

Pathways to Success in Higher Education:
Understanding the Influence of Mentoring Programs on First-Generation Students

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Prior to beginning my studies in the doctoral program, I met with a recent graduate who shared her experiences with me and offered me some advice. She said that while she enjoyed her studies very much, the road to her doctoral degree was a very lonely one. She stressed the need for a strong support system and suggested that I intentionally surround myself with supportive, helpful people during the years ahead while I pursued my dream of earning a Ph.D. She was right. It has been a very isolating experience at times, sitting downstairs in my home office typing a paper or reading an article in the middle of the night while my husband and children slept upstairs. The second part of her statement has been equally true. There are numerous people who have supported and encouraged me along the way and for that I owe them a debt of gratitude. This dissertation wouldn't have been possible without them.

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Abstract

First-generation students, those who are the first in their family to earn a college degree, represent one of the fastest-growing populations of college students in our country today. Unfortunately, this segment of our nation's college-going population also happens to be the least successful, according to national retention and graduation statistics. Despite the considerable contributions of existing research and initiatives to better understand low-income, first-generation students, one important view of the achievement gap has been ignored. Relatively little attention has been paid to the factors affecting *high-achieving*, first-generation students' academic success. Most research in this area has focused on revealing the barriers these students face. Many negative factors have been well identified regarding low-income, first-generation college students' academic achievement. While the majority of low-income, first-generation students are not succeeding in higher education, there are many who are.

This study explores the common characteristics and dimensions of high-achieving, low-income, first-generation students through a qualitative, multi-case study design. Interviews were conducted with twenty college students participating in mentoring programs at two private, Catholic colleges in the Midwest. An exploratory phenomenological methodology was chosen because it had the best potential to capture the lived experiences of program participants.

As a result of the research, several contributing factors leading first-generation students to success were identified: Family support, academic preparedness, and

personal drive to succeed. The study's findings suggest that when students have the right support: familial, academic, and programmatic, they will succeed at higher numbers than their peers who are also first-generation.

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Chapter 1: Introduction

In 1958, my mother boarded a ship called “The Cristoforo Colombo” in Naples, Italy bound for New York; she was only 12 years old. Her family was making the eight-day journey to America hoping for a better tomorrow, one filled with hope and greater opportunity. My mother says she will never forget what it was like to see the Statue of Liberty emerging in the harbor.

My father proudly became a U.S. citizen on his 19th birthday. He was born and raised in Germany. He escaped a life of poverty, and had only a few dollars in his pocket upon arrival to America. He believed that America could offer him a more fulfilling life and has achieved it.

Though my parents had very different upbringings, both came to this country with similar goals and dreams: a better life for themselves and for their future children. Throughout my childhood, I was encouraged, motivated, and loved. I grew up understanding the value of a good education and knew that I was fortunate to receive one. I am proud to be a first-generation student. I am also, however, disheartened at the current plight many of today’s first-generation students are facing. Through this study, I hope to educate people on how to better serve this significant population.

First-generation students represent the fastest growing population in the U.S. According to results from the NCES, 34% of students entering the nation’s four-year institutions in 1995-96 were first-generation students, and this number is on the rise (Choy, 2001). Compared with their peers whose parents were college graduates, first-generation students are more likely to be Black or Hispanic and to come from low-

income families (Chen, 2005).

Although a large number of first-generation students are matriculating into higher education, fewer are succeeding. Existing research on low-income, first-generation students focuses on the barriers they face and the staggering number who drop out of college during their first year. While the current literature paints a bleak picture for first-generation students, what's missing is a discussion about what makes this group of students successful and what helps them achieve their goal of graduation. This study aims to contribute to the understanding of the factors and attributes successful first-generation college students possess.

One prevalent option for increasing the retention and graduation of first-generation college students has been the creation of mentoring programs. Over the last 10 to 15 years, thousands of colleges and universities have implemented mentoring programs or attempted to encourage mentoring relationships for their undergraduates. These interventions reflect the belief that mentoring can improve students' levels of academic achievement, assist students at risk to graduate, feed the pipeline to graduate schools and the professoriate, and provide a sense of community at large and impersonal institutions. As well as understanding factors and attributes of successful first-generation students, this research aims to understand what role, if any, formal mentoring programs play towards their success.

Research Questions

This study explored the common characteristics and dimensions of high-achieving, low-income, first-generation students through a qualitative, multi-case

study design. Research was conducted at two private, Catholic colleges in the Midwest to seek answers to the following questions:

1. How do first-generation students access and utilize social capital gained from mentoring programs as a bridge for success?
2. What formal and informal structures and networks are utilized in co-curricular involvement for increased social capital?

Approach to the Study

A qualitative design was chosen as the best way to approach the questions above. Specifically, a phenomenological study was used to investigate the contributing factors leading to success in college for first-generation students by exploring the lived experiences of program participants. The factors in the framework are drawn from four broad areas of existing research which deal with aspects of the relationship between success and failure for first-generation students: academic preparation, finances, student engagement and social and cultural integration.

Data for this exploratory research was primarily derived from twenty personal student interviews, conducted at two postsecondary institutions. The interview protocol was designed to gain insight into each student's personal story, as related to the four broad areas of the framework, which lead him or her to current success in college. Institutions for this study were selected based on their reported success with first-generation students, as it relates to retention and graduation. Program brochures, mentoring contracts, and college websites were used to provide validity and depth to

the interviews. Interviews were audio recorded and later transcribed for accuracy. Common themes were identified, coded and analyzed.

Chapters two through five highlight institutional strategies aimed at creating success for first-generation students. Among them are formal mentoring programs, which may have the ability to keep first-generation students involved and engaged in their education. Two sets of literature, involvement and social capital, are used to understand how college mentoring programs affect the student experience and outcome. Mentoring programs, as well as college preparatory programs, appear to play a significant role in whether the student will be attend and persist in college. High schools and postsecondary institutions may be able to use what is uncovered in this study as a guide for providing their students with the tools they need to be successful in college.

Chapter 2: Review of the Literature

Introduction: The Importance of Obtaining a Bachelor's Degree

The value of a post-secondary degree is irrefutable and is viewed as the currency for economic success in every developed country. Even in a time of recession, enrollment in U.S. higher education is better than ever with many colleges struggling to manage the flood of applications streaming into their admission offices. The United States' higher education system has one of the highest participation rates in the world (OECD, 2007). Nearly 15 million students are currently enrolled as undergraduates in U.S. colleges and universities, a number that has more than doubled in the past 35 years (NCES, 2007a). The number of low-income students entering college immediately after high school has increased by over 60 percent since 1970, with nearly 1.6 million enrolling for the first time in 2005 (Mortenson, 2007). Students are streaming into the gates of postsecondary education for good reason.

The baccalaureate degree continues to be an avenue of upward social mobility, representing the single most important educational goal in terms of economic benefits (Pascarella & Terenzini, 1991). The difference between a high school diploma and a four-year degree in both annual and lifetime earnings is considerable, and the gap has increased significantly over time (U.S. Census Bureau, 2002). Today's four-year college graduates will earn nearly \$1 million more over their working lives than will those who only receive a high school diploma and nearly \$500,000 more than those who attend some college and/or earn a two-year degree (College Board, 2007). Increasing the number of bachelor's degree recipients benefits society as well,

providing much needed tax revenue for states and the nation at large. It also reduces the range of costs the nation bears for poverty, unemployment, crime, and health, all of which are associated with lower levels of education and income (College Board, 2007; IHEP, 2005).

Aside from the obvious economic benefits that come with completing a college degree, many other social benefits exist as well. Researchers have found that those with college degrees have higher levels of civic and community involvement (Astin, 1996; Astin, Sax, & Avalos, 1999; Bowen & Bok, 1998; Ingels et al., 2002; Sax & Astin, 1997). In addition, college graduates who go on to become parents have a positive influence on the educational aspirations, involvement, and persistence of the next generation (Berkner & Chavez, 1997; Nunez & Cuccaro-Alamin, 1998; Warburton, Bugarin & Nunez, 2001). Postsecondary educational attainment has also been positively linked to one's sense of personal control over life and one's self confidence (Ross & Mirowsky, 1989). Consequently, in our society, a college education is essential to overcoming barriers of poverty and adverse social conditions and to improving socioeconomic status (Swail, 2000). While researchers continue to confirm the importance of postsecondary education, it has become clear that not all students are reaping the benefits.

Students from low-income families (as measured by free/reduced price lunch eligibility) now represent almost half of all school children (44 percent), and are the future college-going population. This number of children growing up in low-income families has been on the rise for the last ten years (Mortenson, March 2006) and

represents the fastest growing segments of the population. Historically, however, they have been the least likely to earn college degrees, and the gaps in degree attainment for these groups have only increased over time (Kelly, 2005; Mortenson, March 2006; WICHE, 2003).

Issues Contributing to Degree Attainment for Low-Income College Students

To shed some light on the difference in post-secondary persistence rates between low-income students and their more advantaged peers, four topics areas are examined: the inadequate academic preparation many low-income students receive prior to college, the low levels of engagement exhibited by low-income students once they arrive on college campuses, the financial strain low-income students face upon entering college, and the lack of cultural integration achieved between the low-income student and their college community. Each of these provides some insight into the struggles low-income students face as they attempt to earn a college degree.

Academic Preparation.

Success in college has long been linked to the types of experiences students have in primary and secondary schools. Students who receive access to support systems such as counselors, teachers, and tutors, are far more likely to graduate and attend college. In a longitudinal study examining secondary educational experiences on college retention rates, Ishitani and Snider (2004) found that certain academic preparation programs, such as ACT preparation courses, can increase retention once a

student matriculates to a college setting. According to Adelman (2006), students who take advanced courses in high school, including mathematics, laboratory science, and a world language are more likely to enroll in and complete a bachelor's degree program than those who do not. Completion of a rigorous academic program in high school is especially beneficial for African American and Latino students in terms of increased college-going and completion rates (Martinez & Klopott, 2005).

While the case has been made for the link between strong academic preparation and success in college, Gandara (2002) and Swail (2000), found that students who need the most attention and resources are receiving the least amount of both. When low-income students graduate from high school, they tend to enter college with less academic preparation than their peers. For example, an analysis of NPSAS data shows that low-income students are more likely to take remedial courses than their most advantaged peers in each sector of higher education (except the for-profit sector)(Cominole et al., 2004). Additional research has found that low-income students are less likely to have access to and take a rigorous high school curriculum; they also tend to lack important study and time management skills, have less confidence in their academic abilities, and experience more difficulty navigating the practical aspects of academic life due to their lack of exposure to college (Bui, 2002; Cabrera, LaNasa, & Burkum, 2001; Chen, 2005; Cruce, Kinzie, Morelon, & Xingming, 2005; Lohfink & Paulson, 2005; Nunez & Cuccaro-Alamin, 1998; Richardson & Skinner, 1992; Terenzini, Springer, Yaeger, Pascarella, and Nora, 1996;

Warburton et al., 2001). As a result, they tend to have lower levels of performance and persistence in postsecondary education.

However, even after taking their demographic backgrounds, enrollment characteristics, and academic preparation into consideration, low-income students are still at risk of failing to complete their postsecondary education programs (Berkner & Chavez, 1997; Chen, 2005; Choy, 2001; Horn & Nunez, 2000; Nunez & Cuccaro-Alamin, 1998; Warburton et al., 2001). This suggests that the lower performance and persistence rates of low-income students are likely to be the result of the experiences they have *during* college as well as the experiences they have *before* they enroll (Pascarella & Terenzini, 1991; Tinto, 1993).

Student Engagement.

Student engagement has increasingly been a hot topic in the field of higher education over the past decade. In 1998, the National Survey of Student Engagement (NSSE) was launched as a new approach to gathering information about collegiate quality on a national basis. The survey examines the use of good practices in undergraduate education, and assesses the time and effort baccalaureate degree-seeking students (primarily first-year students and seniors) devote to educationally purposeful activities, as well as what schools are doing to intentionally channel a student's energy toward these activities. Over 600 colleges and universities participated in NSSE 2010, and nearly 1,500 have participated since 2000. The results suggest that for most college students, engaging in campus living is something that

comes naturally and is enjoyable. For low-income students, however, college life is often something that can seem foreign and uncomfortable.

Low-income students are less likely to be engaged in the academic and social experiences that foster success in college (often referred to as academic and social integration), such as studying in groups, interacting with faculty and other students, participating in extracurricular activities, and using support services (Astin, 1997; Cabrera, Nora, & Castaneda, 1992; Billson & Terry, 1982; Lohfink & Paulsen, 2005; Nunez & Cuccaro-Alamin, 1998; Pascarella, Pierson, Wolniak, & Terenzini, 2003, 2004; Pike & Kuh, 2005; Richardson & Skinner, 1992; Terenzini et al., 1996, 2001). During the initial transition to college, low-income students say they delay getting involved in extracurricular activities and campus life until they feel they have “their academic lives under control” (Terenzini et al., 1994; pg. 64). This represents a real loss, however, because low-income students actually derive more benefit from their involvement in such activities than their peers (Filkins & Doyle, 2002; Lohfink & Paulsen, 2005; Pascarella et al., 2003, 2004; Terenzini et al., 1996). Lower levels of academic and social integration among this population are inextricably linked to finances and financial aid (Cabrera et al., 1992).

Finances.

Upon signing the Higher Education Act in 1965, President Lyndon B. Johnson said, “[The Higher Education Act of 1965] means that a high school senior anywhere in this great land of ours can apply to any college or any university in any of the 50

States and not be turned away because his family is poor." While we would like to think this statement still holds true, in today's economy many families are being hit by hard-pressed financial times and college-bound students are no different. The financial strain felt by many is in large part due to college costs that are increasing faster than family incomes.

From 1990 to 2000, tuitions at private universities rose by 70 percent, at public universities by 84 percent, and at public 2-year colleges by 62 percent (Johnstone, 2005). Those hit hardest by cost increases are unfortunately the ones who can least afford it. Charges at public institutions increased from 27 percent to 33 percent between 1986 and 1996 for families in the bottom quartile, but only from 7 percent to 9 percent for families in the top income quartile. This means for each \$150 increase in the net price of college attendance, the enrollment of students from the lowest income group decreases by almost 2 percent (Choy, 1999). Because tuition and fees have been rising faster than family income, there are also more students today with unmet financial need (Breland et al., 2002; Choy, 1999).

Due largely to a lack of resources, low-income students are more likely to live and work off-campus and to take classes part-time while working full-time, which limits the amount of time they spend on campus. Increases in financial aid, particularly grants, scholarships, and work-study, have been shown to increase the likelihood that low-income students will persist in college (Lohfink & Paulsen, 2005; Somers, Woodhouse, and Cofer, 2004). Somers and her colleagues (2004) found that loans can increase persistence for low-income students; however, they also found that even low

levels of accumulated debt can significantly decrease persistence among this population. Engle & Tinto (2008) suggest that low-income students are highly debt averse and may choose to work rather than take out loans to pay for their education.

Pascarella and his colleagues found that working while attending college has a negative impact on the persistence of low-income students because it reduces the number of courses they take, the amount of time spent studying, and the amount of time they spent on campus interacting with peers and faculty (Pascarella et al., 2004). Reducing the work burden through financial aid, including the careful use of loans, has been found to enable students' interaction and integration on campus, which has the effect of improving academic performance (Dowd, 2004).

Social and Cultural Integration.

During a time when media and social networks are successful in connecting our students to each other, it is equally important that they are socially and culturally connected to the college they attend. For this reason, colleges spend a great deal of time and resources planning opening ceremonies and convocations, so that they may focus on getting the student connected to campus during the first early weeks. For many, the attempts are successful, but for other students, building a social and cultural connection can be more difficult to achieve.

Low-income students not only face barriers to their academic and social integration, they also confront obstacles with respect to cultural adaptation. This is due to differences between the culture (i.e. norms, values, expectations) of their families and communities and the culture that exists on college campuses. Low-income, first-

generation students often experience problems “that arise from [living] simultaneously in two vastly different worlds while being fully accepted in neither” (Rendon, 1992; pg. 56). At home, first-generation students report that relationships with family and friends who did not go to college often become strained and difficult to maintain as they are perceived as changing and separating from them, which causes intense stress for these students (Lara, 1992; London, 1989, 1992; Olenchak & Hebert, 2002; Piorkowski, 1983; Rendon, 1992; Richardson & Skinner, 1992; Rodriguez, 1982; Rosas & Hamrick, 2002; Terenzini et al., 1994, 1996).

On campus, low-income students, particularly those from racial and ethnic minority backgrounds, often describe themselves as unprepared for the sense of isolation and alienation they felt upon entering college (Richardson & Skinner, 1992). Low-income, first-generation students are more likely to view the campus environment, particularly the faculty, as less supportive and less concerned about them (Pike & Kuh, 2005; Terenzini et al., 1996), and they are more likely to report having experienced discrimination on campus (Richardson & Skinner, 1992; Terenzini et al., 1996). The extent to which first-generation students can participate in and navigate the higher education system has a significant impact on whether they can be successful in college (Phelan, Davidson, and Yu, 1993).

