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PATH TO THE PROFESSORIATE FOR HIGH-ACHIEVING,

FIRST-GENERATION COLLEGE STUDENTS

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PATH TO THE PROFESSORIATE FOR HIGH-ACHIEVING,
FIRST-GENERATION COLLEGE STUDENTS

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

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ABSTRACT

The researcher conducted nine interviews with high achieving first-generation college students who were able to overcome difficulties in order to gain access to higher education, persist through the maze of obstacles that confronts all students, and attain advanced degrees on the path to the professoriate. Analysis of the interviews followed the constant comparison method. Two in vivo codes emerged out of the data. First, the seeker code reflects the internal drive and observable behaviors common to the high achieving first-generation college students who served as interview participants. Second, the navigator code represents the range of individual relationships that facilitated the development or empowerment of the seeker. The navigators observable functions were as follows: adviser, champion, coach, confidant, classic mentor/protégée, facilitator, guide, protector, role model, sponsor, teacher, or tutor.

These two in vivo codes were interrelated with code constructs for parental influence, pre-college experience, institutional selection, persistence factors, attainment qualities, educational attainment, and career choice in order to explain the phenomenon. The theory that developed is grounded in the data gathered in this study. Prior to entry into college each of these high achieving first-generation college students (seekers) exhibited at least two out of four positive factors: academic success, college expectation, culture of possibilities, or models of hard work. Eight of the participants earned a Ph.D. and one a J.D. followed by an MLIS and allare currently employed in a doctoral granting institution. All participants experienced both negative and positive factors during their higher education. The cumulative influence did not prevent these individuals from earning advanced degrees and gaining access into the professoriate.

CHAPTER I

Introduction

Each year there is a large high-risk group of students who participate in American higher education. These students include peoples from across ethnicities, religions, genders, geographic areas, and even socioeconomic levels within society. The students in question are those whose parents did not attend college, known in higher education research as first-generation college students (Terenzini, Springer, Yeager, Pascarella, & Nora, 1996). This group of students, as a whole, is under prepared for access into postsecondary education, with almost half lacking the academic qualifications for admission to a 4-year college (Choy, 2001). This term should not be confused with the designation of first-generation American. Even though it is possible for a student to be both a first-generation college student and a first-generation American, one does not imply the other. For the purpose of this study a first-generation college student is a college student whose parents had not attended college at the time of his or her first enrollment.

The practical fact is that, for whatever reason, first-generation college students are less likely to go beyond high school than those whose parents attended or graduated from college. Choy (2001) found the following:

Among 1992 high school graduates whose parents did not go to college, 59 percent had enrolled in some form of postsecondary education by 1994. The enrollment rate increased to 75 percent among those whose parents had some college experience, and to 93 percent among those whose parents had at least a bachelors degree. (p. 7)

Even though first-generation college students are less likely to enroll in postsecondary education it is notable that each year this group represents 43% of the first-time students across America. The percentage of first-generation college students declines in institutions as time to degree rises (i.e., from community college to a 4-year college) or as program completion requirements become more difficult. The proportion of first-generation college student enrollment represents 73% for institutions requiring less-than-2-years (these institutions do not necessarily offer collegiate instruction, e.g., cosmetology schools), 53% of 2-year colleges, and 34% of 4-year colleges (Kojaku, Nuñez, & MPR Associates, 1998; Nuñez & Cuccaro-Alamin, 1998).

First-generation college students are not only less likely to gain access to postsecondary education, but they are less likely to persist in college. First-generation college students are twice as likely to drop out and not return prior to their second year of college as those whose parents attained a baccalaureate degree. For first-generation college students whose entry goal was a bachelor degree, only 52% are still enrolled in college after three years. After three years even the best academically prepared first-generation college students, who started in a 4-year college, are 25% less likely to persist on track to the baccalaureate degree than students whose parents graduated with bachelors and advanced degrees (Choy, 2001).

First-generation college students who persist continue at a disadvantage when it comes to degree attainment. Institutional selection is the first obstacle for first-generation college students since the majority (51%) choose to enroll in a 2-year college (Nuñez et al., 1998). This choice becomes an educational glass ceiling for the vast majority of these students (Rendón, 1994). The best possible transfer rate for all students (regardless of

their parents educational attainment) from 2-year to 4-year institutions would be about 25% (Cohen, 2003). Allowing for the different enrollment access choices, higher drop-out and lower transfer rates, few first generation college students earn a college degree. After five years only 13% of first-generation college students graduate with a bachelors degree versus 33% for non-first-generation college students (Choy, 2001). This means that first-generation college students, who are nearly half of the entering freshman class, are outnumbered in baccalaureate degrees earned by non-first-generation college students by a 5 to 2 ratio.

Are the 13% of first-generation college students who attain a baccalaureate in the same position as non-first-generation college graduates after college? The answer appears to be complex. It is yes for those who join the labor force because all graduates received equivalent salaries for similar jobs. However, when graduate enrollment is considered the answer is no. There is not equivalence between first-generation college students and non-first-generation college students moving on toward advanced degrees. First-generation college students are less likely than those whose parents hold bachelors or advanced degrees (25% versus 34%) to enter graduate school (Cohen, 2003).

There is equivalence in MBA and other masters program enrollment, but when first-professional and doctoral enrollment are examined there is a significant gap. Statistics show that only 2% of first-generation college students enroll in first-professional programs (i.e., law, medicine, religion). Only half as many first-generation college students enroll in doctoral programs (1%) as enter first-professional programs. In contrast, students whose parents had some college are more likely to enroll in first-professional programs and three times (3%) more likely to enter a doctoral program. The

gap widens even more for students whose parents hold degrees. These students are three times more likely to enroll in a first-professional program (6%) and four times more likely to enroll in a doctoral program (4%) than first-generation college students. When graduate enrollment is considered, first-generation college students who graduate do not appear to have been remediated through the process of attaining a baccalaureate degree (Choy, 2001).

It is not a surprise that research has identified that socioeconomic status has a positive correlation with enrollment and re-enrollment in the same college, as well as entry into graduate school. However, the level of parental educational attainment has greater impact than socioeconomic status (Astin, 1993). The first-generation college student has greater difficulty than the non-first-generation college student in access, persistence, and baccalaureate degree attainment. In addition, the impact of parental education attainment continues into the graduate enrollment patterns of first-generation college students. This means that even for those first-generation college students who attain the baccalaureate degree, their parents' educational attainment has a greater effect on graduate school enrollment than socioeconomic status.

