion: First-Generation Students as Transfer Students

Furthermore, research conducted in this study supports the claim that first-generation students require special support regardless of postsecondary institution. As discussed previously, 65.8% of first-generation students aspiring to a BA never achieved the degree by 2000 (i.e. eight years out of high school). Yet, 34.1% of the respondents achieved an Associate's degree or Certificate at a two-year institution. Therefore, practitioners should consider shifting attention to first-generation transfer students moving from two-year institutions to four-year institutions to realize their ultimate aspiration of a BA. It is possible for these students to achieve their aspirations; yet, it is the responsibility of staff and faculty at the four-year institution to make continued education attractive by providing advising, bridge programs, more ease with transfer credits, ESL support, proper orientation, assistance with deciphering and gaining financial aid, guidance for family and life issues, and clear guidelines for success (Gardner, 1996; Rendon, 1995).

Gender Issues in Aspirations and Attainment

As discussed previously, findings also indicated that first-generation females aspired to higher levels of education than first-generation males, but by 2000 (i.e. eight years out of high school) females did not attain higher than males. At some point in their education, female students are either shedding their aspirations or some external forces are causing the change. Faculty, administrators, and policymakers must pay particular heed to women in the postsecondary environment and construct special supports to ensure completion of degrees (Pascarella, Whitt, Edison, Nora, Hagedorn, Yeager, & Terenzini, 1997). For traditionally aged first-generation female students, practitioners

should consider women's support groups, one-on-one advising, woman to woman mentoring relationships, and out-of-classroom experiences such as retreats and camps to enhance retention and boost self-efficacy.

For nontraditionally aged female students, practitioners should consider programs and counseling to assist female students with family management, financial concerns, language barriers, childcare, etc. Career centers should be well equipped to serve these students with special day and evening programs aimed at validating their courses of study. Faculty, particularly successful female faculty, should take on advising roles and care for these special women students in a more individualized manner. Finally, academic departments should re-evaluate leave policies and assess the rigidity of those policies which may be creating a chilly climate of gender inequity that is discouraging first-generation women students to continue and succeed in the postsecondary environment (Pascarella et al., 1997).

Limitations of the Study

It is important to note several limitations of this study. First, in this study, all first-generation students were included in the sample as determined by parents' education. Therefore, students that identified as first-generation may have had older siblings who already entered and perhaps graduated from college. These students, although possibly more advantaged because of sibling guidance, were still included in the first-generation sample because the study analyzed parental involvement, not sibling involvement. Additionally, it cannot be assumed that students with older siblings who have experienced the college process gain knowledge from that relationship (e.g., siblings may not live together or students may share different parents).

A second limitation of this study is that non-first-generation students included students whose parents have earned a BA, MA, Ph.D., or some other professional degree. This study captured non-first-generation students in one broad category. Therefore, it is important to remember that because parental education has not been parceled out, multiple levels of appreciation for and encouragement of education may be represented in the non-first-generation sample.

A third limitation of this study is that although a significant number of first-generation students are adult students, only traditionally aged students were sampled with the NELS:88/2000 instrument (Bui, 2002). Therefore, the data presented in this study will reflect traditionally aged students. However, this is more congruent with the objective of the study, since it is rare that adult students would be as strongly influenced by parental involvement in terms of educational aspirations.

Participant racial demographics represented in the study sample contribute to a fourth limitation of the study. Although Asian and Hispanic students were over sampled in the original NELS: 88/2000 study, there was no mention of over sampling for African American or Native American students. For Native American subjects, especially, the larger sample included so few that it was difficult to generalize to this population, and, thus, Native Americans were removed from crosstabulation analyses examining racial differences.

Lastly, a fifth limitation of this study was the actual research design: the *ex-post facto design.* This research design posed a limitation because the study was reliant on existing data; therefore, experimental procedures were limited. The researcher could not

control the randomness in assignment or selection of the first-and non-first-generation college student variables.