The Challenges for First-Generation Students

Thus far, this literature review has focused on low-income students and their struggle towards earning a college degree. Low-income students are often also those who are the first in their family to earn a college degree, frequently referred to as first-

generation students. First-generation students represent one of the fastest-growing populations of college students in our country, yet they are failing to succeed at a tragic pace.

Across all institution types, low-income, first-generation students were nearly four times more likely to leave higher education after the first year than students who had neither of these risk factors (26 vs. 7 percent) (Engle & Tinto, 2008). In fact, low-income, first-generation students who started in public, four-year institutions were three times more likely to leave after the first year compared to their most advantaged peers, 12 vs. 4 percent respectively. After six years, nearly half (43 percent) of low-income, first-generation students had not attained degrees and had left postsecondary education altogether. Among those who left, nearly two-thirds (60 percent) did so after the first year (Engle & Tinto, 2008).

First-generation students face a number of challenges that make it difficult for them to be successful in college. They disproportionately come from ethnic and racial minority backgrounds with lower rates of college participation. Some have suggested that the lack of positive group experiences with higher education may create patterns of cultural resistance (Ogbu, 1995). First-generation students also tend to be older, less likely to receive financial support from parents, and more likely to have multiple obligations outside college, such as work and family, that limit their full participation in the college experience. They take fewer classes each semester as they balance these multiple obligations, and frequently stop out as family circumstances, such as changes in jobs, finances, and health require them to do so. As previously noted, these

characteristics have been shown to be risk factors that negatively affect the chances of success in higher education for this population (Chen, 2005; Choy, 2000; Nunez & Cuccaro-Alamin, 1998).

Research on first-generation college students focuses on three general explanations for this lack of success. The first area makes demographic comparisons between first-generation college students and their peers. The second line of research examines the transition from high school to college. The third area of investigation examines outcomes such as degree attainment and drop-out rates (Clauss-Ehlers & Wibrowski, 2007).

These three lines lead to an explanation as to why this problem exists. The literature most frequently cites weak academic preparation, socio-economic status, lack of student involvement, and lack of resources as primary reasons for low numbers of first-generation college students attaining bachelor's degrees. What is lacking in this largely descriptive empirical investigation is a theoretical framework. Astin's student involvement theory is a useful starting point to frame the problem of first-generation student persistence, within which a "social capital" perspective can be applied as the main conceptual lens.

Involvement and Student Success

Astin's (1984) theory of involvement contends that students relate learning and retention to their involvement within an institution. This theory is based on students' involvement in their college or university which he believes strongly influences their retention and academic and psychological development. He argues that true

involvement requires the investment of energy in academic relationships and activities related to the campus. Astin (1984) argues for an approach: there can be no one-size-fits-all to teach students and, thus, curriculum and co-curricular activities should meet the needs of the individual. Student involvement theory places the student at the center of the learning process and is practical to implement. Astin (1984) describes this involvement as “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 297).

Astin’s (1984) theory incorporates five major assumptions: (1) involvement as the investment of physical and psychological energy in various objects which can be both generalized or specific; (2) involvement occurs along a continuum; (3) involvement has both quantitative (e.g., number of hours spent reading) and qualitative (e.g., the actual focus a student had while reading) characteristics; (4) the amount of learning and personal development is proportional to a student’s involvement; (5) and the effectiveness of policy or practice is related to how much it increases student involvement. In this theory, students are active participants at the center of the learning process.

Astin’s findings indicated that highly involved students were more likely to persist, while uninvolved students were more likely to drop out. For example, one of the more significant influences on students staying in college is on-campus residency which allows students to be more engaged because they live in the midst of college life, interact with peers, save time not having to commute, and are able to develop a stronger identity in relation to the higher education institution. In contrast, those who

commute have less opportunity to invest time and energy in their college experience. In addition, on-campus students' behaviors, such as interacting with faculty and joining student government, indicated high levels of involvement (Astin, 1984). Astin (1993) found that learning, academic performance, and retention was positively associated with academic involvement, involvement with faculty, and involvement with student peer groups.

Tinto (1987) expanded Astin's theory by developing a model to explain student departure. This has become the most commonly cited model of student persistence. In a longitudinal study of institutional departure, Tinto found that an individual's decision to continue attending an institution was connected to pre-entry attributes, the student's goals and commitments, academic and social institutional experiences, and academic and social integration. With this model, Tinto distinguished individual factors from institutional factors. Tinto found that the structure of an institution of higher education influenced students in their decision making, as did their social and intellectual integration. Key researchers (Astin, 1993; Nagda, Gregerman, Jonides, Von Hippel, and Lerner, 1998; Tinto, 1993) found that a student's difficulties in identifying with, and connecting to, the academic and social cultures and subcultures within an institution lead to poor academic performance and eventual withdrawal.

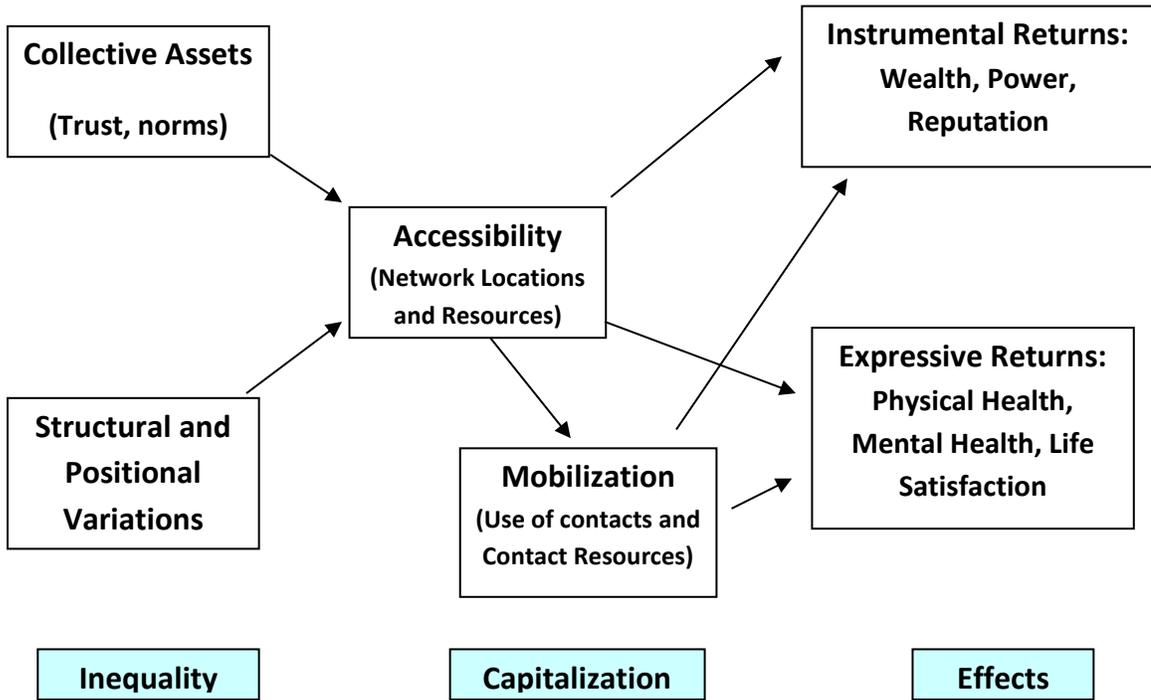
In addition to the literature that demonstrates the type of opportunities social capital provides for all individuals and groups in varied contexts and through different forms, I sought to discover the existence of additional benefits for first-generation

students through mentoring interventions. (1) A form of bonding and bridging social capital takes place as faculty develop relationships with students throughout the mentoring process providing the student with a connection to campus. (2) First-generation students connect with informal and formal networks of social relationships that provide opportunities of access and mobilization. (3) Mentoring programs not only provide first-generation students an element of social capital, but also connect the student to contacts and resources (bridging) that enable them to navigate higher education successfully. (4) Utilizing the benefits of higher education, first-generation students realize the effects of social capital as they move on from their education, which in turn provides avenues of upward social mobility.

First-generation students have an opportunity to gain valuable connections to their institutions through mentoring interventions. These connections may or may not be enough for them to realize gains in social capital and subsequent upward social mobility on their own. Therefore, most first-generation students need to connect with social networks that can provide returns on instrumental actions. Lin illustrates his

theoretical framework in Figure 2.1.

Figure 2.1: Lin's Theoretical Model of Social Capital



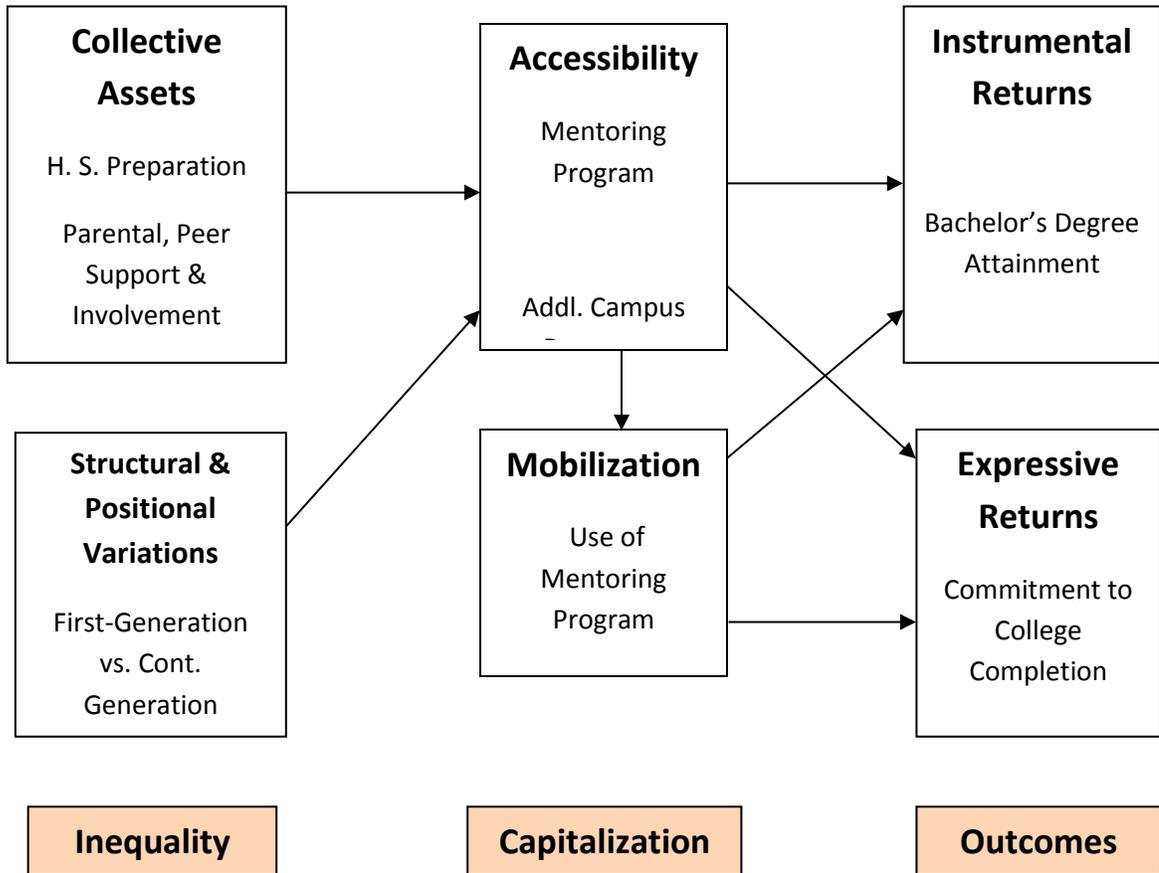
Source: Lin, 1999

Lin's theory of social capital and the conceptual framework in Figure 1 contains three blocks or categories of variables in causal sequences. The first block identified as inequality represents the pre-conditions and precursors of social capital depicted as collective assets (trust, norms, etc.) and structural and positional variations. This first block deals with the individual's abilities to facilitate social capital. Moving from this block into the middle block is categorized as capitalization. In this stage the individual interacts with social capital elements such as accessibility of network locations and

resources and mobilization to utilize the contacts and resources in other social networks. The final block represents the effects of the connections of individuals with other social networks and the possible returns for social capital in the form of wealth, power and reputation (instrumental) or physical health, mental health, and life satisfaction effects (expressive) (Lin, 1999).

Lin's (1999) model provided a good basis for me to attempt to demonstrate that mentoring programs provide avenues for social capital gains for low-income, first-generation college students which, in turn, can lead to an increase in bachelor's degree attainment. In the adapted model, you will see the collective assets have been replaced with high school preparation, parental support and involvement, and opportunities for social and academic integration, all of which are cited by Astin (1984) and Tinto (1987) as important tools needed for success in college. The structural and positional variations in this case are first-generation and low-income status. This first block represents the typical first-generation student entering college, often times with inadequate high school preparation and little parental support or social integration. During the next phase the student encounters accessibility on campus through a formal or informal mentoring program and capitalizes on the opportunity, possibly acquiring social capital in the process. The final phase represents the outcomes of the students' efforts through a newly developed commitment to college (expressive returns) and ultimately, and perhaps the most rewarding, graduation and the attainment of a bachelor's degree (instrumental returns). This newly adapted model is shown below as Figure 2.2.

Figure 2.2: Mentoring as a Model for Creating Social Capital



Current Approaches to Increasing Degree Attainment for Low-Income First-Generation Students

Several interventions have been implemented in the past to improve postsecondary success of low-income, first-generation college students. Only a few of these, however, reflect Astin’s and Tinto’s findings.

TRIO Programs

The most reputable programs are those developed by the U.S. Department of Education under the TRIO designation. The Federal TRIO Programs are outreach and student services programs designed to identify and provide services for individuals from disadvantaged backgrounds. Founded in the 1960s, TRIO includes eight programs targeted to serve and assist low-income individuals, first-generation college students, and individuals with disabilities to progress through the academic pipeline from middle school to post-baccalaureate programs. As mandated by Congress, two-thirds of students served by TRIO programs must come from families with annual incomes below \$24,000. The three most common goals of TRIO programs are to promote college attendance, college awareness, and college exposure. According to Swail and Perna (2002), building college awareness and college exposure is likely to be associated with higher educational aspirations, one of the most important predictors of college enrollment.

Upward Bound is one of the more well-known programs under the TRIO designation. The program serves low-income, first-generation high school students and provides support to participants in their preparation for college. The goal of Upward Bound is to increase the rate at which participants complete secondary education and enroll in and graduate from institutions of postsecondary education. Upward Bound provides students with academic instruction at college campuses after school, on Saturdays, and during the summer. Over 700 Upward Bound programs are operating in the U.S. today. One-third of all TRIO funding in 1998 (600 million) was

dedicated to Upward Bound (\$220 million) and Upward Bound math and science (\$20.1 million).

While the intent of federally funded outreach programs is good, the evidence showing the overall success of these programs is lacking. Critics of the TRIO programs argue that early intervention programs are too expensive, serve too few students, and are too inefficient with respect to program drop-out rate. Swail (2000) argues that none of the federally funded programs are broad enough to provide services to all students who need them. For example, it is estimated that the TRIO programs are able to serve no more than 10 percent of the eligible student population in the United States (Swail, 2000). Based on current congressional funding it would cost over \$6 billion dollars to serve the entire eligible population. Other programs, such as I Have a Dream (IHAD), are limited in the scope of their reach. Students can only participate if their school is fortunate enough to be included.

First-Year Programs

Institutions of higher education have expressed concern about the retention of students for over a century (Levine & Levin, 1991; Hicks, 2005). According to Hicks (2005), researchers have studied college students in their first year for two reasons: the first year shapes subsequent persistence and the largest proportion of drop-outs occurs in the first year. First-year programs are a response that is aimed at increasing retention and bachelor's degree attainment for students. While these programs are generally offered to all incoming students, some colleges have designated certain first-

year interventions for low-income, first-generation students. Many institutions have developed programs for first-year students to deal with such issues as academic achievement, academic persistence, and graduation programs (Levine & Levin, 1991; Tinto, 1993; Greene & Puetzer, 2002), which include intensive orientation, developmental course work, advising, counseling, or mentoring (Capolupo, Fuller & Wilson, 1995; Strommer, 1993; Hicks, 2003). In particular, researchers (Strommer, 1993; Tinto, 1993) realized that critical components of successful first-year programs included academic advising, orientation, support programs, tutoring, supplemental instruction, first-year seminars, skills development programs, placement testing and mentoring programs.