Statement of the Problem

The problem of this study states that universities are poorly equipped to help first-generation college students gain educational success and attain advanced degrees. These high-achieving, first-generation college students have gained access to higher education, persisted through the maze of obstacles that confronts all students and attained the highest educational degree available to the American university student. There is no satisfactory understanding as to how or why these same students become high-achievers.

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Purpose of the Study

The purpose of this study is to explain the phenomenon of high-achieving, first-generation college students who became faculty members. An optimal place to discover high-achieving, first-generation college students is among those students who have succeeded in a graduate doctoral program. This is typically the Ph.D. or a doctorate attached to a particular discipline (e.g., Ed.D. or D.P.A.). The most accessible group of successful first-generation college students out of these doctoral degree programs are American university faculty. The general areas of study will focus on: parental educational attainment, personal educational attainment, institutional selection, educational influences, and paths into the professoriate. In order to explain the process of how high-achieving, first-generation college students succeeded, this study will examine the following: first, what factors helped the student gain access into higher education; second, why were they able to persist through the process; third, how was degree attainment made possible; fourth, what influences helped them move through higher education and into the academy? While finding a position in the professoriate is neither the only option open to these individuals nor an exclusive measure of success, it does allow insight into how these first-generation college students moved beyond degree attainment. One first-generation college student, Gallos (1996), expressed her circumstances in becoming a professor by the following:

> I had little knowledge of academic life. Graduate courses and doctoral seminars
> did little to fill the gap. I knew that professors taught classes and published
> research. I had no idea how that translated into day-to-day behavior. I was the first

member of my family to attend college, let alone the first with any thoughts of

teaching in one (p. 12).

In this case a high-achieving, first-generation college student does not feel that she has

any real knowledge of the professoriate even though she has moved from being a student

to being a professor.

Numerous researchers have studied failure among first-generation college

students. These students are less likely to enroll in college, more likely to drop out, and

produce fewer graduates than the national average. Little work has been focused on those

who succeed in the academic environment, specifically those who became academicians.

Through the study of educational success, future first-generation college students may be

helped in educational access, persistence, and attainment. The rationale is that by

examining high-achieving, first-generation college students currently serving in the

professoriate, future first-generation college students may be helped so as not to

perpetuate the pattern of failure which has existed for so many.

The practical implications of this study will be to provide knowledge to higher

education professionals to assist in better decision making on behalf of first-generation

college students. This should include recruitment of this population to the university,

development of admissions criteria, and financial assistance to provide greater access for

first-generation college students. First-generation college students are at-risk in the

current collegiate environment and strategies need to be formulated and implemented to

help these students survive and succeed in greater numbers. The degree attainment

numbers should be improved by better decisions, design, and the development of

strategies and programs to improve personal, social, and academic success for first-

generation college students. To have knowledge about how first-generation college students succeed and not act upon it excludes large numbers of potential students from higher education access, persistence, and degree attainment. This failure would perpetuate the exclusion of first-generation college students who are in need of the socioeconomic lift that higher education provides.

Research Questions

The research questions used to study high-achieving, first-generation college students from among the professoriate will be:

1. What role does parental educational attainment play in the educational success of high-achieving, first-generation college students?

2. What is the personal educational attainment of high-achieving, first-generation college students?

3. How does institutional selection affect high-achieving, first -generation college students' degree attainment?

4. Are there educational influences for high-achieving, first-generation college students that they perceive as having contributed toward their educational success?

5. What paths did first-generation college students follow or take into the professoriate?

These questions will be investigated through interviews conducted with university professors who were first-generation college students when they entered higher education. An interview protocol will be used and refined to investigate possible factors that influenced themin both educational success and career selection.

Definition of Terms

For the purpose of this study, the following definitions will be used:

Carnegie classification ‒ Refers to criterion used by the Carnegie Foundation for the Advancement of Teaching to categorize institutions of higher education in 2006 (Carnegie Foundation, 2006).

Educational access ‒ Refers to a student's pre-collegiate academic preparation, institutional admissions qualifications, and actual enrollment in an institution of higher education.

Educational attainment ‒ Refers to the level of higher education determined by using enrollment experience and academic degrees earned by individuals as benchmarks of success.

Educational persistence ‒ Refers to students who continue to enroll in higher education allowing for the continued possibility for a student to earn a degree.

First-generation college student ‒ A college student whose parents did not attend college prior to the student's first-time enrollment in college.

High-achieving, first-generation college student ‒ A college student whose parents did not attend college prior to the student's first-time enrollment in college, who is able to complete a doctors degree (definition is for the purpose of this study only and does not discount the fact that many other first-generation college students are successful for a variety of reasons).

Non-first-generation college student ‒ A college student whose parents have enrolled in college or attained a college degree prior to the student's first-time enrollment in college.

Phenomenon — As used in Phenomenology refers to the description of the conscious experience of everyday life and the description of things as an individual experiences them. The experiences of individuals may be reported as believing, deciding, evaluating, feeling, judging, perceiving, remembering, and all experiences of bodily action. In this study the focus is not on the facts of this phenomenon, but the meaning it possesses for the participants (Moustakas, 1994; Schwandt, 2001).

Professoriate — Refers to faculty of any academic rank or tenure track who have attained an advanced degree in their field and hold a faculty position at a doctoral granting institution.

Need for the Study

A large body of research has been accumulated for first-generation college students. The literature falls into the following groupings: pre-college characteristics and college choice, transition into the college environment, cognitive development, plus persistence and educational attainment. The practical application of much of the research has been to develop strategies and programs to assist first-generation college students gain access, persist, and attain baccalaureate degrees in college.

The research on first-generation college students diminishes when one focuses on advanced degree attainment. In the book "Over the Ivy Walls," the educational mobility of Hispanics who earned first-professional and terminal degrees was examined. Each was the first in his orher family to go to college and interviews were analyzed to find characteristics common to educational success of the participants (Gándara, 1995). Rodriguez (2001) studied first-generation college students, but her definition of success was somewhat different than that of Gándara. Success for the Rodriguez study was

defined as educational or social activism rather than education. All participants had earned a baccalaureate degree, 65% of participants had masters degrees, and 24% had achieved a doctorate (p. 12). However, there were some areas of commonality between the two studies. Both studies investigated first-generation college students whose parents had no college experience and in many cases no high school diploma. The predominate professions of the combined 67 participants out of the two studies were: physicians (12), attorneys (13), and academics (34). In fact, the majority group among all the participants were the educators (Rodríguez, 2001). These two ground breaking studies focused on minority students from low socioeconomic backgrounds, but leave room for a closer examination of the first-generation college student status and its affect on high-achieving students.