Suggestions for Future Research

A primary area for future research with regard to first-generation students' educational aspirations evolves from the fact that such a small percentage of variance in educational aspirations was explained by the factors chosen in this study. Factors such as parental involvement, perceptions of the importance of good grades, SES, gender, and race only explained 16.1% of the variance. It is the researcher's suggestion that future scholarship examine additional variables as predictor factors for educational aspirations, particularly parental involvement and perceptions of the importance of good grades. Together, these two variables explained 12.4% of the variance. Such studies could include school-based parental involvement measures, which assess parent behaviors such as parent attendance at school activities or programs on educational opportunities and postsecondary aid and parent discussions with college aid representatives (Trusty, 1998). Additionally, researchers might consider expanding the "student perceptions of good grades" variable to include actual grades and academic performance.

This variable of "student perceptions of good grades" is particularly interesting and also worthy of additional research when considered from the perspective of first-generation students of color. Scholars may consider examining this perception of success particularly since research suggests that some students of color resist behaviors associated with academic achievement because admitting to and striving for such success may be seen as "acting White" (Ogbu, 1992). When this existing research is coupled with the low educational aspirations and the low attainment of the students of color in this

study, particularly African Americans and Hispanics, future scholarship examining student peer groups and school performance is intriguing (Ogbu).

A third area of possible future exploration with regard to first-generation students that was not addressed in this study is the issue of older siblings as first-generation college students and their involvement with younger brothers and sisters. In terms of cultural and social capital, older siblings may provide an "information network" or guidance, support, and advice to younger brothers and sisters in lieu of parental experience with higher education (Hossler et al., 1999; McDonough, 1997). Additionally, older siblings who have either experienced or are experiencing the process of postsecondary education may exert influence over the educational aspirations and/or attainment of younger siblings. Future researchers may want to consider examining this influence.

A fourth suggestion for future research speaks to the issue of the varying "levels" of social and cultural capital provided to children associated with varying degrees of parental pre-and post-baccalaureate education. As discussed previously in this study, the non-first-generation students included students whose parents earned a BA, MA, Ph.D., or some other professional degree. This study captured non-first-generation students in one broad category. Additionally, first-generation students were selected based on parental education including less than high school, high school, and some college. It would be worthwhile to examine student aspirations and attainment by each parental level of education in order to assess subtle or major differences as determined by each level of education.

A fifth suggestion for future research involves examining the “gender gap” issue (King, 2000) with regard to educational aspirations and attainment between first-generation male and female subjects. This study has found and addressed some disparities in attainment between males and females, but there is more to learn. First, additional research examining the lower attainment rates (as compared to aspirations) of women students is critical in that it may address the reasons why female students are enrolling at greater rates than men but are not achieving at a greater rate.

Second, additional research on another dimension of the gender gap issue, gender and race as predictors of academic success, should be considered. Such a study would complement current research pointing to substantial imbalances between male and female achievement, especially in the case of minority males. A recent study published by the American Council on Education noted that males are falling behind their female counterparts in enrollment and achievement, and this gap is most relevant to African American and Latino men at a socio-economic disadvantage (King, 2000; "The ominous gender gap in African-American higher education," 1999). This study would be especially relevant in the first-generation group as students of color are so prevalent, as is lower SES.

As natural connection to the suggestion above, a sixth area of research would include closer examination of the success and retention of first-generation students of color, in general. The needs these students bring to the higher education environment are multi-faceted including issues of family, finances, and cultural roadblocks. This study has shown that first-generation students of color, particularly African Americans and Hispanics, lag in comparison to their non-first-generation counterparts in educational

aspirations and attainment, which results in attrition. Retention theories should be reexamined and redefined to include the richness and complexities first-generation students of color bring to college; this special group deserves more attention (Rendon, Jalomo, Nora, 2000).

A seventh and final suggestion for future research involves a closer examination of the aspiration and attainment rates of Asian American students. Results of this study showed that Asian respondents achieved above and beyond other racial groups and that Asian racial identity served as a viable predictor for educational aspirations. Despite language barriers and immigrant burdens, first-generation Asian students excel. Additional research investigating this educational success would be a substantial contribution to current scholarship.

Summary

This chapter has provided a detailed summary and interpretation of the study findings in addition to implications for practice, limitations, and suggestions for future research. The results of this study provide one framework within which scholars and practitioners can assess the experiences of first-generation college students and work to better serve and educate this special population.

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