While some critics may be skeptical of their success, some form of first-year programs exist at nearly all four-year institutions in this country. Many institutions have begun to allocate significant resources to the first-year experience in an effort to improve student outcomes. First-year experience (FYE) programs vary widely across institutions ranging from highly organized learning communities to basic courses introducing students to college life. Some FYE programs are focused on academic life, some on student life, and some are blended. Although literature on the evaluation of FYE programs is growing, the results remain mixed. This is in part because each analysis is specific to the particular institution's characteristics, student body, and the types of FYE programs being implemented.

Mentoring as a Specific Strategy to Increase Bachelor's Degree Attainment

A final approach for increasing bachelor's degree attainment by low-income, first-generation students is that of mentoring. Formal mentoring programs have become especially popular in recent years within higher education. Such programs have been designed for a range of issues, including: career development, leadership development (Shandley, 1989), and retention or academic success among students at risk for failure or attrition (Allard, Dodd, and Peralez, 1987; Dunphy, Miller, Woodruff, and Nelson, 1987). Other programs have placed students in the mentor role, hoping that the peer-mentoring experience will promote their development and reinforce their commitment to higher education (Ender, 1984; Humm & Riessman, 1988).

Mentoring Definitions.

The origins of the word "mentor" stem from Greek methodology. In the *Odyssey*, the main character, Odysseus, entrusts his friend, Mentor, to help him prepare to fight in the Trojan War. Mentor serves as a wise, responsible and trusted advisor who guides Odysseus's development (Miller, 2002). Despite its long history, there is currently an absence of a widely accepted definition (Dickey, 1996; Johnson, 1989; Miller, 2002; Zimmerman & Danette, 2007) and a lack of theory to explain what roles and functions are involved in a mentoring experience (Jacobi, 1991; Haring, 1999).

The literature often includes definitions specific to the researcher's discipline. For example, Roberts (2000), approaching mentoring from a business perspective, has defined it as "a formalized process whereby a more knowledgeable and experienced person actuates a supportive role of overseeing and encouraging reflection and learning within a less experienced and knowledgeable person, so as to facilitate that person's career and personal development" (p. 162). Similarly, Campbell & Campbell (1997) have considered mentoring as a set of behaviors in which experienced, more seasoned members of the organization provides guidance and support to less experienced employees to increase the likelihood that new employees become successful members of the organization. In contrast, psychologists Levinson, Carrow, Klein, Levinson, & McKee, (1978), have focused their definition on supporting the psychosocial development of an individual through another person who provides moral and emotional support.

Within the context of higher education, the absence of a consistent definition of mentoring has been repeatedly recognized (e.g., Dickey, 1996; Johnson, 1989; Miller, 2002). For example, Brown, Davis, & McClendon (1999) and Murray (2001) broadly defined mentoring as a one-on-one relationship between an experienced and less experienced person for the purpose of learning or developing specific competencies. Blackwell (1989) has defined mentoring in more specific terms stating that mentoring "is a process by which persons of a superior rank, special achievements, and prestige instruct, counsel, guide and facilitate the intellectual and/or career development of persons identified as protégés" (p. 9).

Although there has been a large amount of disagreement about what mentoring is and what characteristics it entails, Jacobi's (1991) review of the literature identified three ways in which researchers agree about mentoring, which largely continue to be reinforced by the literature. First, researchers have concurred that mentoring relationships are focused on the growth and accomplishment of an individual and include several forms of assistance (Chao, Walz, & Gardner, 1992; Cullen & Luna, 1993; Ehrich, Hansford, & Tennent, 2004; Haring, 1999; Johnson & Nelson, 1999).

Second, there is general consensus that a mentoring experience may include broad forms of support including assistance with professional and career development (Brown et al., 1999; Campbell & Campbell, 1997; Chao et al., 1992; Davidson & Foster-Johnson, 2001; Kram, 1985), role modeling (Brown et al., 1999), and psychological support (Chao et al., 1992; Cullen & Luna, 1993; Davidson & Foster-Johnson, 2001; Kram & Isabella, 1985; Levinson et al., 1978).

Third, there continues to be agreement within the literature that mentoring relationships are personal and reciprocal (Davidson & Foster-Johnson, 2001; Kram & Isabella, 1985; Healy & Welchert, 1990; Johnson, 1996; Johnson & Nelson, 1999).

Research has shown that mentoring relationships may be informal or formal, long-term or short-lived, planned or spontaneous (Luna & Cullen, 1995). Informal mentoring relationships have been shown to be not structured, managed, or formally recognized by the institution (Chao et al., 1992). Informal relationships typically develop "naturally", involve the mentor and protégé' seeking each other out, and are typically focused on long-term goals (Campbell & Campbell, 1997). In contrast,

formal mentoring relationships have been shown to be managed and sanctioned by industry or an educational institution (Chao et al., 1992). Formal mentoring relationships typically have a third party who matches the mentor with the mentee. The duration of informal and formal mentoring relationships has been shown to vary, while some mentoring relationships may be as short as one meeting (Phillips-Jones, 1982), others last 6 months or a year (Kram & Isabella, 1985), or even an entire decade (Levinson et al., 1978).

Academic Preparation through Mentoring Programs

Academic and Social Integration

Many mentoring programs today have an academic component whereby students are paired with either a peer or faculty mentor who guides them on their academic path. Academic guidance through mentoring includes but is not limited to: assessing coursework, reviewing time to degree requirements, and discussing career goals. Through mentoring programs, staff, faculty, or student mentors have an opportunity to promote a feeling of belonging or integration among students by offering them acceptance, validation, and friendship. Mentors also engage in socialization functions that assist students in understanding the institutional culture.

Increasing Student Engagement through Mentoring Programs

Involvement in Learning

Astin (1977, 1984; Study Group on the Conditions of Excellence in American

Higher Education, 1984) contends that the extent to which a student is involved in the educational process is a good predictor of graduation and academic achievement.

Integrating an array of empirical research on college impacts, the Study Group (1984) concluded:

“There is now a good deal of research evidence to suggest that the more time and effort students invest in the learning process and the more intensely they engage in their own education, the greater will be their growth and achievement, their satisfaction with their educational experiences, and their persistence in college, and the more likely they are to continue their learning” (p. 17).

From this perspective, mentoring can be viewed as a vehicle for promoting involvement in learning. The mentor may encourage and motivate the student protégé to deepen his or her involvement in learning and would provide opportunities for particular kinds of involvement (e.g., research assistantships). For example, faculty mentors could promote involvement by providing their protégés with challenging assignments, coaching or advising them about educational activities, or sponsoring them for special educational opportunities. On the other hand, peer mentors might promote involvement through role modeling or by demonstrating the benefits of involvement through their own activities.

Achieving Social and Cultural Support through Mentoring Programs

Social Support

Social support theory focuses on the role of supportive relationships in preventing stress, reducing the harmful effects of stress, and/or increasing individuals' abilities to cope effectively with stress. Many definitions of social support have been proposed, one of the most common of which is "information leading the subject to believe he is cared for and loved, esteemed, and a member of a network of mutual obligations" (Cobb, 1976, p. 300). Research in this area tends to focus both on the individual's subjective perception of the adequacy of social support in relation to his or her needs as well as on objective appraisals, or "maps," of the individual's actual social support network (Pearson, 1990; Vaux et al., 1986). House (1981) has proposed four broad categories of social support: (1) Emotional support (esteem, affect, trust, concern, and listening); (2) Appraisal support (affirmation, feedback, social comparison); Informational support (advice, suggestion, directives, information); (4) Instrumental support (aid-in-kind, money, labor, time, modifying environment) (p.23).

A large number of empirical studies have established that social support is effective in preventing stress or in buffering people from the negative effects of stress. These findings have included studies based on college student populations (e.g., Ostrow, Paul, Dark, & Berhman, 1986). From this perspective, mentoring provides emotional, appraisal, informational, and instrumental support which either prevents stress or buffers students from the negative effects of stress. As a result, stress does not interfere with the students' academic activities, and they are better able to cope with

the demands of the college environment. The four functions of social support can be linked in a straightforward manner to the three major functions of mentoring. Emotional and appraisal social support correspond with the emotional support function of mentoring while instrumental and informational social support correspond with direct assistance for professional development. From the framework of social support, the social comparison component of appraisal social support perhaps best corresponds to the role-modeling function of mentoring. Within the educational environment, different kinds of support are best provided by different kinds of mentors. For example, informational support is probably best provided by staff or faculty while emotional and appraisal support are probably best provided by students, with counseling staff as a back-up (Pearson, 1990).

Developmental Support

A variety of developmental theories emphasizes the importance of mentors, however many of these (e.g., Levinson et al., 1978; Sheehy, 1974) focus on adult development and have, at best, limited applicability to the traditional undergraduate student experience. A number of authors, however, have linked mentoring to other developmental theories. For example, Thomas et al., (1982) link their discussion of mentoring to Perry's (1970) nine stages of cognitive development. They suggest that the ideal mentor will have reached Stage Nine thinking or will "have achieved a self-created role and be involved in expanding it, know who she is and how she affects other people, places and things, and be ready to encounter risks to her self-esteem in

achieving full potential" (p. 52). They also point out, however, that effective mentoring will provide students with stimulation at only one stage beyond their current cognitive levels, so that the mentor needs to be aware of, and responsive to, the developmental stage of the student.

Chickering's work is also applicable to the study of mentoring. Chickering (1969) underscores the importance of student-faculty relations in promoting the development of students' intellectual competence, autonomy, purpose, and integrity. He concludes that student-faculty relations that succeed in promoting student development are characterized by "accessibility, authenticity, knowledge, and an ability to talk with a student" (p. 244). It is difficult to directly translate these concepts to specific mentoring functions, but one might infer that the role-modeling function is of greatest importance to student development followed by emotional support and direct assistance. As Levine and Nidiffer (1996) concluded, support and encouragement from a mentor, whether a parent, relative, or empathetic member of the community, can play a critical role in college enrollment for students from low-income families.

Empirical Applications of Mentoring and Undergraduate Students

Although empirical studies between mentoring and academic success are not extensive, a large body of literature indicates that contact with faculty is linked to academic success (e.g., Astin, 1977; Pascarella & Terenzini, 1977; Tracey &

Sedlacek, 1985; Wilson, Gaff, Dienst, Wood, & Bavry, 1975). These studies imply that mentor relations may positively influence retention and achievement.

Jacobi (1991) suggests one of the best assessments of a mentoring program was conducted by Cosgrove (1986), describing the outcomes of a mentoring-transcript program on freshmen. In the study, potential selection biases were controlled by randomly assigning students who had applied to the program into experimental and control groups and by providing opportunities for both cross-sectional and longitudinal comparisons with controls for such factors as SAT scores, place of residence, and gender. Students' satisfaction with the university, use of services, behavioral patterns, and level of personal development were all assessed. The results of the study indicated that students who participated in the mentor-transcript program were more satisfied with the university environment and showed greater developmental gains than the control group. While this report provided some evidence of the effectiveness of formal mentoring programs, it did not attempt to measure the unique contribution of the mentoring relationship versus other interventions, nor did it measure program effects on student academic success (Jacobi, 1991). This study lacks some validity since it was conducted at only a single institution. However, Cosgrove's analysis is among the strongest methodological efforts to systematically assess the effects of a formal mentoring program.

Utilizing a broad student population, Ishiyama (2007) examined how first-generation, low-income, and/or African American students perceived a formal research-based mentoring relationship. Participants were asked about their perceptions

of a mentor's role, to describe the benefits of a mentoring relationship, and to describe what they felt was a "good" mentoring relationship. Results were coded into three reliable variables: career support, research/academic support, and personal consideration. Career support involved helping students find opportunities, giving advice, and standing up on his or her behalf. Research and academic support was comprised of providing students with guidance related to finding literature, research techniques, and selecting a research topic; listening to students' personal concerns and being a good listener were components of personal consideration (Ishiyama 2007). Results suggested that White first-generation, low-income students consistently emphasized that a "good" mentor was someone who was an expert in their field, whereas African American students frequently cited "personal concern" as an important quality in a good mentor. Weaknesses in this study include its narrow focus and small sample size (33 participants).

A noteworthy study by Wallace, Abel, and Ropers-Huilman (2000) examined undergraduate students' interpretations of their involvement with a formal mentoring program that serves first-generation, low-income students. Their research focused on students involved with TRIO, a federally funded initiative, and three programs offered therein: Student Support Services, Educational Opportunity Center, and Veterans Upward Bound. Results from the qualitative study indicated that, according to the students in the study, mentoring facilitated students' initial decisions to attend college as well as their future enrollments. "This finding is particularly important because it emphasizes the need for members of the higher education community to proactively seek connections with potential students, especially if those students are not aware of

what higher education can offer them” (Wallace, Abel, & Ropers-Huilman, 2000, p.99). This study is valuable because it focused specifically on undergraduate, first-generation students, and the effect mentoring may have on academic persistence. However, the sample was small (20 students) and the study was conducted at a single institution. Further, the authors cite as a limitation the fact that the interviewees were referred to them by staff members of the program and therefore a potential selection bias may exist.

Salinitri (2005) conducted a study examining the effects of formal mentoring on the retention rates of first-year, low-achieving students. She sought to discover if there were differences in retention rates, cumulative GPA's, or number of courses failed in a year between students who participated in a mentoring program and comparable students who did not participate in a mentoring program. There were 128 participants in the study (56 in the mentored group and 72 in the control group or non-mentored group). The results from this study showed that mentoring as an intervention for first-year low achieving students had a dramatic effect on retention. Students in the mentored group had higher GPAs, failed fewer courses and had a higher percentage of persistence than the non-mentored group. The findings of this research provide evidence for a successful formal mentoring program for first-year low achieving students and confirm Tinto's (1993) belief that academic and social involvements play a role in current theories of student retention. The results of this study further indicate the importance of student involvement with the institution as proposed in Astin's (1993) theory of involvement.

Holland's (1995) study examined the characteristics of African-American doctoral student-faculty advisor relationships. The study included forty-two participants, twenty-three of whom were still enrolled in the doctoral program, and nineteen who had graduated. Results of the study concluded that the academic and career mentoring relationships had the most significant impact on participants in his study. Welch, (1996), concluded that "this finding underscores the importance of these kinds of mentoring relationships to advancement in higher education" (pg. 10). Limitations of this study include its narrow focus on doctoral students, who are, by definition, already successful in higher education, and who are not necessarily low-income or first-generation.

Finally, Noe's (1988a) analysis of assigned mentoring relations is also worth mentioning, although it is based on research with school teachers and administrators rather than undergraduate students. Noe evaluated a professional development program for educators, in which upper level administrators were assigned to serve as mentors to teachers or lower level administrators within the same school district. Results indicated that the formal mentoring relationship provided psychosocial but not career or vocational benefits to protégés, suggesting that formal mentoring programs may have limited effectiveness. His analysis can be criticized for its relatively small sample size (139 protégés and 43 mentors) and reliance on self-report methods. Also, the extent to which his findings can be generalized to the university setting is unknown. His analysis underscores the need to further examine formal mentoring programs as a strategy for promoting academic success (Jacobi, 1991).

Social Capital and First-Generation College Students

This literature review indicates that there are significant challenges and barriers facing low-income, first-generation college students, some of which may be addressed through mentoring. Additional research provides many contexts in which social capital is utilized to benefit individuals and groups of people seeking to expand their world of opportunities.

Social capital is born out of Marx's work on the notion of capital defined as "part of the surplus value captured by capitalists or the bourgeoisie, who control production means, in the circulations of commodities and monies between the production and consumption processes" (Lin, 1999, p. 28). Although the term "capital" and subsequently 'social capital' is linked to Marx, Coleman and Putnam popularized the concept of social capital in the late twentieth century.

Social capital as a concept is generally defined as the glue that holds groups together – shared values, norms, and institutions (Narayan, 1999). Another loose definition is the connections within and between social networks. A foundational definition comes from a prominent social capital researcher, "The aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu, 1985, p.248). Putnam defines social capital as, "the collective value of all social networks and the inclinations that arise from these networks to do things for each other" (Putnam, 2000). A slightly different approach to social capital is, "A variety of entities with two elements in common: they all consist of some aspect of

social structure, and they facilitate certain actions of actors-whether persons or corporate actors-within the structure" (Coleman 1988, p.98; 1990, p. 302). Lin approaches social capital from a network perspective, "The premise behind the notion of social capital is rather simple and straightforward: investment in social relations with expected returns...[social capital] as investment in social relations by individuals through which they gain access to embedded resources to enhance expected returns of instrumental or expressive actions" (Lin, 1999). Baker defines the concept as "a resource that actors derive from specific social structures and then use to pursue their interests; it is created by changes in the relationship among actors" (Baker 1990, p. 619). A more broad definition of social capital is, "the set of elements of the social structure that affects relations among people and are in-puts or arguments of the production and/or utility function" (Schiff 1992, p. 161). Finally, Burt defines it as "friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capital" (Burt 1992, p. 9). Portes concludes "the consensus is growing in the literature that social capital stands for the ability of actors to secure benefits by virtue of membership in social networks or other social structures" (Portes, 1998, p.6).