The annual "Survey of Earned Doctorates" investigates parental educational attainment as a background variable for recent terminal degree recipients. However, the research focused on the 37% of doctoral graduates whose parents did not earn a baccalaureate degree regardless of whether they had some collegiate experience. Even though the definition of first-generation college students refers to baccalaureate recipients and is different from that of other studies, the results still point to the educational attainment of a student's parents as significant. The level of a student's educational access, persistence, and attainment is affected by the educational level of his or her parents (Hoffer, et all, 2003).

The National Center for Education Statistics' report on "Students Whose Parents Did Not Go To College" included research on first-generation college students after completion of a bachelors degree. "Once students whose parents did not go to college

overcome the barriers to access, persistence, and attainment, are they in the same position as other graduates?" (Choy, 2001, p. 27). First-generation graduates and non-first-generation graduates (whose parents attended college) were employed in similar jobs and at equivalent salaries. When graduate enrollment is considered, there is not equivalence (Choy, 2001).

There is a continuing disparity for first-generation college students in graduate and professional school enrollment. Yet some first-generation college students move from being outsiders in higher education to successful insiders as members of the academy. Specifically, how does a first-generation college student (who isat a disadvantage in higher educational access, persistence, and degree attainment) succeed in graduate education to the point that an academic career becomes an option?

Delimitations

The scope of this research is on the faculty of a university with a RU/H, Research University (high research activity) ranking, in the southwestern United States and participants referred from among the professoriate (Carnegie Foundation, 2006).

Limitations

The main weaknesses of this study are its focus on educational attainment and the professoriate interview sample. It is acknowledged that first-generation college students who earn a baccalaureate, masters, or first-professional degree are educational successes. Likewise the career choice of the professoriate may limit generalization of the results in areas that are unique to the professoriate. The interview methodology is dependent on the accuracy of each participant's memory and the level of motivation that existed during the actual interview.

CHAPTER II

Explanation and Literature Review

Introduction of theories

The literature on first-generation college students is found among studies on college choice, persistence, academic performance, and minority students. The first-generation college student literature is limited, perhaps because such large numbers of first-generation students attend community colleges rather than research institutions. The literature reviewed from the community and junior college publications was generally focused on helping first-generation students successfully move into the college environment and toward enhancing pre-college academic preparation. A number of studies used such qualitative methods as narratives, and contrasted the individual student's experiences against the larger body of research on traditional college students. The first-generation college student articles reviewed can be categorized as follows:

1. access into higher education

   - The first-generation college student's pre-college characteristics

   - How college choice impacts students

2. persistence through higher education

   - The first-generation college student's transition from high school or work into the college environment

   - The cognitive development differences between non-first-generation college students and first-generation college students

   - The first-generation college student's persistence in higher education

3. educational attainment by first-generation college students

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General literature for first-generation college students

First-generation college students tend to share the following characteristics. They are less prepared for college, have lower degree aspirations, and expect to take longer completing a degree than students whose parents attended, but did not necessarily graduate from college. The first-generation population is comprised largely of members from working class families, ethnic minorities, women, and/or adults with a higher-than-average number of dependent children (Hsiao, 1992; Terenzini, Nora, Pascarella, Springer, & Yeager, 1995). The twenty-four tribally controlled (Native American) colleges across the United States with mission statements verifying that the institution strives to preserve, enhance, and promote the language and culture of its respective tribe. The characteristic of being a first-generation college student is a recurring factor within Tribal Colleges. The research found that the student's family responsibilities bring pressure to bear on those caring for their children or younger siblings. This responsibility can lead to absenteeism and financial strain (Stein, 1992).

Access into higher education

After World War II, President Harry Truman's Commission on Higher Education concluded that there were five barriers to college for young people. The first barrier was economic favoring the wealthy. The second barrier was geographic with students from rural settings or areas with limited college access attending in smaller numbers. The third barrier was racial/ethnic divisions and prejudice that create obstacles for minority students. The fourth barrier was religious, notably for Jews and other religious minorities. The fifth barrier was gender related with women having greater difficulty than men in both going to and staying in college (Levine & Nidiffer, 1996).

During the last half of the twentieth century, these five barriers have been reduced to some degree. The economic barriers were targeted through need-based student financial aid; however, the accelerated cost for higher education has eroded much of the real dollar impact. The increase in the number of junior and community colleges has improved accessibility. The gender gap for women has closed at least in regard to the numbers attending college. In 1979 female students became a slight majority of the students enrolled and by 1999 that majority increased to over 56% of the total student population (National Center for Education Statistics, 2001). The reality of the current environment is that, while there has been improvement in access, these barriers continue to exist for students in the American higher education system.

For students whose parents have no previous experience in higher education, an additional barrier exists. These students are the first person from their families to attend college. This unique place in the family experience distinguishes him or her from non-first-generation college students (individuals whose parents have previously attended institutions of higher education) and identifies the individual as a first-generation college student (a student whose parents did not attend college). Each first-generation college student must leave the known of family and culture to be initiated into the higher education experience. The goal is typically an economic one with the college degree being the means to improved socioeconomic status (Nuñez et al., 1998).

The pre-college characteristics of first-generation college students

An analysis of the "High School and Beyond" longitudinal study found lower college aspirations, enrollment, and retention for first-generation college students. There was a negative accumulation of factors that hindered first-generation college students in

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college going and degree attainment. These negative factors included: lack of support, lower parental income, lack of siblings in college, lower grades and test scores, plus less frequent enrollment in college preparatory curriculums. Those who did enroll in college were less likely to live on campus and more inclined to enroll in nonselective or 2-year institutions than non-first-generation college students. The combination of these factors makes a first-generation college student less likely to graduate. The conclusion was that there is a first-generation college student "effect" that impacts students beyond family income, race, or ability (Barahona, 1990; Arrendondo, 1999).

Terenzini (1995) reports that, compared to non-first-generation college students, first-generation college students come from lower-income families, minority families (Hispanic was the dominant minority group in the study), have lower degree aspirations, and were less involved with peers and teachers in high school, perhaps because they work more. In a study analyzing the academic preparation, aspirations and first-year college performance of 2,190 freshmen at Indiana State University, it was determined that first-generation students had lower SAT scores and high school grade point averages, but no difference was found in class rank. Predicted first-semester grades and degree aspirations were both lower for first-generation college students (Riehl, 1994).

Gándara (1995) proposes seven ways that public policy can assist the educational attainment of Chicanos and other ethnic minorities with a first language other than English. There are numerous areas of overlapping when examining strategies to assist both minorities with a first language other than English and first-generation college students. Out of her seven proposals there are four that also relate to first-generation college students. These four are as follows:

1. ending de-facto segregation to enable minorities (who have a greater potential of being the first in their families to attend college) to attend common schools with those students who assume college is a birthright,

2. identifying 'gifted' students early in their education,

3. rewarding effort and persistence in the college going process, and

4. reanalyzing and rethinking high school curriculum tracks to give increased opportunities to all students (pp. 117-125).

First-generation college students are at a disadvantage in academic preparation as demonstrated by their standardized test scores and high school grade point averages. Once in college first-generation college students tend to make lower first-semester grades and have reduced degree expectations. This lack of experience in college preparation and college going may contribute to the different patterns in college choice by first-generation college students when compared to traditional (non-first-generation) college students.

College choice for first-generation college students

The obstacles from lack of adequate academic preparation and the possibility that choosing a community college becomes a glass ceiling for many minority and first-generation students, complicating the possibility of success. Fifty-one percent (51%) of the beginning first-generation college students choose to enroll in a community college (Nuñez et al., 1998). In the analysis of the U.S. Department of Education data from the Beginning Postsecondary Students Longitudinal Study, 43% of the beginning first-time college students were coming from households where the parent(s) had no education attainment beyond the high school diploma. The parents of 23% of the beginning students had some college and 34% were the children of college graduates. Considering the

pervasive notion that a college education is needed in American society the percentage of

parents with degrees (34%) is almost as surprising as the percentage of first-generation

college students (43%). Practically speaking for every 1000 first-time freshman enrolling,

approximately 430 of those students are the first in their household to attend college. If

current degree completion percentages are used for these students, out of the 430 first-

generation colleges students only 56 (13%) will attain a bachelors degree within five

years compared to 188 (33%) out of the 570 traditional (non-first-generation) college

students (Nuñez et al., 1998). Non-first-generation college students are two and one-half

times more likely to attain a baccalaureate degree than first-generation college students.

The National Center for Educational Statistics reports the percentages for First-

generation (Fgc) and Non-first-generation (Non-fgc) college students' institutional

enrollment patterns as follows:

Table 1

Beginning Student Enrollment Distribution

Category/ Year	Public 4-yr.	Private 4-yr.	Public 2-yr.	Private, For-profit	Other less- Than-4-yr.
Fgc	20%	8%	51%	15.5%	5.5%
Non-fgc	36%	19%	37%	05.5%	2.5%

U.S. Department of Education, National Center for Educational Statistics, 1989-90
Beginning Postsecondary Students Longitudinal Study [BPS:90/94], Second Follow-up
BPS:90/94, Data Analysis System conducted in 1998 (Nunez & Cuccaro-Alamin, 1998,
p. 8).

Most first-generation college students begin their college education at a community

college. This is the point of transition into higher education, but it often creates a

separation from the student's culture of origin (Striplin, 1999). While enrolling in a

community college to improve one's academic and social standing are admirable goals,

the real problem for most students is continuing through the education process to degree attainment.

This study defines culture in higher education according to the Association for the Study of Higher Education (ASHE) report, "The Invisible Tapestry," which occurs on pages 12-13 as follows:

> The collective, mutually shaping patterns of norms, values, practices, beliefs, and assumptions that guide the behavior of individuals and groups in an institute of higher education and provide a frame of reference within which to interpret the meaning of events and actions on and off campus (Kuh & Whitt, 1988).

The culture of the institution may affect the access to the institution by certain students through a targeted recruitment that restricts some students and includes others. The culture may help some students persist and be obstructive to others. The affect of the institutional culture on first-generation college students may be dependent on the cultural distance from the student's world of origin.

It makes little difference whether first-generation students are from racial minority groups, immigrant ethnic groups, working-class families, or older adults seeking a college degree. There are a myriad of challenges to their successful pursuit of higher education. In order for first-generation college students to succeed in greater numbers, colleges must provide a range of programs and services that will combat weaknesses common to the first-generation student. In addition, these efforts must take into account the obstacles first-generation students encounter upon entrance into higher education (Hsiao, 1992). Cultural barriers coupled with low socioeconomic status intensify the difficulty of the assimilation into higher education (Rendón, 1994). These problems are

real, but successful first-generation college students must still persevere in order to succeed (Rendón, 1992).

Persistence in higher education

First-generation students enter college with little awareness of the impact the institution will have on them. The established patterns and expectations of family and friends formed a comfort zone in the past. The first-generation student may discover that close family and friends do not appreciate the changes in the student (Hsiao, 1992). These first-generation college students seem to be on the margins of both their past lives and their future possibilities, "students live and share in the life and traditions of two distinct cultures, never quite wanting or willing to break with their past, even if permitted to do so, and never fully accepted, …in the culture [college] in which they seek a place" (London, 1992, p. 7). The requirement of this necessity seems to be an unexpected burden for large numbers of first-generation college students.

First-generation college students enroll in college "less well-prepared and with more non-academic demands on them, and they enter a world where they are less likely to experience many of the conditions that other research indicates are positively related to persistence, performance and learning" (Terenzini et al., 1995). This is generally true for first-generation college students from racial minority groups, immigrant ethnic groups, working-class families, or older adults seeking a college degree. There are a multitude of obstacles to their successful pursuit of higher education (Hsiao, 1992).

First-generation students were more likely to drop out during the first semester, have lower first-semester grades, and were less likely to return to college for their second year (Riehl, 1994, p. 18). Rendón (1994) identified key issues that relate to first-

generation students, as well as minority students. These are the de-facto segregation of economic and minority groups, the lack of adequate academic preparation, and the possibility that the community college becomes a glass ceiling for many minority and first-generation students. She recommends that alternative methods of assessment be used to determine admission and placement, communicate the importance of multicultural learning, emphasize faculty mentoring, collaborative learning, and validating the abilities of these students.

The Western Interstate Commission for Higher Education (WICHE) published a report on "Exemplary Programs for College-Bound Minority Students." In the report, Colorado State University is cited for its First Generation Award Program which provides support for worthy students who lack the financial resources to attend college. The program targets first-generation college students, particularly minorities, women, and others needing additional encouragement and financial support. After three years, program participants had an average retention rate of 87% compared to 60% for all students (Halcon, 1988). These findings indicate that first-generation college students can persist and succeed beyond non-first-generation college students in certain circumstances.