Social capital is utilized in varied contexts in research. Groups of people are more likely to take collective action if they are socially connected (Bandura, 1997). Social ties among neighborhood residents contributes to the possibility of residents bringing their diverse self-interests together for the collective good, otherwise known as "bonding social capital" (Larsen et al., 2004).

Bonding social capital is a necessary antecedent to the more powerful form of bridging social capital (Ferguson and Dickens, 1999; Warren, Thompson, and Saegert, 2001). Bridging social capital or cross cutting ties (Paxton, 1999) refers to the phenomenon, “when members of one group connect with members of other groups to seek access or support or to gain information” (Larsen et al., 2004, p. 66). Perhaps most advantageous is a unit that has high levels of both bonding and bridging. Schuller (2007) describes this scenario as presumably being secure in one’s own identity; being internally cohesive but managing this without closing itself off to new ideas and acceptance of others’ values. To further illustrate high levels of bonding and bridging, Schuller (2007) used the example of a country that is able to welcome immigrants yet continues to uphold strong historical national norms.

Putnam in *Bowling Alone* suggests that Americans are less likely to be involved in formal group organizations since the mid-1960s and, therefore, the connections that were once made socially are on the decline (Putnam, 2000). Lin applies social capital to the information age of cyber-networks. He suggests that social capital is not on the decline as Putnam purports but that it is merely instituted in a different form (Lin, 1999). Instead of Americans connecting at parties, picnics, lodges, and the bowling alleys, social connections in the twenty-first century are being made through chat rooms, instant messaging, and on social networking websites.

Further research on social capital focuses on the economics of social capital. Communities with resources that include social networks and civic associations are in a better position to fight poverty and vulnerability (Moser, 1996; Narayan, 1997).

Strong social networks allow communities to settle disputes and take advantage of new opportunities (Isham, 1999). Social capital is linked to student's academic success individually and corporately through high levels of trust and supportive parents (Goddard, 2003; Horvat, Weininger, & Lareau, 2003). It is also found in concord organizations designed to bring together people with opposing societal viewpoints and perspectives to invest in a civil society while recognizing group differences (Nelson, Kaboolian, & Carver, 2004). Social capital is developed in faith-based and secular poverty-to-work programs more so than those programs run by for-profit or government agencies (Lockhart, 2005).

Hunter uses social capital in defense of her hypotheses on skin color, "I contend that light skin works as a form of social capital for women. In this case, light skin tone is interpreted as beauty, and beauty operates as social capital for women. Women who possess this form of capital (beauty) are able to convert it into economic capital, educational capital, or another form of social capital" (Hunter, 2002, p.177).

An overarching criticism of social capital and its broad applications is that it can be all things to all people; is more style (marketing) than substance; is merely the latest fad or buzzword; encourages and rewards economic imperialism; reinforces or legitimize orthodox development policies; neglects considerations of power, especially those who are powerless; and it was conceived in the West, supported by research from the West and is globally inapplicable (Woolcock, 2002).

Lin's Network Theory of Social Capital

Lin's Network Theory of Social Capital is built on the notion that social capital is captured from embedded resources in social networks (Lin, 1999). In conjunction with that notion is the idea that an individual invests in social relationships with an expected return (Lin, 1999). It can also be enacted when members of one group connect with members of other groups to seek access, support, and information (Paxton, 1999). In examining the concept of social capital further, Lin writes,

“Therefore, social capital can be defined as *resources embedded in a social structure which are accessed and/or mobilized in purposive actions*. By this definition, the notion of social capital contains three ingredients: resources embedded in a social structure; accessibility to such social resources by individuals; and use or mobilization of such social resources by individuals in purposive actions. Thus conceived, social capital contains three elements intersecting structure and action: the structural (embeddedness), opportunity (accessibility) and action-oriented (use) aspects” (1999, p.35).

The research on embedded resources and network locations has produced concepts of bridging social networks to gain capital. Some researchers focus on the individuals located in certain networks and that individual's location to certain bridges that provide access to more, diverse, and valued information (Burt, 1992). Location of individuals in proximity to access points is a key element of identifying social capital (Granovetter, 1973, 1974; Borgatti, Jones, & Everett, 1998). Embedded resources in

various societies are typically attributed to wealth, power and status (Lin, 1982). Lin argues that there are two types of outcomes as possible returns to social capital:

“In instrumental actions, the return is the gaining of added resources, resources not presently possessed by ego – whereas in expressive actions, the return is the maintaining of possessed resources...For example, if we assume that bridges link to different information, the utility of that information depends on whether it concerns resources valued by the individual but not yet attained. If it does not, then the bridge serves little utility. If it does, the bridge is very useful. That is, not all bridges (or network locations) lead to better information, influence, social credentials or reinforcement” (Lin, 1999, p. 36).

Recent Empirical Applications of Social Capital that draw on Network Approaches

During the past decade, research on social capital in educational literature has significantly increased. Coleman's theoretical framework has continued to guide most of the studies, although a few of the studies used Bourdieu's framework of social and cultural capital (McNeal, 1999; Smith-Maddox, 1999; White & Glick, 2000), Lin's social network theory (Smith-Maddox), and Putnam's collective social capital (Fritch, 1999a; Morrow, 2001). Many of the studies (Israel, Beaulieu, & Hartless, 2001; Muller, 2001; Muller & Ellison, 2001; Pribesh & Downey, 1999; Qian & Blair, 1999; Smith-Maddox, 1999; Sun, 1999; Yan, 1999) relied on data from NELS: 88, a large-scale panel study of eighth grade students in the United States. While many

researchers have chosen to conduct quantitative studies, others chose case study design, including interviews, focus groups, observations, and document analysis (Fritch, 1999a; Fritch, 1999b; Kahne & Bailey, 1999; Lareau & Horvat, 1999).

Kahne and Bailey's (1999) study used thematic analysis guided by Coleman's notions of trust, informational channels, and norms. Over a period of 2 ½-years, the study focused primarily on two "I Have a Dream" (IHAD) programs in Chicago. Each IHAD sponsor "adopted" an entire sixth grade class and together with a project coordinator provided those students long-term financial, academic, and social support with the hope that they would graduate from high school and attend college. Because IHAD sponsors "adopted" all of the sixth graders at a given school, Kahne & Bailey compared their graduation rate with the graduation rates of students who were in the sixth grade at the school the previous year. The comparisons were made using interview, focus group, and student performance data from the 10 other IHAD sites in Chicago. The study found that the two IHAD programs were incredibly successful. Their graduation rates (71% and 69%) were roughly twice those of their respective comparison groups (37% and 34%). The study focused on the significance of differing forms of social capital (social trust, social networks, and social norms with effective sanctions) in enabling meaningful support of youth in inner-city contexts.

Lareau and Horvat (1999) presented a qualitative study looking at the role of the school in accepting or declining the activation of social and cultural capital by families of different races and classes. Unique to their study was the focus on moments of inclusion and moments of exclusion. Moments of inclusion include various

individuals joining forces, thus creating networks, to provide an advantage for the child. In the realm of education this may include placing a child in an accelerated class, providing extra tutoring, involving a child's family in decisions regarding their education, providing encouragement and assistance with college applications, a student's attendance at a prominent college and use of networks for job placement. Moments of exclusion may include placement in a low reading group, high levels of absenteeism and failure to complete college preparation materials.

Stanton-Salazar (1997) developed a social capital conceptual framework for studying the socialization of racial minorities and identified intrinsic mechanisms of mainstream institutions that account for the problems in accumulating social capital for low-status and minority children and youth. This framework was further articulated and elaborated in his recent study of the school and kin support networks of Mexican American youth (Stanton-Salazar, 2001). His model highlights the embeddedness of the adolescent in a social network affected by counter-stratification and stratification forces.

Stanton-Salazar and Dornbusch (1995) also viewed language proficiency (in this case, Spanish) as a source of cultural and social capital, and using Lin's social resource theory (1990), measured social capital with social network indicators (e.g., status of network members, number of non-kin). The study revealed associations between a student's language and acquisition of social capital, suggesting that bilinguals may have special advantages in acquiring the institutional support necessary for school success and social mobility" (1995).

There are several cited weaknesses in the existing body of research on social capital. Many of these stem from no clear overriding definition or theory of social capital. Morrow (1999) notes that most of the measures used in research today (e.g., number of parents, number of siblings or household size, church attendance) are crude and arbitrary. The selection of these types of measures reflects those used by Coleman (1988) in his original study, which used data from the HSB study of 1980 and 1982. The HSB was not designed to measure social capital, nor was the NELS, although most measures of social capital come from these data sets. Furthermore, some of these variables function as proxies for wealth or family background, and it is obvious that "manipulating such a variable will not produce the presumed effect" (Pedhazur, 1997, p. 287). Only a few researchers specifically designed and implemented their own studies to understand social capital, including all of the studies using qualitative methods (Fritch, 1999a, 1999b; Lareau & Horvat, 1999; Morrow, 2001; Stanton-Salazar & Dornbusch, 1995; Stanton-Salazar, 2001).

In their study relating to first-generation students, Pascarella, Pierson, Wolniak and Terenzini (2004) suggested that the social capital gained through extracurricular and peer involvement during college may be a particularly useful way for first-generation students to acquire the additional cultural capital that helps them succeed academically and benefit cognitively (p.278). As clarified by Bourdieu (1986) and Coleman (1988), students not only bring certain levels of cultural and social capital to college, the college experience itself provides a vehicle for acquiring additional cultural and social capital.

Although empirical attention has been given to first-generation students and their current plight in higher education, the reasons for why some are succeeding eludes us. What appears to be lacking are qualitative studies focused on first-generation students who exhibit social capital gains through extra-curricular programs, in this case, mentoring programs. This study sheds light on this incidence.

Chapter 2 provided a historical view of mentoring, a background of Astin's (1984) Theory of Involvement, numerous definitions of social capital, applications of social capital, and how social capital can positively influence disadvantaged groups. In addition to Astin's (1984) Theory of Involvement, Lin's Network Theory of Social Capital is used in this study as a conceptual framework to address the challenges first-generation students face in pursuit of a college degree. Informed by literature in student involvement and social capital, I aimed to uncover common characteristics of social networks and other forms of social capital among high-achieving first-generation college students. Furthermore, I sought to understand how mentoring programs augmented this success.

Chapter 3: Research Design

Introduction

This study explored the common characteristics and dimensions of high-achieving, low-income, first-generation students through a qualitative, multi-case study design. Research was conducted at two private, Catholic, four-year colleges in the Midwest to seek answers to the following questions:

1. How do first-generation students access and utilize social capital gained from mentoring programs as a bridge for success?
2. What formal and informal structures and networks are utilized in co-curricular involvement for increased social capital?

The study used a qualitative approach with a phenomenological methodology in an effort to elaborate on the conceptual gaps identified in the previous chapter, while building on the preliminary observation that social capital may be particularly important for low-income and first-generation students.

For the purpose of this study, the term "first-generation college student" was used to describe a college or university student from a family where no parent or guardian has earned a baccalaureate degree (Choy, 2001). Similarly, the term "low-income" was used to describe students from low-income families, as measured by free/reduced price lunch eligibility and represented by the bottom 20% of all family incomes (U.S. Department of Education, 2005).

Design

A qualitative approach was conducted to understand the educational paths of high-achieving, low-income, first-generation college students. Qualitative methodology was suitable for this research because the objective of this study was to gain a thorough understanding of the lived experiences of the students interviewed. Furthermore, a qualitative study seemed particularly fitting because I chose a smaller group of people to interview and sought to acquire in-depth and intimate information about them. “The aim of qualitative research is to learn about how and why people behave, think, and make meaning as they do, rather than focusing on what people do or believe on a large scale. Above all, qualitative research emphasizes meanings...” (Ambert, Adler, Adler, & Detzner, 1995).

While I could have chosen to explore causal patterns across individuals and examined survey data, it did not fit the study I envisioned. I wanted to find the *meaning* behind the abstract categories listed in Chapter 2. The reason for a phenomenological study is simple: Phenomenological studies focus on descriptions of what people experience and how it is that they experience what they experience (Patton, 1990). Phenomenology is a tradition in German philosophy with a focus on the essence of lived experience (Rossman & Rallis, 1998). The phenomenological inquiry is particularly appropriate to address meanings and perspectives of research participants.

Phenomenological studies rely on lengthy interviews with a carefully selected sample to obtain multiple perspectives in order to depict the phenomenon of interest in

its multifaceted form (Leedy & Ormrod). It is important to note that there are as many phenomenological methods as there are researchers using this method of study and there are no standard procedures or preexisting rules that direct the methodology (Danaher & Briod, 2005). As one might expect, with the wide variety of methods presently used in phenomenological studies, there are no specific techniques for reporting a phenomenological study (Leedy & Ormrod).

Overview of the Study

The purpose of this phenomenological study was to investigate the contributing factors leading to success in college for first-generation students by exploring the lived experiences of program participants. Research has demonstrated that mentoring often creates a positive experience for the mentee, mentor, and the institution as a whole (Jacobi, 1991; Kram, 1983; Ragins, Cotton, & Miller, 2000; Whitely, Dougherty, & Dreher, 1991). However, the literature appears to lack qualitative or quantitative data in order to substantiate the effectiveness of the mentoring program on minority student persistence toward degree completion and academic performance. Data for this exploratory research was primarily derived from twenty separate personal student interviews. Program participants, to maintain anonymity, were assigned numbers. Students numbered one through ten participated in interviews at a small town college (STC), and students numbered eleven through twenty participated in interviews at a city college (CC). In addition, I met with several administrators and program directors to gain an understanding of the history and goals

of each program. Data were gathered through audio recording of all student interviews, research notes, comments, and observations. During the student interviews, I sought participant validation by asking for clarification from participants when necessary. I was the only person who participated in data collection.

I began the study with several assumptions. The assumptions were that participants would choose to participate in the program voluntarily, respond honestly about their lived experiences, and share any information that they believed would benefit future first-generation college students.

Sample

A purposive sample was chosen over a random sample because of the narrow scope of the research. The focus was on high-achieving first-generation college students, and very few colleges in the Midwest are recognized for their successful retention and graduation of first-generation students. It was for this reason that I chose a purposive sampling technique.

A variety of qualitative or "naturalistic" methods were used to explore and evaluate mentoring within higher education (cf., Patton, 1987; Williams, 1986). These included: individual interviews with protégés (cf., Levinson et al., 1978); and direct observation, including extended observation, or fieldwork (cf., Kram, 1985; Patton, 1987; Zey, 1984). These methods offered an opportunity for in-depth exploration of mentoring relationships and hypothesis generation.

This study focused on first-generation college students participating in

mentoring programs in a single state in the Midwest. According to the state office of higher education statistics, 36% of first-generation students attend community colleges. However, data from the state asserts that first-generation students who attend community colleges are reported as the least likely to persist and earn a bachelor's degree. According to the American Association of Community Colleges, more than six million students each year enroll for credit in courses offered by the nation's community colleges. However, only 26 percent actually transfer to a four-year college.

Since the intent of this study was to interview highly-successful, first-generation students who were on track to graduate, I chose to examine only four-year institutions. National data reports the six-year graduation rate of first-generation students at public four-year institutions as only 44 percent compared with 61 percent at private colleges and universities. This led me to focus on private colleges in the Midwest. In that group of data, a small number of postsecondary institutions stood out as national leaders in retention and graduation of first-generation students.

Small and mid-sized private institutions enroll comparable or higher percentages of lower-income and first-generation students than public institutions. Most importantly, small and mid-sized private institutions have moved beyond a focus on access to a record of unparalleled success in retaining and graduating lower-income and first-generation students.

According to the Federal Department of Education's IPEDS system, Catholic higher education educated more than 900,000 students during the 2006-2007 academic

year. The mean enrollment at Catholic colleges and universities is 3,500 students; the median is 2,400 students. Overall student enrollment has grown dramatically over the past decade. For the 2000-2001 academic year, Catholic institutions (undergraduate and graduate) enrolled 577,961 students. By the 2006-2007 academic year that figure had risen by 55.8 percent.

According to the National Center for Education Statistics (NCES) 2006 Digest of Education Statistics, 62.4% of students enrolled in Catholic universities and colleges were female; 37.6% were male. From 1980 to 2005, enrollment in Catholic universities and colleges increased by 60.9%. In that same period of time, 10 new Catholic universities and colleges were founded.

The first Catholic higher education institution in the United States was Georgetown University, Washington, DC, founded by the Society of Jesus (Jesuits) in 1789. The newest institution is Wyoming Catholic College, Lander, WY, founded in 2007. Three Catholic colleges or universities have emerged as higher education institutions since 2005.

Institutional Descriptions

There are two institutions in this study: each is a private, Catholic college in the Midwest. Both colleges offer mentoring program interventions targeted at first-generation students. The two private colleges selected for the study have been nationally recognized by the Council of Independent Colleges (CIC) for their success in the retention and graduation of first-generation college students. Both colleges are

members of the Association of Catholic Colleges and Universities (ACCU). The institutions are both located in cities with populations of less than 100,000 and have enrollments of less than 5,000 students. The institutions are both four-year colleges, with one offering masters and doctoral degrees as well. The two institutions, while both Catholic, private four-year colleges in the Midwest, are quite different. One has advanced graduate programs, one confers only Bachelor's degrees. One is located in a city, the other in a small town. One has standard admission requirements, and the other is more highly selective. Differences abound, but the two colleges in this study share one strong commonality: mission. Both institutions have an explicit focus on outreach for those who are disadvantaged. This is perhaps the reason for such high enrollment numbers of first-generation students. One-third of the student body from each institution meets the criterion for first-generation student status.

Small Town College.

Small Town College (STC) is a private, Catholic college nestled in a quaint, semi-rural town in the Midwest. The college is one of the few remaining all-female institutions of higher education in the country. STC is located in a town with a population of approximately 6,000 people, and is only ten miles away from the nearest town with a population of 65,000. The college is home to 3,900 undergraduate students, and boasts that 99 percent of their student population lives on campus or in campus housing. Due to the small size of the surrounding town, many community events take place on campus. The campus itself is located right in the middle of town

and is accessible by foot, bike, or car. The school, which was founded in 1913, is highly selective in its admission process, and recruits regionally (and to some extent nationally). It is well-known for having an outstanding 4-year graduation rate.

STC have a well-developed mentoring program in place for first-generation students. The program is very selective and accepts only 20-25 highly qualified students per year, with over one-hundred students applying annually. Students accepted into the program at STC receive specialized mentoring and advising, participate in required bi-weekly seminars, as well as peer-networking and support groups. Students benefit financially as well by receiving a ten thousand dollar scholarship for every year of participation. The average high school GPA for the 2011 cohort was 3.64.

City College.

City College (CC) is a private, Catholic college located in a medium-sized city in the Midwest. The town has a population of approximately 85,000 people. The institution, while primarily an undergraduate college, enrolls approximately 4,000 students through a combination of undergraduate, masters and doctoral programs. CC also has four extension campuses located throughout the state. It is less selective than STC, but has a good reputation in the state and surrounding region. While CC was initially a women-only college, it now admits men into all of its programs.

The college offers a specialized mentoring program for juniors and seniors that is focused on preparing low-income, first-generation students for graduate studies.

The program, which has been in place for over a decade, requires an application and interview process and is highly selective. Those accepted into the program attend numerous academic seminars; receive the opportunity to participate in research with their respective academic department, as well as a chance to publish their research. Students are also aided in finding and securing a paid summer research position in their field of study. They receive ongoing, specialized mentoring and career advising from academic staff. Students are provided with in-depth information regarding the graduate school application process through seminars, workshops and internships, and are networked with professionals in their field through membership in professional organizations.

Data Collection

The target population for data collection was high-achieving, low-income, first-generation college students who are in their junior or senior year of study. The reason that I chose low-income, first-generation students is that they have been regarded as the group least likely to succeed in higher education in terms of student achievement data. The reason why the I selected high-achieving students instead of low-achieving students is because the primary goal of this study was to reveal the common characteristics and pathways within the high-achieving group. I chose to interview only students in their junior and senior year of college as they have proven their success in higher education thus far.

Student Interviews.

STC's mentoring program provided me with a small meeting room with which to conduct personal interviews with students. CC's intervention program provided me with a small office (occupied by the program director) to conduct student interviews. At each college, I provided each participant with snacks and drinks to enjoy during the interview. The digital recorder was placed in the middle of the table to effectively record each word that was said by the me and the participant.

In all twenty interviews, I reviewed the informed consent form (see Appendix A) with each participant. The consent form contained a brief statement about the nature of the study, which was read to the participants, and again asked for their consent to participate in the study. Once the verbal introduction was read aloud to the participants, I asked if the participant understood the nature of the study, confirmed that their responses would be kept confidential, and that the results would be made available to them if requested via e-mail. All verbally confirmed and signed the Informed Consent form agreeing to participate.

The interviews lasted approximately one hour and thirty minutes each. I used the interview questions found in Appendix B for the interviews with each participant. After all of the interview questions had been asked, the participant was given the opportunity to add anything else she/he thought should be shared about themselves or the mentoring program. I reminded participants that their responses would be kept confidential and that any follow-up questions would be conducted over the phone. I also reminded the participants that a copy of the study could be obtained if they

e-mailed me.

Instrumentation

The instrument for the study was an interview protocol. I created guidelines to conduct the interviews and to increase reliability of the data (Fowler, 1993). Closed-choice questions were developed to obtain demographic and baseline quantitative data about the individuals. Open-ended questions were used in semi-structured interviews to seek information about how the students arrived at where they are today (Fowler, 1993). I considered how families, school personnel (i.e. teachers, administrators), finances, culture, and environment influence a first-generation students' educational path.

The baseline demographic data for individuals included:

- Gender
- Race
- Present Year of College
- Current Enrollment Status
- Major
- Grade Point Average
- Plans to Graduate

The open-ended interview questions were developed to correspond with Lin's theoretical framework. The questions took on a narrative approach by providing students the opportunity to tell their own moral stories and to express and enhance their own authority and responsibility through the process of authoring (Witherell &

Noddings, 1991). A sequential listing of the questions for the interview process is provided in Appendix B. A summary of responses to the closed questions containing baseline demographic data can be found in Table 4.1 of Chapter four.

Role of Researcher

Creswell (2003) describes qualitative research as interpretative research that requires researchers to immerse themselves in the research process. As the researcher in this study, I was involved as an interviewer, participant observer and archival researcher. Qualitative research requires a high tolerance for ambiguity, and the ability to recognize, comprehend, and study a phenomenon with the purpose or intent of finding meaning (Merriam, 1998; Creswell, 2003). Since I intended to construct knowledge through human experience, it was important to receive permission from the Institutional Review Board (IRB) of the University of Minnesota in order to protect the rights of the individuals involved in the study (Creswell, 2003). A copy of the IRB Approval Form can be found in Appendix D.

Data Analysis

A social network lens was used to analyze the interview data, and to help connect meaning to the findings (Clark, 1998; Creswell, 1998). In particular, this study drew from a theoretical framework developed by Lin (1999) to address the challenges first-generation students face in pursuit of a college degree. This framework is built on the notion that social capital is captured from embedded resources in social networks (Lin, 1999). In conjunction with that notion is the idea

that an individual invests in social relationships with an expected return (Lin, 1999). It can also be enacted when members of one group connect with members of other groups to seek access, support, and information (Paxton, 1999).

Upon completion of the interviews, I transcribed the recordings. I reflected upon the process and listened to the recordings soon after the interviews. After reviewing the transcripts, I read them along with my notes and then read them again while listening to the recordings to look for emergent themes. The first stage of analysis identified as open coding (Newman, 2006) was rich with emerging themes and resulted in a lengthy list. I used the program Excel to manage the list of themes.

Next, I entered transcript words and phrases into Excel: one spreadsheet for the ten student interviews at STC and one spreadsheet for the ten student interviews at CC. This stage was called axial coding (Newman, 2006). Then, according to axial coding, I sorted text according to stage one themes, searching for commonalities and linkages as well as alternate groupings. This was a lengthy process and entailed multiple readings of the transcript. This stage of coding resulted in a considerable reduction of themes. Finally, I used labeled selective coding by Newman (2006) which involved reorganizing and elaborating on previous themes, and combining where appropriate. The themes were sorted based on the primary interview questions as found in Appendix B.

I asked several baseline demographic questions of each student during the interview. Several characteristics emerged and assisted me in understanding the mentees who participated in the interviews. The baseline demographic data on student

participants was self-reported (see Table 4.1) and was not verified by either institution or myself. The self-reported grade levels of student participants in this study were 35% (n=7) junior, and 65% (n=13) seniors. The large majority of students in this study, 90% (n=18), reported themselves as full-time students, while 10% (n=2) reported to be part-time students. The self-reported grade-point average (GPA) of participants when averaged was a 3.38. All 20 participants indicated that they would continue their studies and intended to graduate from their respective institution with a Bachelor's Degree. Table 4.1 presents an overview of the findings.

Table 4.1: Self-reported Baseline Demographic Data

Student	Gender	Race	Year	PT/FT	Major	GPA	Plans to Grad
Study Participant Number	1=Female 2 = Male	1 = Student of Color 2 = White	3 = Junior 4 = Senior	1 = PT 2 = FT	Current Declared Major	1 = 0-1.0 2 = 1.1-2.0 3 = 2.1-3.0 4 = 3.1-4.0	1 = Yes 2 = No
1	2	1	4	2	Political Science	4	1
2	2	1	4	2	Environ. Aff.	4	1
3	1	2	3	2	Philosophy	4	1
4	1	1	4	2	Peace Studies	3	1
5	1	1	3	2	Peace Studies	3	1
6	1	1	4	2	Political Science	4	1
7	2	1	3	2	Accounting	4	1
8	1	1	3	2	Psychology	3	1
9	1	1	3	2	Peace Studies	4	1
10	2	1	4	2	Political Science	4	1
11	1	1	3	2	Chemistry	4	1
12	1	2	4	2	Social Work	4	1
13	2	2	4	2	Bio/Chem	4	1
14	2	1	4	2	Pre-med	4	1
15	2	2	3	2	Soc/Psych	4	1
16	1	2	4	2	Bio/Chem	4	1
17	2	2	4	2	Pre-med	4	1
18	1	1	4	1	Intl. Studies	3	1
19	1	1	4	1	Social Work	3	1
20	2	1	4	2	Bio/Chem	4	1

Conclusion

Chapter 3 detailed the reasoning for conducting a qualitative, phenomenological study. While many benefits of phenomenological inquiries have been explained in this chapter, it is also important to note that there are some weaknesses to this design. For example, Husserl says, “the researcher cannot impose the meanings for the learners, because they are the absolute sources of their own

existence living through the learning environment” (1970). When analyzing a phenomenological study, the interpretations of the participants in the phenomenon are the focus, and little else.

Chapter 4: Results

Introduction

This chapter will focus on the lived experiences of mentoring program participants and the way in which the students developed and used social networks, both within and beyond the mentoring experience. Six primary questions, as well as four framework themes, were derived from Lin's Theory of Social Capital. These questions guided the study of the perceptions of the student participants in regard to their success as first-generation college students and addressed the perceptions that they had about their retention and persistence at the college.

I sought to understand these lived experiences by asking participants to discuss their specific experiences in an in-depth interview format. Particularly, I asked interview questions that would create dialogue and explore those experiences. To begin, two complete student interviews are highlighted, as they best demonstrate the profoundness of the process. A presentation of the emerging findings from the remaining participant interviews follows. A discussion of the relationship of the results to the theoretical framework will occur in Chapter five.

Imagine that every child is born with a suitcase. Most children are given durable, rugged suitcases made of fabric. These suitcases wear well, and are practical for the road they will travel. Some very fortunate children are given shiny, steel-cased suitcases with wheels, so that they can roll it if it ever gets too heavy for them to bear. Other children, sadly, have tattered and torn bags, and often do not even have a suitcase, but merely a plastic bag.

Through the years, the child accumulates “things” in their imaginary suitcase. For the fortunate children, their suitcase is filled with strong morals and values, a good education, a foundation of goodwill, comfortable financial means, a supportive base of friends, and a loving family. For many of these lucky children, attending and graduating college is a clear goal and one that is attainable. Now imagine for a moment that you are one of the less fortunate children who are raised with virtually nothing inside the suitcase. Or worse yet, you may not even have a suitcase; you may have a plastic bag and are able to carry all of your belongings in this small bag. What if you had been given a poor education, low financial means, and an unsupportive family? Would you still strive to attend college? Would you believe it was attainable?

For most low-income, first-generation students, showing up for the first day of college with no suitcase or an almost-empty suitcase is common; sadly, it’s to be expected. It’s what the students in this study did with that empty suitcase that is worth marveling at.

While the voices of all of the students in the study will be acknowledged, I thought it fitting to dive deeper into two students’ stories¹. Jose was faced with no family support, but, like the majority of students in this study, was fortunate to receive the help of a college preparatory program in high school. The other student, Maria, had some family support while growing up, but received no college-prep assistance in

¹ All names are pseudonyms.

high school. Through sharing their stories, both students explained how their resilience, while lacking support and resources, made a college education possible.

Jose

Jose was the very first student I interviewed. He was born and raised in Mexico and did not speak any English until moving to California at age twelve. He came from a large family with six siblings, and they lived in a small, overcrowded home with his grandparents, aunt, and uncle. He was mostly raised by his mother until being reunited with his father when they moved to California. He recalls his early memories of school in the United States,

I remember my first day of school in America, I was crying because I didn't know what was going on. My mom just dropped me off at school and I remember thinking, 'what do I do now?' From there, my parents didn't help me at all. I actually had no one to support me but friends that I made in school. And that was hard because I didn't speak English. I learned English very fast, but not well. Within a year, I was already speaking English. I was really devoted to learning because I knew that I had to in order to succeed.

When I asked how he heard about college, Jose said,

I heard if you went to college, you were going to have a better job than your parents. During the summer, I used to work with my dad and it was just mostly construction work. So, I saw that people didn't really have dreams. It was the same thing over and over. I was doing that for a while, and it got

boring. It was hard work too, but I knew I didn't want to do that for the rest of my life. From there, I kind of learned more about the whole construction business, and that's where my dream of working in architecture started.

Still speaking Spanish in middle school, Jose excelled in math class because as he said, "...math is universal". Once Jose reached high school, he was no longer in ESL classes, and was speaking English very well. He described his high school experiences as follows,

When I went to high school, I jumped into normal classes and noticed I was with a lot of students who didn't really care about school. There were a lot of people who were just in school because they were supposed to be there, not because they wanted to. There were a lot of gangs in my school. The gang members didn't have respect for the teachers at all. They wouldn't do homework and it was frustrating because I was trying to learn and the wrong people were just playing around and interrupting the teacher, so it was hard to focus. But luckily, I stayed out of that group. I remember one of my high school teachers telling me that if I stayed out of that group and went to college, I would have different opportunities. So, from then on, I distanced myself from those people and tried to do better.

Jose has two older brothers, and he said that neither pursued college. I asked Jose if his parents ever discussed college with him or encouraged it. He replied,

Well, I mean, it was complicated because, you know my mom would sometimes say, ‘Oh yeah, you should go to school so you can get a better job’. But then she would say, ‘You and your brothers are our hopes and when you guys finish high school you guys are going to start working and helping us pay our bills.’ So it was a conflict.

As previously mentioned, the vast majority of the successful first-generation students in this study attribute their success in some part to the college preparatory program that worked with them in high school. Jose was fortunate to work with a program in Southern California called College Match. He described his experiences with College Match.

When I was in 10th grade, I got interviewed for a program called “College Match”. I had no idea what it was when I was called to the counseling office at school. They work with you for the last two years of high school. They have ACT classes on Saturdays and college trips, so we traveled throughout the East coast with them. They paid for everything. My parents weren’t very happy about it and wondered how I was chosen. I explained that I was in the top of my class.

When discussing College Match further he said,

My dad, he was straight up. He would tell me school was just a waste of time, and that I should come and work. So it was kind of depressing, you know? They actually convinced my brother, my little brother, to go to work even

though he had the chance to go to college. Now he's helping to support the family. Sadly, it made me feel a little better since it took some of the pressure off of me having to support them. So I saw an opportunity. I was like well, now my brother is working, so I don't feel as bad, you know, for not working to help the family, so I'm just going to continue with this dream. So, I traveled with College Match, went to the classes on Saturdays. But it was always hard, you know, because a lot of other people in the program had parents who were supportive and they always took them to the classes.

Jose discussed the relationship he had with his parents during this time. He said it was largely unsupportive and uncaring. He said he seemed to get used to lack of attention. He explained,

My parents would never show up for anything. I would be the only kid who didn't have their parents present. Sure, it felt bad. But after so many times, you just get used to it and stop hoping they'll be there. It never stops hurting, but you learn to accept it and know not to expect anything from them.

Jose toured several four-year institutions with College Match, and agreed with his counselor that it would be better for him to go away to school, out of California. He said, "I thought it would be better living away from my parents because I knew if I was living at home and trying to go to college, it would be even harder. I wouldn't have anyone to support me, and didn't want my parents constantly telling me to work instead of going to school." As he toured several colleges in California and along the

East Coast, it solidified his decision to go to college. The tough part would be deciding which one.

Even with supportive guidance from counselors at College Match, Jose felt lost while searching for the best college. He had no advice from family or friends, and had to go on a gut feeling. Upon meeting with counselors at STC, he said he felt at home. He explained,

We toured the campus and met with an admission counselor. I felt like I knew the admission guy personally. He spoke to us a lot on our visit day, and was always available when I called him on the phone. So that was something different, you know? I think that's what made me come here. He told me that I was going to be taken care of here. There are small classes and more personal attention with the professors. So that's why I came here, for the sense of community here; it's a nice community.