The transition of first-generation college students

Cultural barriers coupled with low socioeconomic status increase the difficulty for the assimilation of racial and ethnic minorities into higher education (Arrendondo, 1999; Rendón, 1994). Arturo Madrid, a professor of humanities at Trinity University, in an interview (Chronicle of Higher Education, 2003) noted:

A large number of Latino students are still the first in their families to complete high school and become eligible to pursue higher education. For the most part,

they have no familial role models, mentors, or sponsors to help them along and

must depend on teachers, guidance counselors, and other school personnel (p.

B8).

These problems are real, but successful first-generation college students must still

persevere in the transition from the old and familiar into the new collegiate environment.

"American Indian students attending a tribal college present their instructors and

counselors with many challenging cultural, linguistic, and personal situations" (Stein,

1992, p. 90). If this is true to some degree with other ethnic minority groups, who have a

greater possibility of being first-generation college students, these circumstances may

combine to their detriment in terms of degree attainment.

Lower social integration may be related to the fact that first-generation college

students tend to be older than non-first-generation college students. First-generation

college students tend to report having more family and work commitmentsresulting in

less time and interest in social activities. The cultural differences on the value of a college

degree may also influence the choices of a student to involve himself or herself in the

institutional community (Nuñez et al., 1998).

Cognitive development of first-generation college students

Compared to non-first-generation college students, first-generation college

students come from lower-income families, minority families (Hispanic was the largest

minority group in the study), have lower degree aspirations, and were less involved with

peers and teachers in high school, perhaps because they work more. First-generation

students have weaker cognitive skills in reading, math, and critical thinking when

entering college, get less encouragement from family and friends to stay in college, and

expect to take longer to finish their degrees. First-generation students should be considered an at-risk population whose numbers and proportional size should grow in higher education (Terenzini et al., 1995).

First-generation college students are less involved in the academic and social activities that contribute to higher grade point averages (Grayson, 1995). Latino students with low SAT scores are more likely to judge themselves as having lower ability, and almost half reported a perception of missed opportunities as a result of their scores. The researchers proposed that consideration should be given to better student preparation in high school, eliminating the bias for Spanish speakers by making it optional on college applications [the language of instruction was not addressed in the article], and give attention to other effects on Latino participants (Gándara & López, 1998).

The National Center on Postsecondary Teaching, Learning, and Assessment (NCTLA) examined the influence of academic and non-academic experiences on student learning, student attitudes about learning, student cognitive development, and student persistence. The analysis demonstrated how cognitive development is affected by: (1) 2-year and 4-year colleges; (2) historically black and predominantly white colleges; (3) teacher behavior toward the students; (4) first-generation college attendance; (5) intercollegiate athletic participation; (6) campus experiences and the effect on attitudes of openness to diversity; (7) Greek affiliation during the first year of college; (8) in-class experiences and out-of-class experiences. The results showed that first-generation college students were more likely to perceive teachers as unconcerned, report instances of overt discrimination, or to consider the institution to be a non-welcoming environment (Pascarella & Others, 1995).

Continuing through higher education (drop-outs and persisters)

Nunez (1998) states, "the families of first-generation students had lower family incomes than those of non-first-generation students" (p.8). This lower family income may be another factor that hinders persistence of the first-generation college student (Rendón, 1992). This student is more likely to be employed than non-first-generation students and over one-third of first-generation college students worked full-time (Nuñez et al., 1998). Full-time employment, as well as part-time employment off campus, is considered to negatively influence re-enrollment (Astin, 1993).

First-generation students were more likely to drop out during the first semester, have lower first-semester grades, and were less likely to return to college for their second year (Riehl, 1994, p. 18). These findings gain significance when the first-generation college student enrollment is compared to traditional students. Traditional students are more likely both to enroll in a 4-year college and return to a baccalaureate granting institution than students whose parents did not go to college.

Laura Rendón (Chronicle of Higher Education, 2003), contends that Latino students (the largest first-generation college student minority) attend poor schools and are not academically prepared for college. "They often come from low-income backgrounds and are the first in their families to even consider higher education" (p. B7). This concurs with a previous finding that the socioeconomic status (SES) of the student's peer group has significant effects on satisfaction with the overall college experience and on willingness to re-enroll in the same college (Astin, 1993).

The cultural differences on the value of a college degree may also influence the choices of a student to involve himself or herself in the institutional community (Nuñez et

al., 1998): "The Social integration index is a composite based on how often students reported having contact with faculty outside of class, going places with friends from school, or participating in student assistance centers/programs or school clubs" (p. 34). First-generation students are less likely to live or work on campus, receive less support of all types from their parents, and have heavier job loads (Billson & Terry, 1982). Laura Rendón states, "Even when Latino students get into college, they have a difficult time staying. Many working-class, first-generation Latinos experience feelings of inadequacy, isolation, and cultural shock" (Chronicle of Higher Education, 2003).

First-generation college students were more likely to perceive teachers as unconcerned, report instances of overt discrimination, or to consider the institution to be a non-welcoming environment (Pascarella et al., 1995). The willingness of a student to re-enroll as a freshman in the same college is positively affected by student-faculty interaction (Astin, 1993). The research reveals differing patterns for academic and non-academic achievement, environment and social perceptions, drop-out or stop-out of college and continuance through the difficulties of college. The statistics support the reality that first-generation college students continue to be an at-risk group within higher education. The expanded access offered thatthe multiplicit y of institutional numbers and types across America has not bridged the gaps in access, persistence, or educational attainment between first-generation college students and non-first-generation students.

Educational attainment

One pre-college characteristic, which many first-generation college students possess, is the drive to go to college. While most students are fearful of failure, there are

some who are actually eager to advance into new territory. London (1992) states the following:

> It is evident, however, that for many first-generation students (especially those who declare a liberal arts course of study or who transfer to a baccalaureate college), the very act of going to college indicates an interest in attaining a white-collar, middle-class position not previously attained by a family member, and this may take the student into uncharted cultural territory (p. 10).

This drive to go to college may be the basic distinction in those students who overcome obstacles to attend college and those who are satisfied to remain in, or return to, the familiar patterns of their home culture.