Jose learned soon after being admitted to STC that they have a well-established mentoring program for first-generation students. He applied and was accepted. I asked him to describe the program to me. He explained,

Before school started, the students in the mentoring program were brought to campus for a two-day retreat. We spent time talking and getting to know each other. It was great meeting people like me. We also met the program directors and professors who would be our first-year mentors. It really felt like a family.

The first day to move into the dormitory had arrived, and Jose showed up alone to campus. He watched quietly as his roommate's mother and father helped his roommate get moved in. He commented,

I sat and watched as all of the other students' parents came to drop their children off at school. They would help them set up their rooms, go grocery shopping, everything. And for me, it was nothing. I remember sitting on my bed and crying.

He cried as he told me this story about the first day of college. He wished so badly that his mother had been there to help him move in and support him. He continued, "It was sad. My roommate's mom was there and she was kind enough to help me set up my stuff. I just wish it was my mom and not someone else's."

School had started and Jose was looking forward to meeting new people and learning new things. It wasn't long though before homework and homesickness took a toll on him. He discussed the first month of college.

After about a month I suffered culture shock. That's when everything went bad for me. But I think the problem was that, you know, in high school, I had a goal, I had a dream, which was to get into college. Once I was in college, I didn't know what was next because no one talked about what was next. We just talked about what college was like, and what opportunities it was going to bring me. But I honestly didn't know what was next. It's like, okay, so I'm in college. So what's next, where will I go from here?

During that first year of college, the only thing getting Jose to class was knowing that if he did not earn a high enough GPA, his scholarship would be gone and he would have to go home. Jose spent a lot of time with his fellow first-generation students in the mentoring program. He said it was common for all of them to meet in the library and talk about how tough it was. “We’d sit and talk about how depressing it was to be here, but at the same time, we were kind of motivating each other. We’d say, let’s just make it through this semester, or this year, and then we’ll transfer. And so came another semester, and another semester...” And at the time of this interview, Jose was in his senior year.

Another thing contributing to Jose’s unhappiness during the first year at STC was finding out that the college did not offer an architecture program. That was always his intended area of study. Instead, he decided on political science. While he’s happy with that path, he wonders why he didn’t learn more about the academic offerings prior to enrolling. He explained, “It’s frustrating, you know? I should have asked about architecture, but I just figured every school offered it. I guess that’s a downfall of not knowing the system.”

Jose and I discussed his finances at great length, and he explained that he is completely independent from his parents and on his own. The mentoring program granted him a sizeable scholarship for four-years, which is what motivated him to graduate in four years. He was also eligible for grants and other need-based loans. He said that when speaking to his parents prior to starting college, they got very

uncomfortable discussing money. “They told me that I would never be able to afford to go to college.” He further explained,

I asked my parents for their income tax statements, but it was a struggle. They didn’t understand why the financial aid office needed them, and didn’t trust the process. They thought I was going to give them to the wrong people.

We talked about the kind of community Jose was raised in after coming to America.

He explained,

I was raised in a largely Hispanic-based community with some black folks, too, but mostly Hispanics in Southern California. Many of the older people only spoke Spanish. The mentality there is that you try to finish high school, and if you’re lucky, you find a minimum wage paying job. It’s either that or you join a gang. So either you become a gang member, or you finish high school and start working; that’s it. Not many think about going to college. I was definitely different.

How was *he* able to break through the stereotype of children raised in his community while others were not? He said,

I think I just wanted to do something different. I had seen the different routes that some of my friends and family had taken, and I didn’t like the outcomes of those routes. So I was like, I’m trying something different. What did I have to lose? And every year, there was something challenging. There was always a reason to quit school, but there were always more reasons to continue. I had to

stay strong and push past the obstacles to continue my dream. It was just the hunger of having a better life. I had heard about the lives of people who went to college and I wanted that. I also listened to my mentor. She was always friendly and encouraged me to continue.

He then told me that I am only the third person with whom he has ever shared his life story. He said that he does not usually feel comfortable telling people his background for fear they will judge him. He explained,

The reason I don't tell more people? It's pride. I'm a private person who likes to help and listen to other people. I like to keep everything to myself and work on my problems by myself. I'm learning that's not always the best way, but it's still who I am.

He grew sad thinking about how his parents would react to his impending college graduation:

It's hard, you know, because they have never come up here. They don't even know where I am or what I'm doing. They think it's all a joke. They haven't visited me once in four years. They just know that it's somewhere in Minnesota – sometimes they even say Michigan. I have been going home once a year for holidays, but we never talk about school. It's always discussions about how hard my brothers and fathers are working so that there is a home for my family. It's funny because that's why I'm here, for my future family. I think that's what's always been on the back of my mind; having my college

diploma, having a family, having children and raising them with a life that is better than I had...and being there for them.

Our interview ended with Jose in tears.

Maria

I met Maria during my interviews at STC. She was born in California, but raised in the inner city of Chicago. She described her upbringing.

I have an older sister and a younger brother. Both of my parents were originally born and raised in Mexico. At the age of 22 or 24, they crossed the border and came to live in Chicago with a few family members they had. So they were both illegal immigrants until about my first year in college. They never hid it from us. When my sister turned 21, she got papers ready for them and they became U.S. citizens. Before that, they weren't legally allowed to work. Luckily, my dad used my uncle's fake Social Security number to be able to work. During that time, he purchased a car and a house that's under my uncle's name. So my dad worked under a different name to be able to support us. I guess we were really lucky.

Now that my dad is in his 50's and is a U.S. citizen, he has to start over again with his new Social Security Number. So, all the benefits and insurance he got are going to my uncle, which is fine. My uncle was a legal resident here, but he was living in Mexico and then my dad was basically working

under his Social Security Number. So that's how he managed to work and provide for us. My mom didn't work at all because she was taking care of us.

I asked Maria how she first heard of college. She responded,

Well, my dad always kind of pushed education, even though he never directly said we should go to college. It's kind of sad, but my dad was originally studying to be a teacher in Mexico. I think he was at the point when they were shadowing teachers in Mexico. He basically gave up his dream of becoming a teacher for us. Once he found out my mom was pregnant, he dropped everything and came to the United States. Even though they never got a college degree, both of my parents really wanted us to try to go to college.

As we talked about her early years of education, she explained that she went to a public school in Chicago, but spoke only Spanish until the 3rd grade although she was in a bilingual program. Maria described her early grade school years as fun, and because everyone was speaking Spanish, it was comfortable. However, after the 3rd grade, her mother decided she should be learning English:

One day my mom went and told the school that she didn't want me in the Spanish classes anymore, so they said, 'okay, tomorrow don't report to this room, go to this room'. She switched me over to all English classes, which was a huge change for me because I'd never spoken English. I knew some English words that I had learned from my older sister, but that was about it. As a result, I failed 3rd grade, and was put back in bilingual classes. Soon, the

teachers noticed that I understood what was going on, but I just didn't know the language perfectly. I ended up taking a test and passed, so then they moved me up to 4th grade again. Unfortunately I still had to repeat some parts and I had to take summer classes to make up what I missed, which was a really a confusing time for me. Even now, I notice that I have trouble with some of my English grammar just because I never got the basics in 3rd grade.

As we continued our discussion of her education and upbringing, she talked more about her junior high and high school experiences. Maria said,

It was weird in junior high, because for some reason, I was listed as being in special education in my school record. I'm guessing it was for my language issues early on. My parents thought that wasn't right, but it turned out that there was a lot of problems at my school with administrators and teachers putting non-special education people into special education for the money. Our school went through so many principals, and there wasn't any good leadership. So, I was basically in special education classes through junior high. When I finally got to high school, an advisor told me that I could advance into IB classes. I didn't know what that was, but they told me I would be getting extra help, so I agreed to take them. There were about 25 of us in the IB (International Baccalaureate)² classes and we were basically separated

² The International Baccalaureate Program is an internationally recognized curriculum that, on successful completion of the final exams, allows a student entry into most universities in most countries.

from the rest of the school. We took classes together every day; we had extra science and math classes. And when we finished, I graduated fifth in my class.

I told Maria how impressed I was and how much perseverance she must have had to achieve that. She said that through it all, she continued to participate in soccer and swimming. And she also added that her original freshman class was around 600 students, and by the time she graduated it was about 300. Almost half of the students in her high school didn't graduate.

As the conversation continued, I asked if she had ever been approached by any college preparatory programs. She said that she hadn't, but that the cohort of students in her IB classes was like a small support group, with many of them having the same college aspirations as she did. She also got some encouragement from an English teacher in an unusual way. She explained,

Our English teacher wanted all of us to go to college. One thing she did that stood out was have us all write our names on a white board and we had to write what college we were going to go to right next to it. I was getting kind of nervous because people's names were going up on the board with where they had been accepted to college – and my name still wasn't up there. It was good motivation for me. And at the very end, I put my name up on the board.

I asked her how she conducted her college search with no assistance from advisors or her parents. She said she just “happened” upon the college she attended, STC. She

explained that she was going to a college fair with a friend and decided to wait in line for a college that seemed particularly interesting to her. She said,

I saw the booth for the one school I wanted and waited in line. And right next to it was the booth for STC. The school I was interested had this huge line of students waiting to talk to the recruiter, so I kind of waited for the line to go down, but I got bored, so I went to talk to someone at STC since they were available. So I kind of arrived here by default. And then my recruiter was there and she gave me all of these brochures and she told me about the programs they had. And on the back of the application, it asked if I was a first generation student and in need of financial aid, and I just checked the box and then did the essay they told me to do. A couple of weeks later, they called me back and said that they were doing a national weekend visit and would fly me out if I wanted to come check out the school. I came and really enjoyed the campus. The community here is great; it's just so different from the city. I completed the interview and about a week later, they told me I got a scholarship.

Like Jose, Maria was enrolled in a mentoring program at STC. She described her experience at the weekend retreat before the beginning of the first year:

Before school started, they brought all of us to this retreat where we got to know each other and they basically told us, 'this is who you're going to be with for the next 4 years'. And that was really nice because before school even

started, I already knew someone, and they made sure that we got our first year seminar classes together. It made the transition to college so much easier.

She elaborated on the support system within the mentoring program, saying that,

I had an advisor before coming in and I got to know her better at the retreat. I talk to her as much as I can, probably once a week. I also have my major advisor now, who I can go to for questions about my classes. We also got to know the Dean, and she has been so helpful and gives good advice. I even still keep in touch with my recruiter. Basically, we're given connections in every department – even financial aid. So there is really no excuse for us to not find help somewhere. On top of that, we were assigned mentors from the class above us, and they offered support when needed.

She said the experience of being in her mentoring program has made college worthwhile.

Like Jose, Maria's parents were not very helpful during the college choice process, but they provided some logistical support:

My parents didn't know anything about the process of applying, and I did most of the college search and applications by myself. I would just tell my parents when I needed a signature for a form or something. And sometimes I would need a ride to someplace because there was an interview for a scholarship, and they would take me. They were sad I was going away to school, but my Dad always told me that I could try it out for a year, and if I didn't like it, I was

always free to come back home. Then he said ‘if you find that this is good for you, you should stay there’.

Maria is now in her senior year and is an environmental studies major. She said her Dad has only been to campus once, when he took the bus with her to drop her off on the first day. Her mom has never been to campus, but plans on going for the first time to see her daughter graduate.

As we finished the interview, I asked her what has kept her motivated all this time. She answered,

I think, for one, it was my parents because even though they haven’t physically been here with me, they have been alongside me on this experience. I’ve called home a lot and that first month I was really homesick. Classes were a lot harder than my high school classes; I was used to being a straight ‘A’ student in high school and then I came here and had to settle for B’s and C’s. Even though times have been hard, I’ve always remembered my dad and the sacrifices he made for me and my siblings.

Examining Student Experiences Across Institutions

Having been introduced to Jose and Maria’s experiences with mentoring programs before and during college, I now turn to an examination of the way in which the themes that are raised are encountered across all of the 20 students who participated in the study.

Student Perceptions about Family.

Primary Student Interview Question 1 was directed toward understanding what familial upbringing the student experienced as a child and how it may have related to his/her present academic outcome. Table 4.2 presents an overview of the findings.

Table 4.2: Primary Student Interview Question 1 – Family

	STC	CC	Total
Received No or Minimal Support from Family	8	7	15
Well Supported by Family	2	3	5

Note. Primary student interview question 1: "How were you raised?"

The two themes that emerged from student interviews about their families were: (a) Received no or minimal support from their immediate family of origin, or (b) Well supported by immediate family of origin. Several students reported that they had a difficult upbringing. Student 5, who was raised by a single parent, stated, "I didn't really know what I was missing out on until I became friends with a girl at school who had two parents and two siblings. Her life seemed a lot more structured than mine." Several students believed they received academic support from their families. Student 6 reported, "My parents didn't help me much with homework, but they always encouraged me to get my homework done. They always said that I should go to college because they didn't get the chance to go." There were also others who believed their families hindered their academic goals. According to Student 1,

My dad and brothers all worked in construction and assumed I would do the same. They always seemed to get upset when I told them I'd have to study and

couldn't help them work. My mom even said I should maybe drop out of high school so I could go right to work to support the family. But I knew...I would end up on the streets just like the guys I went to school with.

Student 13 shared her story,

My mother was disabled and my dad had to work two jobs to support us, so I mostly took care of my mom and younger sister all the time. I also cooked dinner for my dad when he got home. We were close though; my parents were supportive of me. They always said to do what I want in school because they didn't want me to have any regrets like they did.

As Student 19 recounts, the pressure to attend college and graduate was strong from the beginning. He said,

My parents had five children, four daughters and me, their only son. All I remember them saying over and over as I grew up was, 'You better work hard to be better than your dad'; that was a lot of pressure. Pretty much told me not to come home until I had a degree and could earn a good living.

A follow-up asked students to indicate how much contact they maintained with their family of origin. Table 4.3 suggests that nearly half of the respondents (9 of 20) have only limited or no contact.

Table 4.3: Follow-up Student Interview Question 1 – Family

	STC	CC	Total
Full contact	5	6	11
Minimal contact	3	2	5
No contact	2	2	4

Note. Follow-up Student interview question 1: "What amount of contact do you maintain with your family today?"

Due to many of the students being raised by grandparents or other guardians, they did not possess close-knit relationships with their parents from the start, so it was not surprising that several had no contact with their families today. Many of the students commented that it was easier to keep their families separate from their studies because they would be too distracted otherwise. According to Student 2,

My family is very overbearing when it comes to school. They are always asking about my major, what my grades are, what job I will get when I graduate. It's so much pressure; I just prefer to talk to them and see them at the holidays.

Student Perceptions about Academics.

Students were asked about their educational history, including the kinds of schools attended, their experiences with advising, and engagement in extracurricular activities. The intent of this question was to explore how well prepared they were for the rigors of college. Table 4.4 shows that more than half of the students (11 of 20) believed they received no advising assistance.

Table 4.4: Primary Student Interview Question 2 - Academics

	STC	CC	Total
Advising and involvement	4	5	9
No advising and no involvement	6	5	11

Note. Primary student interview question 2: "Did you have an advisor in high school and were you involved in any extra-curricular activities?"

Although the participants in this study attend Catholic colleges, all twenty students were educated through the public school system. Two major themes emerged from student interviews about their academic backgrounds. They were: (a) Advising and involvement (in extra-curricular activities), and (b) No advising and no involvement. The students who received no advising and were not engaged in any extracurricular activities cited the lack of support they felt from their family, friends and peer group. Several students reported that they knew there was an advisor at their high school, but had never met him or her. Student 4 stated, "I'm pretty sure we had one (advisor) but I would have had no idea who she was. Nobody ever reached out to me." Other students felt they received great academic support from staff members of their middle and high schools. Student 8 reported,

As soon as I hit seventh grade, I was contacted by the counselor who told me which classes to take and what to get involved in. I thought it was super helpful and would definitely say it helped me stay on track through high school.

Student 18, shared her academic journey,

We came to this country when I was about ten years old. Up to that point, I was mostly raised by my grandma. When we moved here I was placed with my mom and step-dad...I didn't even know them or any English. There wasn't any ESL at school either, so I had to work extra hard to learn the language...they put me in second grade, way below where I should have been. It wasn't until my English improved that they realized I should be with the other kids my age, in fourth grade. I even got into advanced classes the next year. I was in AP classes from there on and graduated in the top 10 percent in my high school class.

With regards to student involvement in extra-curricular activities, many students believed it was a way to escape what was going on at home. For Student 3, football was not only an after-school activity, but a way to connect with friends and focus on something other than caring for his grandmother. He explained,

I am glad my Grandma lived with us, but it did put a lot of pressure on us kids to help care for her. My mom was always working and I usually had to make her (and my sisters) dinner at night. The nights that I had football, I could just do that and it was nice.