Compared with the general student population first-generation college students often reported that financial security is very important. In fact, students whose parents had no formal education beyond high school cited "being very well off financially" 61% of the time (Nuñez et al., 1998)). Astin (1993) reports an equivalent percentage (62.2%) for the same item (p. 147). Those whose parents attained at least some college cited "being very well off financially" 49% percent of the time. First-generation college students seem to know what they want, but the attainability of this goal is more complex for these students than most imagine (Nuñez et al., 1998).

The majority of these first-generation college students have already chosen a community college with another 20% enrolling in private for-profit or other less than 4-year institutions. The result is that only 28% of first-generation college students enroll at 4-year (public or private) institutions versus 55% of traditional (non-first-generation) college students (Nuñez et al., 1998)."Over 300,000 [13.6%] of the 2.2 million students

who begin postsecondary studies each year in a two-year college transfer to a baccalaureate-granting institution within four years of original matriculation" (Cohen, 2003). The overall rate varies according to the definition used, but ranges from 21.5% to 25.2% are optimal (Cohen, 2003). Since half of the first-generation college student population that enrolls in college starts in the community college, even allowing the high end transfer rate means that 3 out of 4 of these students will not leave the community college. The struggle to transfer is compounded by the poor academic preparation and low socioeconomic level of large numbers of these students (Striplin, 1999). When you combine a 25% transfer rate for 2-year colleges with the figures from Table 1: *Beginning Student Enrollment Distribution,* the practical result is that nearly 60% of the first-generation college students never arrive at a baccalaureate degree granting institution.

In the NCES Report, "First-Generation Students: Undergraduates Whose Parents Never Enrolled in Postsecondary Education" (Nuñez et al., 1998), percentages were given for the parent's educational attainment of entering students (p.8), institutional type enrollment (p. 14), bachelor degree attainment within 5 years (p. 37), and graduate school enrollment (p. 47). Table 2 uses the college choice percentages reported in Table 1 to filter the numbers for a theoretical 1,000 entering freshmen filtered through the percentages reported for retention at a public 4-year institution. Table 2 reports the numbers as follows:

Table 2

Category/ Enrollment	First-generation		Non-first-generation		Number
	%	Numbers	%	Numbers	Totals
Beginning Totals	43%	430	57%	570	1,000
Public 4-yr. Enrollment	20%	86	37%	211	297
Public 4-yr. Bachelors earned	34%	29	52%	110	139
Graduate school Enrollment	23%	7	30%	33	40

High-achieving, first-generation college students

Gándara (1982) in studying high-achieving Chicanas [Gándara's terminology for females of Mexican-American descent] discovered that there were background factors and experiences held in common by the participants. Among the factors found to be most important were the strong role models their mothers provided, the emotional support of their families, and the fact that they attended highly integrated schools. These powerful mothers were considered the impetus for their children's strivings (Gándara, 1982).

Rodríguez (2001) states that in conducting her research she was able to interview extraordinary individuals who overcame formidable obstacles and became the first in their families to complete a college degree. The impact of these individuals on their respective communities earned a label of acclamation, "giants among us" for those who show others the possibilities for change. While the study defined success as educational or social activism rather than advanced educational attainment, all of the participants had earned a baccalaureate degree with over 65% earning graduate degrees and one in four

had an earned doctorate. The findings were that these first-generation college students earned college degrees without a formal plan or strategy, but that the conditions and elements involved are replicable. The participants perceived that a positive sense of identity and belonging within the college influenced their success. The transition from college success to educational or social activism was marked by a personal willingness to take risks.

In the book, "Over the Ivy Walls," the educational mobility of 50 low-income Chicanos was examined to determine if there were characteristics common to educational success. The family characteristics determined to be common to educational success of these individuals included:

1. highly supportive mothers with high educational standards,

2. parents who modeled literacy,

3. democratic parenting style, which yielded independence and high aspirations,

4. parents who facilitated attendance in better schools,

5. parents were models of hard work, and

6. family histories that created a "culture of possibility."

The participants showed personal characteristics of persistence, ability, goals, and interpersonal skills. The critical element for each seems to be the opportunity for academic preparation and resources to realize the goal of higher education. (Gándara, 1995).

Graduate enrollment of first-generation college students

The National Center for Education Statistics' report on "Students Whose Parents Did Not Go To College" included research on first-generation college students after

completion of a bachelors degree. One question examined was whether first-generation college students gained equal status by completing an undergraduate degree (Choy, 2001). First-generation graduates and traditional graduates (whose parents attended college) were employed in similar jobs and at equivalent salaries. But when graduate enrollment is considered, there is not equivalence. First-generation status was found to be a factor in graduate/professional school enrollment:

> Overall, 30 percent of 1992-93 bachelors degree recipients had enrolled in
> a graduate or first-professional program by 1997, but first-generation
> students were less likely than their peers whose parents had bachelors or
> advanced degrees to have done so (25 versus 34 percent). This relationship
> held even after controlling for other factors significantly related to
> graduate enrollment including age, undergraduate major, GPA, and
> race/ethnicity, and also after controlling for selected other factors
> including sex (Choy, 2001, p. 28-29).

While the study found that first-generation students enrolled in MBA or other masters programs in similar patterns, their enrollment in doctoral degrees or first-professional degrees was less frequent than those whose parents had college, graduate, or professional degrees. The statistical gap between first-generation college students and traditional students is dramatic. While Nunez (1998) and Choy (2001) do not report the same figures it is notable that the percentages for each category are equivalent. Students whose parents have some college are three times more likely to enroll in a doctoral program than first-generation students. The gap widens with educational attainment students whose parents

graduated from college or higher were four times more likely to enroll in a doctoral program than first-generation college students (Choy, 2001, p. 29).

Is there a continuing residual effect for the first-generation college student that impedes educational advancement into graduate and professional schools? What factors do high-achieving, first-generation college students consider most important to their success in graduate school? It should be noted that while socioeconomic status has positive effects on re-enrollment in the same college and entry to graduate school, the parental educational attainment of a student has greater impact than parental income (Astin, 1993; Pascarella & Terenzini, 1991). The effect of parental educational attainment on first-generation college students does appear to continue into the educational access, persistence, and degree attainment when compared to traditional students. The indication that this effect continues into graduate enrollment has evidence in several research studies (Astin, 1993; Choy, 2001; Chatman, 1994; Nuñez et al., 1998).