Many students in this study, including Student 3, were using extracurricular activities to create networks that did not otherwise exist at home, and which, in some

cases, were not afforded through contact with special teachers or advisors. This is an important theme and connects to Astin’s theory of involvement because these students were benefitting from the social relationships they created on campus and were choosing to continue their studies largely based on those bonds.

I asked two follow-up questions to primary Interview Question 2. The first follow-up question was, “Do you feel you were prepared academically for the rigors of college?” Table 4.5 presents an overview of the findings.

Table 4.5: Follow-Up Student Interview Question 2 - Academics

	STC	CC	Total
Prepared	5	6	11
Not prepared	5	4	9

Note. Follow-up interview question 2: "Do you feel you were adequately prepared for the rigors of college?"

Almost half of the students (9 of 20) interviewed said they were not adequately academically prepared for college. Some students in the study commented that they were even in advanced placement courses in high school, yet fell short once getting to college. As student 4 recounts,

I was in upper level coursework in high school, English and chemistry. When I got to college, I thought it would be a breeze. I ended up having to withdrawal from chemistry because it was way too advanced for anything I had learned in high school...

Still others credited a college preparatory program for their academic preparedness prior to college. Student 6 said,

If it wasn't for Admission Possible, I wouldn't even have known which courses to take in high school to prepare me for college. They had written out year-by-year, which classes I needed to take, which activities to get involved in, everything. It definitely helped because I got to college and had an easier time than some of my friends.

This led to the second probing question to Interview Question 2 was, "Did you participate in any college preparatory programs? If so, which program?" The results can be found below in Table 4.6.

Table 4.6: Follow-up Student Interview Question 2 - Academics

	STC	CC	Total
Admission Possible	3	2	5
College Match	3	2	5
Educational Talent Search	1	3	4
Upward Bound	1	1	2
None	2	2	4

Note. Follow-up Interview question 2: "Did you participate in any college preparatory programs? If so, which program?"

An overwhelming 80 percent of students in this study were aided in their college search process by a preparatory program. Several of the students mentioned that they were still in contact with advisors from their college preparatory program because of the strong bond they had created over their high school years. These students were

fortunate to have been given the guidance, time and resources needed to conduct a college search and are successful today.

How did the remaining 20 percent of students who said they had no assistance from a college-prep program, end up as successful college students? They attributed their accomplishments to grandmothers, former teachers and friends who told them they could do better. While these four students weren't initially targeted as "college material", you wouldn't know it now. As Student 7 explains,

We didn't have any of those college prep programs come to my school, I don't know why. I made it here because I had a teacher tell me I could be something great if I just set my sights high. I didn't have the support of my family or any money, but I had someone who believed I could do it, and I think it sort of made me believe too.

Another emerging theme is the apparent lack of formal high school advising programs. Not one student said that he or she was appropriately advised by a guidance counselor in high school. Every student in this study was either provided with a college prep program advisor or luckily had a connection with an adult who encouraged them to pursue a college education. When I asked Student 13 about her high school guidance counselor, she said, "We only had one counselor for our whole high school and I think she only worked with the straight A students. I never even met with her."

Student Perceptions of Social Networks.

Primary Student Interview Question 3 asked students about the type and strength of social relationships that were part of their adolescence, building on the assumption that such relationships are essential to forming social capital. Approximately two-thirds of the student participants cited few or weak social relationships in high school, as shown in Table 4.7. The two categories that were developed from student interviews about social networks are (a) Strong social network and (b) Weak social network. Please see Table 4.7 for the findings.

Table 4.7: Primary Student Interview Question 3 - Social Networks

	STC	CC	Total
Strong social network	3	4	7
Weak social network	7	6	13

Note. Primary student interview question 3: "What was the strength of your social network growing up?"

Several students commented on the lack of support or advice from members of their community. Student 4 said, "I was raised in such a small town that everyone assumed we all knew each other and were close-knit. In reality, everyone kept to themselves and I really didn't talk to my neighbors or do anything in the community." In contrast, Student 7 from a tight-knit community added,

In our community, all we had was each other. We all leaned on each other for support, advice, and counseling. I would say I had a really strong social network to go to for anything. They were definitely who shaped me into who I am today.

Student 17 said,

I actually grew up in a very White town. We were one of the only black families...around 5th grade I started to notice issues coming up with my race and class. We didn't have any money at home for new clothes, so I would wear the same stuff day after day and kids started picking on me. I think that's when it hit me that we were different, meaning lower class or whatever. That's why I tell people I would never move back to my hometown. I want to raise my kids in a place with diversity.

Student 14 stated, "I was really involved in my church and had a lot of people there who I could go to for help. My pastor was the one who told me about this college."

All but one student reported that their social network had grown during college. The vast majority of students in this study believe their social network is stronger now than it was throughout their adolescence. When asked to explain why,

Student 11 responded,

I think my social network is stronger because I know more people. I have closer relationships here than I have back home. I have an advisor, a close group of friends I go to with problems, professors I can ask questions to. I figure that's why it's stronger.

Student 19 explained,

I never really had people I could count on, you know? I now have the know-how to figure things out, like how to register for the GRE. I never would have known that before college. I purposely make contacts with people outside my academic department now because my advisor said I'd never know when I'd need them. And she was right, because I've switched majors and already know people in my new department. For me, social capital means understanding the world we live in and having the tools to navigate it.

For each student in this study, race and class appeared to be a factor in their pursuit of social capital. For some, being the only student of color in an all-white community was enough to create a blockade. For others, low socio-economic status set them apart from the other children and they missed out on extra-curricular activities because of low financial means. However, as seen in this study, even the students who did have strong networks within their families and communities still came up short because they were not part of the networks that were likely to generate social capital that would have been useful in college.

Student Perceptions about College Choice.

Primary Student Interview Question 4 was asked with the goal of recognizing what students thought about when making the decision to attend college, and who, if anyone was there to aid in their decision. Table 4.8 reviews the findings.

Table 4.8: Primary Student Interview Question 4 - College Choice

	STC	CC	Total
Cost	8	7	15
Size	2	3	5

Note. Primary student interview question 4: "What was the number one factor when choosing a college?"

The two strongest themes that emerged from their responses were (a) cost and (b) size. The students interviewed overwhelmingly responded that cost was a concern for themselves and their families. Student 10 said, "I grew up in such a small town that I knew I could never go to the U or anything, I knew I needed to be at a small school. That's why I came here." Student 4 said, "I didn't care where I went. I just wanted to get out of my town and knew I didn't want to work at a gas station all my life." Student 18 spoke about her path to college,

I worked part-time in high school and was trying to get good grades so I could go to college. My mom wasn't doing so well and she needed the money I made from my job. She and I didn't talk about going to college. ...I met this counselor through school and Admission Possible who told me about the benefits of being a college grad...I actually forged my parent's signatures on a travel approval form so that I could go with on a college tour. And I also forged their signatures on my final acceptance letter, and used the money I saved from my job for my deposit. ...I didn't want to stay 'in the bubble'; I knew there was more to life.

Student 14 said,

To be honest, everyone in my high school was going to college in this town. I didn't even know I could go out of state for school. I ultimately chose this school for the smaller class sizes, but now I kind of regret it because there is no real black student representation on campus and that's what I identify with most.

Two follow-up questions were asked related to primary Interview Question 4. The first follow-up question was, "Would you choose this college again if you had the chance?"

Table 4.9 presents an overview of the findings.

Table 4.9: Follow-up Student Interview Question 4 - College Choice

	STC	CC	Total
Yes	9	8	17
No	1	2	3

Note. Follow-up interview question 4: "Would you choose this college again if you had the chance?"

All but three students were happy with their choice of college, even if it initially was a choice based largely on cost and proximity. All three of those who indicated that they would have preferred to be elsewhere cited low diversity within the student body on campus. When probed further about their feelings regarding the mission of the college, most were very positive. Surprisingly, one-third of students in this study did not know that their college had a Catholic affiliation until after they arrived on

campus.

It is notable that the majority of students in this study a) attended a college they had not intended on, and b) were not aware of certain academic programs or school affiliations upon entrance. While they were still successful, it is important to notice the unplanned nature of these students' paths as it appears common among first-generation students.

Student Perceptions about their Individual Success and Future Plans.

Primary Student Interview Question 5 was asked so that students could reflect on their achievements so far and look ahead to their future after college. Table 4.10 displays an overview of the students' feelings towards graduation.

Table 4.10: Primary Student Interview Question 5 - Reflection on College Experience

	STC	CC	Total
Sense of pride	3	4	7
Anxiety	7	6	13

Note. Primary student interview question 6(b): "How do you feel as you approach graduation?"

Students in this study possessed very high levels of motivation to finish college. All twenty students believed strongly that they would graduate from their respective institution. When asked how he felt as graduation approached, Student 13 gave a response that was echoed by a majority of the students interviewed,

I'm scared. I don't know yet if I'll get into grad school, or where I'll work if I don't. I mean, sure, I'm proud of myself for making it this far and know my

family will be proud too because they always wanted this for me. But where do I go next, I don't know.

Student 20 reflected by adding,

No, I never thought I'd be sitting here talking about graduating next Spring. I didn't think of myself as someone who could go to college in the first place, so to be almost finishing my degree is really cool. I didn't end up being the doctor or lawyer that my parents hoped I would be, but I'm doing something that I wanted to do, which is important. I know they're still going to be proud of me once they see I can earn a living and take care of myself. I owe a lot to my advisor who really stood by me and told me I could do better than I thought I could.

Student 2 said about her upcoming graduation,

Yeah, it's scary. It's like starting all over again. But I've worked really hard and know my family is proud of me. I know now that I am the example for my nieces and nephews back home so they can look to see that their Aunt did it – she was the first one to make it. That makes me happy.

The follow-up question asked was, “What do you plan to do after graduation?” See Table 4.11.

Table 4.11: Follow-up Student Interview Question 5 - Future Plans

	STC	CC	Total
Work	4	1	5
Graduate School	4	8	12
Undecided	2	1	3

Note. Follow-up interview question 6: "What do you plan to do after graduation?"

Most students at CC were planning to pursue graduate studies, while students at STC were applying for jobs. For all of the students in this study, their future plans were met with a mix of excitement and trepidation. Just as it was scary transitioning from high school to college, this next step of life after college appeared to be equally as daunting. With the national economy in a downturn and many of them with families counting on them to earn a living, it seemed to be an anxiety-ridden time for them while deciding which path to take next. Student 16 expressed it this way,

We are all of course excited to be graduating soon, but we have a lot riding on our next move too. I'm going to be the first one ever in my family to have a college degree. That's something that comes with a lot of pride and a lot of responsibility. When I was little I would hear about people getting their college degrees and thought I wanted that to be me someday. Yeah, it feels great to be approaching my goal of graduation and yet scary to look ahead to the next thing, too.

The fear and trepidation regarding their next steps was an emerging theme throughout the interviews. All but four students expressed fear and anxiety about their future after college. The four students who were excited and confident of their path had already taken entrance exams and applied to several graduate schools with high hopes of being accepted.

Student Perceptions about College Mentoring Experience.

Question 6 gave students an opportunity to share their feelings about the mentoring program they were presently in. The question was also asked to understand whether a relationship existed between the student’s academic success and participation in the mentoring program. Table 4.12 presents an overview of the findings.

Table 4.12: Primary Student Interview Question 6 - College Mentoring Experience

	STC	CC	Total
Supportive relationships formed within program	6	9	15
Increased personal accountability	4	1	5

Note. Primary student interview question 5: "How would you describe your current college mentoring experience?"

Two common themes emerged in the responses to primary Interview Question 6 regarding what mentees thought about the program. They were (a) The program enabled them to connect with faculty, staff, and peer mentors, which provided them with supportive personal relationships, and (b) A belief that the mentoring program gave them greater personal accountability. Student 2 expressed how the mentoring program aided in the creation of new social network ties:

From the beginning with the retreat, and getting to know everyone, like the mentors, and other first-generation students, it's been fun. They have you attend these workshops and seminars and it makes you get out there and meet people...people who I probably wouldn't have met otherwise. In fact I chose my major because of a professor I met who was mentoring. I think the program on campus is an excellent program and should be offered to more students.

Student 3 addressed the accountability theme by saying,

This program really makes sure everyone is on track to graduate. You need to fulfill certain requirements to keep your scholarship and they make sure you're doing everything you need to so that you can reach your goal. Not only the program director and mentors, they are looking out for you, but the other students in the program too. We always check to see if we're where we need to be. We've become friends. And it makes us more accountable.

When referring to one of her mentors on campus, Student 6 said, "She's my lifeline. I wouldn't have made it this far without her."

Student 1 summed it up this way:

I can honestly say I wouldn't be a senior today if it wasn't for this program. I thought about dropping out several times and each time I was told I could make it by my mentor and friends. College, it's not easy, you know, but if you

have people counting on you and believing in you, you can do it. This program is about working hard, staying on track and counting on each other. From the first orientation, I knew I would make lots of close friends because we're all first-generation you know, and I did.

Student 10 added,

Coming from a family who struggled to get to where we are, I always thought we were the different ones in my neighborhood. Now being here, with other students who share similarities to my story, it's really great. I've realized that everyone has a story. And most of us are really motivated, you know? We are all focused on why we're here, and know that our parents sacrificed so much for us to get here.

The follow-up question asked was, "What changes, if any, would you like to see made to the mentoring program you participate in?" Table 4.13 presents an overview of the findings.

Table 4.13: Follow-up Student Interview Question 6 - College Mentoring Experience

	STC	CC	Total
Additional social activities	5	7	12
More academic counseling	2	2	4
Greater diversity	3	1	4

Note. Follow-up interview question 5: "What changes would you like to see in your mentoring program?"

While the focus of this study is on the lived experiences of its participants and not on the mentoring programs themselves, students did offer suggestions for change. The suggestions cluster in three areas: (a) the program needs additional social activities by which students can create stronger peer networks, (b) the program needs more opportunities for academic counseling, and (c) the program needs greater diversity. Student 16 said that the program should allow for more social occasions for mentees and mentors to “get to know each other.” He continued by saying,

I didn't really know anybody when I started in this program and I've been matched up with some mentors I haven't jelled with. I just think it would be nice to have some more time to get to know everyone. I haven't felt comfortable going to him for advice, I just come to this office for help if I need it, or the counseling office.

Student 5 talked about the need for earlier and additional academic counseling, and pointed to her own and her family's lack of experience in making good choices:

I wish they would have talked to us more freshman year about what major we wanted. I told them I wanted BioChem to be a doctor, and they never questioned me. When I got to my first chemistry class I was so over my head and needed to drop before I failed. It set me back and was so upsetting for my family and for me because I didn't know what I wanted to do then. I've changed my major three times since.

The diversity issue was raised by both students of color and those who were white.

Student 8, for example, noted that:

I wished that the program had more students in it that were also white. Not that I haven't loved meeting all of the students of color in the program, but everyone just assumes that if you're first-generation, you're of color. When really, there are a lot of first-generation students who are white like me. I think even some of the students in the program look at me thinking like 'what is she doing here?' because they see my blonde hair and think I must be rich or something. But I need the help too.

Summary

The motivation for this study was the absence of research in the literature about what contributing factors enable first-generation students to succeed in college. This exploratory, phenomenological study used in-depth personal student interviews as the primary means of data collection. The themes emanated from the students' perspectives in response to six primary interview questions.

Chapter 5 elaborates on the findings of the study through an examination of themes as they correspond to the literature. The next chapter also includes the theoretical foundation of the study, as well as an application of the findings to policies and practices surrounding college mentoring programs. Chapter 5 will address study assumptions, limitations and offer conclusions drawn from data analysis. Finally, the next section will offer recommendations for future research and closing remarks.

Chapter 5: Discussion and Conclusion

Introduction

The motivation for this study was to explore the common characteristics and dimensions of high-achieving, low-income, first-generation students, an area of research that had been insufficient in current literature. This chapter examines these characteristics while also considering the current research and framework described above. Finally, this chapter summarizes and distinguishes findings from prior research, describes the limitations of the current study, and offers recommendations for future research and practice.

Summary of the Study

The purpose of this study was to examine the common characteristics of high-achieving, low-income, first-generation students participating in college mentoring programs, through a qualitative, multi-case study design. Research was conducted at two private, four-year colleges in the Midwest to seek answers to the following questions:

1. How do first-generation students access and utilize social capital gained from mentoring programs as a bridge for success?
2. What formal and informal structures and networks are utilized in co-curricular involvement for increased social capital?

Findings

Several contributing factors leading first-generation students to success were identified as a result of the research. Perhaps the most evident finding was that two forms of social capital, pre-college mentoring and family support/pressure, allowed the students in this study access and success in college. The vast majority of students were the benefactors of pre-college mentoring, which provided them access to guidance counselors who assisted with financial aid, entrance exams, college tours and application essays. While mentoring programs in college are vital to the success of first-generation students, this study revealed that the pre-college mentoring programs carry equal or greater importance. These programs provide access to the weak ties that students have with regards to finances, family support, and academics.

The study's findings suggest that when students have the right support -- familial, academic, and programmatic -- they will succeed at higher numbers than their peers who are also first-generation. Results of the study also found that first-generation students believed the mentoring program they were in provided them with the additional resources, support, and encouragement needed to be successful at the college. Administrators reported that they believed the program was a valuable tool for improving retention and persistence of first-generation students at the college. Additionally, students and administrators believed that the program should be a vital part of the college as they seek ways to improve retention and persistence; and finally, that the college should find ways to make the program available to more students. The majority of students at STC and CC offered praise for the mentoring programs in

which they participated. Mentees praised the program for attempting to improve persistence and retention among the first-generation population. The students also commended the program for the efforts that mentors, staff and administrators gave to them personally. Students mentioned workshops, scholarships, training sessions, academic assistance and personal growth as major contributors to their success and persistence. The students also credited the program with enabling them to become more accountable and/or more responsible for their own education and future. All 20 students reported that they planned to continue their studies and graduate.

Nora and Crisp (2007) stated that mentoring efforts increase retention rates and should be considered a vital component of any retention decision. I expected that the same would hold true at STC and CC. Both mentoring programs, as perceived by the program participants, were believed to have increased retention and persistence. The perceived increase in retention and persistence was reported by the mentees themselves and also discussed by the mentors and administrators who participated in interviews. By participating in the mentoring program, mentees believed the support, encouragement, and additional resources allowed them to achieve their educational goals, predominantly to complete their Bachelor's degree.

The study also found that several formal and informal structures were utilized in order for the students to gain social capital. The most commonly mentioned structures were the college preparation programs that included 16/20 students in this study. Were it not for those programs, many of the students may not have attended college. In addition, the mentoring programs on each campus were a great source and

foundation of social capital for the students. Some examples mentioned were the connections made with faculty in a student's academic department which lead to collaborative research in their field or an internship, as well as mentors connecting students with professors who were also first-generation so that they could share experiences. In addition, each program exposed participants to various experiences which, in turn, led to greater interest in the college community as a whole, and a greater sense of connection and identity. This involvement in the college community was a key factor in Tinto's (1975) retention model in which (a) peer interactions and faculty interaction and (b) social interaction were paramount in gaining institutional commitment. As mentioned earlier, institutional commitment is vital in retaining students from one semester to the next, especially first-generation students who often leave college after the first year. Retention and persistence are major concerns for all institutions of higher education, and it is believed that with the successful implementation of a mentoring program, institutions may expect to see higher rates of persistence and graduation.

Although the college mentoring programs and networks were beneficial to students in this study, I found that they were less important than I expected. While the data suggests that college mentoring programs create a safe space for first-generation students to support each other, there was not much evidence that the programs provided the students with a new set of skills to thrive in the college environment. However, this may be because both institutions in this study were small, private

Catholic colleges, where finding peer groups tends to be less difficult than in larger institutions.

With regards to the college's mission having an impact on the success of low-income, first-generation students, both of the colleges in this study, STC and CC, were religiously affiliated and shared strong similarities around their mission for social justice and helping the disadvantaged. Is it a coincidence that private, religiously affiliated institutions have higher rates of success among first-generation students? While the students in this study chose to attend their school based more on cost and size, nearly all of the students interviewed said that once they got to campus and learned more about the culture, it was comforting and supportive. Even the students who declared they were not Catholic said they enjoyed the perceived peace and spirituality that filled the campus.

Although this study was relatively small with only twenty students, it did reveal that as a whole, many similar characteristics exist among the group. In addition, this study also revealed that the mentoring programs the students at STC and CC participated in were making a difference in the lives of all participants. Each program has its individual goals, but both are in place to help low-income, first-generation students succeed in achieving a college degree. Both programs have the ability to be adopted by other institutions that wish to make a positive impact on its first-generation student population.

It should be noted that while the perceptions of participants would indicate that the mentoring programs at STC and CC had a positive effect on retention and

persistence among first-generation students, no definitive statement can be made about such a claim, since this study was focused on the characteristics of the students in the program and not on the programs themselves.

Limitations

Limitations establish the boundaries, exceptions, and reservations for the study (Creswell, 2003). This study confined itself to the review of two small, private Catholic colleges in the Midwest. Limitations of the research study indicate potential weaknesses of the study (Creswell, 2003). There are several limitations to this study. First, purposive sampling decreases the external validity and generalizability of findings. With only two cases in this study, the findings may not be generalizable to all four-year private colleges. This may be especially true for large institutions. Small institution size and residential character may also be critical.

Second, because the study is exploratory in nature, it should not be used as a basis for generalization to other institutions or contexts. The sole value of this study lies in the stories of the participants, as told by them, to highlight important characteristics and experiences. This can be viewed as a limitation since the students shared their stories as only they knew it.

Third, the interviewees were referred to me by the mentoring program director or administrators and staff members of the program and therefore a potential selection bias may exist.

Finally, I acknowledge that I bring certain perspectives and biases to the research process as a first-generation student myself. I was however mindful of these limitations at all times and strived to be open-minded and objective.

Recommendations for Future Research

Findings in this study opened up avenues for future research regarding first-generation students. Mentoring is one established method used to increase persistence and retention in higher education (Pascarella & Terenzini, 2005). Going forward, and as resources continue to remain scarce at many colleges, it will be very important for higher education administrators and state government officials to have current data available to make decisions about which intervention programs to fund and which should be discontinued.

The first recommendation involves a larger, longitudinal study which would follow students for the duration of high school through their senior year in college. It seems important to track their levels of motivation from the beginning of high school when most students begin learning about college application requirements and processes. Similarly, it would be interesting to focus on only one or two personal attributes specifically to really see its impact on the students' decision to attend and graduate college. The suggested attributes would be personal drive to succeed and familial support.

Another area of research worth exploring is the relationship between college preparatory programs and first-generation student enrollment, retention and

graduation. Valuable government sponsored programs such as Educational Talent Search and Upward Bound, as well as privately funded programs such as Admission Possible and College Match, are making amazing strides in their efforts to educate low-income, first-generation students about their options for higher education. In fact, the vast majority of the students in this study said that one of the aforementioned programs worked with them to provide academic or financial counseling and encouraged them to graduate from high school and continue on to complete their postsecondary education.

While this study was focused on the individual student's perceptions of success, there would be value in conducting a correlation statistical analysis of persistence and academic success derived by first-generation students in a particular mentoring program. A researcher could determine the effectiveness that one mentoring program had by comparing the first-generation students' GPAs of those who participated in the mentoring program to the GPAs of the first-generation students who did not participate over the same time period. This would likely need to be a quantitative study to obtain the research desired. Findings from this type of study could result in statistical data contributing to the knowledge that mentoring programs are beneficial to all students, but particularly to low-income, first-generation students.

Additionally, this study was conducted at two private, Catholic colleges with strong religious missions to help others. While the students in this study discussed the mission of the college briefly with the researcher, it was not the focus of this study. It would be interesting to create a study solely surrounding the issue of first-generation

students at religiously affiliated colleges and track their achievement over time versus first-generation students at public universities. One might investigate what impact, if any, the religious mission of the college has on the programming offered to first-generation students and ultimately, their academic success.

Further, during the interviews I conducted with students, they shared intimate details of their upbringing and present experiences as a first-generation college student. During these interviews, some students specifically detailed how their race and ethnicity played a role in the creation or lack of social capital. While I could have focused on the role their race and ethnicity played on their current status of a successful first-generation student, I chose instead to ask all of my questions focusing solely on their identity and experience as a first-generation student, instead of as a first-generation student of color, for example. For future studies, I suggest the researcher take the student's race and ethnicity further into account, as it contributes to the student's identity as a first generation student attempting to gain social capital.

Finally, in light of an important finding from this study - the vital presence of pre-college mentoring programs, I suggest a need to focus more on the way in which pre-college and in-college mentoring programs support each other. The findings also suggest that expanding the opportunities for pre-college mentoring may be as important as college mentoring, and would be worth investigating further.

Implications for Policy

This study is important because it sheds light on instances of high academic

achievement among low-income, first-generation students. This study aims to provide a better understanding of what can be done for low-income, first-generation students to succeed academically and socially by revealing common themes for their success.

After unveiling the common characteristics surrounding high-achieving first-generation college students, it is my hope that this study will enable students, administrators, and policy makers the opportunity to mobilize and re-organize current social networks of first-generation students so that success in college may be achieved.

Conclusion

It has been well-documented that first-generation, low-income students face substantial barriers as they graduate high school, enter higher education, and attempt to earn a college degree. This study focused solely on the stories of 20 high-achieving, first-generation college students who were beating the odds. Valuable information can be gained just by listening to the stories first-generation students have to share about the paths they have taken on the road to higher education. Some important findings that emerged from this study include the fact that the vast majority of students in this study received guidance from a college preparatory program prior to enrolling in college. All but two students in this study believe that their success in college is attributable to one main characteristic – a personal drive to succeed. And all of the students interviewed believed the mentoring program they participated in benefitted them greatly in their pursuit of their college degree. These students want more than anything to make their families proud and make a better life for themselves

and the next generation.

Students such as Jose and Maria help us understand that the road is definitely longer and more challenging for first-generation students, but it can also be very rewarding. As Jose said, “Anything is possible, right? If I can do this, anyone can.” Jose stayed strong and thanks to the mentoring program at his college, wonderful advisors, and a steadfast desire to succeed, he graduated in May, 2012.

While many first-generation students are not succeeding in higher education, there are countless others who are. This study calls attention to their stories, recognizes their common attributes and the structures that have been in place to help them succeed.

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Appendix A

INFORMED CONSENT FORM

Pathways to Success in Higher Education: Understanding the Influence of Mentoring Programs on First-Generation Students

You are invited to be in a research study of high-achieving first-generation college students. You were selected as a possible participant because you are a successful first-generation college student. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Stefanie Hegrenes, Doctoral Candidate, Department of Educational Policy and Administration, University of Minnesota

Background Information

The purpose of this study is to explore the common characteristics of high-achieving, low-income, first-generation students through interviewing students at two private colleges in the Midwest. This study is important because it will focus on instances of high academic achievement among low-income, first-generation students. This study aims to provide a better understanding of what can be done for low-income, first-generation students to succeed academically and socially by revealing common themes for their success.

Procedures:

If you agree to be in this study, we would ask you to participate in a one - two hour interview discussing your educational path. You would be audio taped.

Risks and Benefits of being in the Study

While the risks of the study are minimal, you may feel uncomfortable with the questions I ask. If you are uneasy about the topic I am asking about, you may choose not to answer and may voluntarily end the interview at any time.

The benefits to participation include furthering research in the area of first-generation college students.

Compensation:

You will receive payment: I will purchase food for you to enjoy during our interview.

Confidentiality:

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records. I am the only person who will have access to the audio tapes used in our interview and they will be erased following transcription.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota, XXXXXXXX or XXXXXXXX. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is: Stefanie Hegrenes. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact me at 612-812-XXXX or hegre014@umn.edu. You may also contact my advisor: Dr. Karen Seashore, 612-626-XXXX, klouis@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature: _____

Date: _____

Signature of Parent or Guardian: _____

Date: _____

Signature of Investigator: _____

Date: _____

Appendix B

Interview Design

Introduction

Despite the considerable contributions of existing research and initiatives to better understand low-income, first-generation students, one important view of the achievement gap has been ignored. Relatively little attention has been paid to the factors affecting high-achieving, first-generation students' academic success. Most research in this area has focused on revealing the barriers these students face. While the majority of low-income, first-generation students are not succeeding in higher education, there are many who are. It is beneficial to understand the students who *are* succeeding and explore their paths to degree attainment.

Mentee Interview Questions:

Primary (P) and probing (p) Interview Questions for mentees:

Theme: FAMILY

P1. How were you raised?

p1. What amount of contact do you maintain with your family today?

Theme: ACADEMICS

P2. Did you have an advisor in high school and were you involved in any extra-curricular activities?

p2a. Do you feel you were adequately prepared for the rigors of college?

p2b. Did you participate in any college preparatory programs? If so, which program(s)?

Theme: SOCIAL NETWORK

P3. What was the strength of your social network growing up?

p3. Is your social network stronger or weaker today? Why?

Theme: COLLEGE CHOICE

P4. What was the number one factor for you when choosing a college?

p4a. Would you choose this college again if given the chance?

p4b. How do you feel about the mission of the college?

Theme: INDIVIDUAL SUCCESS & FUTURE PLANS

P5. What do you believe got you this far in your college experience? What led you to this place?

P5a. How do you feel as you approach graduation?

P5b. What do you plan to do after graduation?

Theme: COLLEGE MENTORING EXPERIENCE

P6. How would you describe your current college mentoring experience?

P6a. What changes, if any, would you like to see made to the mentoring program you participate in?

Appendix C

Interview Question Results

Mentee Interview Questions:

Primary (P) and probing (p) Interview Questions for mentees:

Theme: FAMILY

P1. How were you raised?

Received No or Minimal Support from Family	75%
Well Supported by Family	25%

p1. What amount of contact do you maintain with your family today?

Full Contact	55%
Minimal Contact	25%
No Contact	20%

Theme: ACADEMICS

P2. Did you have an advisor in high school and were you involved in any extra-curricular activities?

Advising & Involvement	45%
No Advising & No Involvement	55%

p2a. Do you feel you were adequately prepared for the rigors of college?

Prepared	55%
Not Prepared	45%

p2b. Did you participate in any college preparatory programs? If so, which program(s)?

Admission Possible	25%
College Match	25%
Educational Talent Search	20%
Upward Bound	10%
None	20%

Theme: SOCIAL NETWORK

P3. What was the strength of your social network growing up?	
Strong Social Network	35%
Weak Social Network	65%

p3. Is your social network stronger today? Why?	
Yes	95%
No	5%

Theme: COLLEGE CHOICE

P4. What was the number one factor for you when choosing a college?	
Cost	75%
Size	25%

p4a. Would you choose this college again if given the chance?	
Yes	85%
No	15%

Theme: INDIVIDUAL SUCCESS & FUTURE PLANS

P5a. How do you feel as you approach graduation?	
Sense of Pride	35%
Anxiety	65%

P5. What do you plan to do after graduation?	
Work	25%
Graduate School	60%
Undecided	10%

Theme: COLLEGE MENTORING EXPERIENCE

P6. How would you describe your current college mentoring experience?

Formed supportive relationships within program	75%
Increased Personal Accountability	25%

P6. What changes, if any, would you like to see made to the mentoring program you participate in?

Additional Social Activities	60%
More Academic Counseling	20%
Greater Diversity	20%

Appendix D

UNIVERSITY OF MINNESOTA

Twin Cities Campus

*Human Research Protection Program
Office of the Vice President for Research*

*D528 Mayo Memorial Building
420 Delaware Street S.E.
MMC 820
Minneapolis, MN 55455
Office: 612-626-5654
Fax: 612-626-6061
E-mail: irb@umn.edu or ibc@umn.edu
Website: <http://research.umn.edu/subjects/>*

09/09/2011

Stefanie A Hegrenes
1998 Williams St.
Shakopee, MN 55379

RE: "Understanding the influence of mentoring interventions on Bachelor's degree attainment for first-generation students at Catholic, four-year institutions: A social capital perspective"
IRB Code Number: **1108P03783**

Dear Dr. Hegrenes:

The Institutional Review Board (IRB) received your response to its stipulations. Since this information satisfies the federal criteria for approval at 45CFR46.111 and the requirements set by the IRB, final approval for the project is noted in our files. Upon receipt of this letter, you may begin your research.

IRB approval of this study includes the consent form dated September 6, 2011 and the recruitment letter dated September 5, 2011.

The IRB would like to stress that subjects who go through the consent process are considered enrolled participants and are counted toward the total number of subjects, even if they have no further participation in the study. Please keep this in mind when calculating the number of subjects you request. This study is currently approved for 20 subjects. If you desire an increase in the number of approved subjects, you will need to make a formal request to the IRB.

For your records and for grant certification purposes, the approval date for the referenced project is August 30, 2011 and the Assurance of Compliance number is FWA00000312 (Fairview Health Systems Research FWA00000325, Gillette Children's Specialty Healthcare FWA00004003). Research projects are subject to continuing review and renewal; approval will expire one year from that date. You will receive a report form two months before the expiration date. If you would like us to send certification of approval to a funding agency, please tell us the name and address of your contact person at the agency.

As Principal Investigator of this project, you are required by federal regulations to inform the IRB of any proposed changes in your research that will affect human subjects. Changes should not be initiated until written IRB approval is received. Unanticipated problems or serious unexpected adverse events should be reported to the IRB as they occur.

The IRB wishes you success with this research. If you have questions, please call the IRB office at 612-626-5654.

Sincerely,



Christina Dobrovolny, CIP
Research Compliance Supervisor
CD/ks

CC: Karen Seashore