Doctoral enrollment

First-generation college students are more likely to be from ethnic minorities. The Chronicle of Higher Education quoted the University of Texas director of the Multicultural Information Center, "When you come to a campus with 50,000 people, what's the first thing you look for? ... To see a person who looks like you." (Arnone, 2003). This expression by the campus official may be a common thought for many universities that have established programs and added personnel to assist access and persistence for specific student groups that are considered at-risk. There are few mentors and role models for students who may conclude that the doctorate is not a reasonable goal. This is also complicated by the fact that serving students in graduate schools is only

a portion of the responsibilities carried by faculty. Miriam Erez writing in her chapter on 'Crossing Cultural Borders' identifies five competing priorities that she carries as a higher education professional. The following quote is taken from her conclusions written for *Rhythms of Academic Life* (Frost & Taylor, 1996):

> My time resources were divided among five major subroles: academic administration, mentoring and advising my graduate students, integrating research and theory in two published books, serving the professional community by being on the editorial boards of four journals, and getting involved in the IAAP (p. 28).

Even though involvement with students is recognized as a faculty role, given the multiple duties of the faculty within academia, there is no guarantee that students of any background will be able to enjoy significant relationships with their instructors, even if they do see a familiar face.

Whatever the reasons, a gap in first-generation college students in doctoral enrollment persists in the general higher education population. The Baccalaureate and Beyond Longitudinal Study by the National Center for Educational Statistics (Nuñez et al., 1998) revealed that due to the first-generation college students low degree attainment they represent only 15% of the doctoral program enrollment. When the overall enrollment is considered according to Nunez (1998) there are 11 students whose parents attended college for every 2 first-generation college students who gain access into a doctoral program. Using the same theoretical sample of 1,000 beginning students the numbers would be filtered as follows:

Table 3

Over-All Enrollment and Educational Attainment

Category/ Enrollment	First-generation		Non-first-generation		Number Totals
	%	Numbers	%	Numbers	
Beginning Totals	43%	430	57%	570	1,000
Attained Bachelor Degree by 1994	13%	56	33%	188	244
Graduate school Enrollment	23%	13	30%	56	69
Doctoral Enrollment	3%	2	6%	11	13

The equivalent enrollments in masters programs give the appearance of equalized access, but what is the significance of the differences in doctoral enrollments? The best place to discover these answers may be among those students who succeed in a graduate doctoral program. This is typically the Ph.D. or a doctorate attached to a particular discipline (i.e., Ed.D. or D.M.A.). The most accessible group of successful students out of these doctoral degree programs are university faculty. The doctorate is the credential for an academic career. These faculty should be somewhat representative of the percentages of doctorate completers from each category of parental educational attainment.

Doctoral degree attainment

The annual "Survey of Earned Doctorates" is conducted and funded under the following United States government agencies: National Science Foundation, National Institutes of Health, U.S. Department of Education, National Endowment for the Humanities, U.S. Department of Agriculture, and the National Aeronautics and Space Administration. The definition of first-generation is different from the other studies in

this review. The unique definition of first-generation is given to those students whose

parents did not graduate from college, rather than those who did not attend. However, the

general findings of the other research are confirmed. There is an impact on the student

that is linked to the parents educational level. This was true not only for enrollment in

doctoral programs, but in the completion and earning of terminal degrees. Overall, about

10 percent of the 2002 doctorate recipients attended a 2-year institution. The lower the

parents educational attainment the longer it will take for the student to earn a doctorate.

This factor is known as 'time-to-degree'. These first-generation college graduates appear

to have faced greater challenges in terms of access, finances (both sacrifice of current

income and the acclamation of more debt) and completion of fewer degrees than those

whose parents had higher educational attainment. The survey does reflect students whose

parents did not go to college (Father's – 29% and Mother's – 38%), but the analysis and

findings do not focus on these data. It should be noted that the apparent discrepancies

between the report of Choy (2001) and the "Survey of Earned Doctorates" (Hoffer et al.,

2003) are the different definitions used in analysis. The general findings show similar

patterns when viewed through the various levels of parental educational attainment.

Path to the professoriate

      General employment patterns for doctorate recipients

      In the 2002 "Survey of Earned Doctorates" 52% of the respondents reported

themselves as having a definite employment commitment. The majority (52.4%) were

committed to jobs in higher education. The next largest single categories were industry or

self-employment (24.2%) and government (7.4%), which includes federal, state, and

local government jobs. The other category (16%) is a mixed bag of various employment

options that include elementary and secondary education, not-for-profit agencies, and non-governmental organizations. Three out of the four large categories showed increases over the last twenty years. The lone exception was government employment which reflected over a 10% drop since the 1982 baseline numbers (Hoffer et al., 2003). The female recipients were more likely than males to go into the academy, while male recipients double the percentage of females employed in industry. The following table is extracted from "Survey of Earned Doctorates" Table 25 on page 66 and reflects the 2002 results with approximate numbers drawn from the table percentages (Hoffer et al., 2003):

Table 4

Employment commitments of doctorate recipients in 2002

Employment Category	Female		Male		Totals	
	%	Numbers	%	Numbers	%	Numbers
Gender Estimates	100%	7,671	100%	8,435		
Academy	57.8	4,428	47.6	4,011	52.4	8,439
Industry/self-employed	15.6	1,198	32.1	2,700	24.2	3,898
Government	6.3	484	8.4	708	7.4	1,192
Other [*]	20.4	1,574	11.9	1,003	16	2,577
Commitment Totals	48%	7,671	52%	8,435	100%	16,106

[*] Includes elementary and secondary school employment

While these estimates are not reported for doctorate recipients by the parental educational attainment level it should provide a comparison to the general population.

First-generation college students finding their way

Frost and Taylor (Frost et al., 1996), seeking to discover insight into the various dimensions and functions that coexist within the academic enterprise, report that in the past academics relied on the experience and advice of their peers within the institution or discipline for guidance. In seeking to provide career guidance for prospective, new, or current faculty they realized that, "little information, conceptual or anecdotal, existed about the paths that academics choose to follow across the course of their careers (p. xiv)." The variety of the perspectives offered in the study were chosen to represent the multiple tasks and recurrent activities that dominate in academy.

One first-generation college student, Joan Gallos, expressed her circumstances in becoming a professor by the following:

I had little knowledge of academic life. Graduate courses and doctoral seminars did little to fill the gap. I knew that professors taught classes and published research. I had no idea how that translated into day-to-day behavior. I was the first member of my family to attend college, let alone the first with any thoughts of teaching in one (Gallos, 1996, p. 12).

The initial requirement for one doctoral graduate was securing employment to gain a measure of financial security. Then the need to establish competence in one's discipline and be seen as a legitimate scholar, form meaningful relationships with students, create a presence within the institution, and gain tenure dominated the early years of employment for one African American female (King, 1996). In the chapter entitled, "Rounding Corners," the writer reflects on her academic career through two

different institutions and concludes with this insightful quotation from *The Teachings of Don Juan*:

> Anything is one of a million paths [un camino entre cantidades de caminos].
> Therefore, you must always keep in mind that a path is only a path. If you feel
> you should not follow it you must not stay with it under any conditions…Look
> at every path closely and deliberately. Try it as many times as you think
> necessary. Then ask yourself and yourself alone one question…Does this path
> have a heart? If it does, the path is good; if it doesn't, it is of no use. Both paths
> lead nowhere; but one has a heart and the other doesn't (Casteneda, 1968; King,
> 1996, p. 198).

The best explanation as to why individuals choose to move into the professoriate may be a mystery that avoids simplistic classification. The journey that any individual in America takes into a career may begin long before the completion of formal education. While this study will seek to add some insight into the paths individuals take to the professoriate it is conceded that it may truly be a matter of the heart.

The role of mentoring

In the process of investigating first-generation college students through grounded theory methodology the researcher must revisit the literature review to validate the emerging data. The literature consulted expands during the research to support the findings whenever possible, the result being that the literature reviewed for the completed research study is larger than that used for the initial prospectus. While much of the literature review has been revisited, revised, and expanded during the constant

comparison of interview data that emerged during the study, the single largest section of literature that required investigation is the subject of mentoring.

Several of the participants interviewed referred to an individual who was a mentor to them during college or graduate school. The term was not defined by the individuals during the interview, so the intended meaning is somewhat fuzzy. Did she or he become the protégé to the person of influence, did the person designated as the mentor simply facilitate the student's progress, or did the student use this individual as a role model? In the latter case those first-generation college students who moved into the professoriate, like their role model, could have used the securing of a faculty position as a benchmark of their success.

What is mentoring?

The ambiguity of the interview participants about the description or definition of their mentors is reflected in the literature as follows: "The biggest problem for researchers into mentoring is still defining what it is" (Clutterbuck, 1996). There are multiple terms and shades of meaning associated with mentoring:

Mentoring can hold a range of meanings and the terminology reveals a diverse set of underlying assumptions. For example, youth mentoring has been associated with programs aiming at coaching, counseling, teaching, tutoring, volunteering, role modeling, proctoring, and advising. Similarly the role of the mentor has been described as role model, champion, leader, guide, adviser, counselor, volunteer, coach, sponsor, protector, and preceptor. A similar range of terms may apply to the mentee, protégé, client, apprentice, aspirant, pupil, etc.

The process itself may also be described variously as reciprocal, helping, advising, leading, or facilitating as a collaborative enterprise with shared ideals or as a learning process by which the mentor leads by example. In general however knowledge and understanding about the processes which take place within mentoring relationships remains at a preliminary stage. Clearly some of the meanings are contradictory especially in the absence of explanatory frameworks (Philip, 2000).

The preceding quote illustrates the wide range of terminology and meaning available in the area of mentoring, but it does not distinguish how the individual student perceives this during the educational process. There are a number of elements required for a mentoring relationship. One researcher in approaching the literature phenomenologically has included certain essential and contingent attributes as follows:

Mentoring appears to have the essential attributes of: a process; a supportive relationship; a helping process; a teaching-learning process; a reflective process; a career development process; a formalized process; and a role constructed by and for a mentor. The contingent attributes of the mentoring phenomenon appear as: coaching, sponsoring, role modeling, assessing and an informal process (Roberts, 2000).

While this may be a good place to begin the discussion of required elements it is still an attempt to bring definition to an area that continues to escape hard and fast definitions (Roberts & Chernopiskaya, 1999).

The origin of the term, Mentor, is in classical Greek literature. In the *Odyssey* Homer introduced Mentor as the life long friend of Odysseus to whom he entrusted his

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household and his son, Telemachus. While there does appear some care of the boy during the years that Odysseus is fighting Troy, in the later period when Penelope is besieged by suitors and Telemachus is in danger of being assassinated it is Athena (in the form of Mentor) who actually is the wise protector of the young man. The term mentor actually acquired the Athena dimension in *Les Adventures de Telemaque* by Fenelon published in 1699 (Roberts, 1999). "Homer's Mentor was in fact highly unsuccessful as a counselor and protector" (Shaw, 2004). The current usage of the term has eclipsed the historical context of the name.

The product of most mentoring is a reproduction of the status quo through a preconceived paradigm (Gulam & Zufiqar, 1995). The lack of definite goals in the mentoring process many times robs the mentee of the ability to interpret their own needs (Piper & Piper, 2000). Mentoring exists in a variety of dimensions: the classic one-to-one, individual-team, friend-to-friend, peer-group, and long-term relationships with risk taking adults (Philip & Hendry, 2000). "Today, a mentor is any caring, mature person who forms a one-on-one relationship with someone in need" (Dondero, 1997). "A mentor seeks to help a youth navigate through the everyday challenges of school, society, and the community by drawing upon his or her greater knowledge and experience, and genuine concern for the youth" (Lauland, 1998). "Mentors worthy of the name serve as teacher, sponsor, role model, confidant, and more" (Little, 1990).

Mentoring is a relational process in which a mentor, who knows or has experienced something, transfers that something (resources of wisdom, information, experience, confidence, insight, relationships, status, etc.) to a

mentee, at an appropriate time and manner, so that it facilitates development or empowerment (Stanley & Clinton, 1992).

There is a distinction between helping someone acquire the skills and behaviors necessary for a profession when the person has chosen that path voluntarily than when the relationship is mandatory and/or the mentee is reluctant to adopt the skills and values that are often hard to define (Shaw, 2004). The best results are produced when the relationship between the mentor and mentee is voluntary (Caruthers, 1993). There are three dimensions to mentoring: the origin of the relationship, whether it is natural or designed; the purpose of the relationship; and the dynamic or nature of the relationship–is it one-to-one or an individual to a group? Mentoring is not one thing; it seems to be more of a sliding scale that grows in proportion to the dimensions of the relationship (Shaw, 2004). The role of mentor may be an obligation that the mentor tries to meet in the relationship with a protégé, but it appears to have a great deal more meaning when the label is voluntarily bestowed on a person, who is seen as a person of influence and empowerment, by a protégé who benefits from this relationship.

Mentoring in higher education

Undergraduates who have been mentored expressed a perceived obligation to persist in college when they might have wanted to drop out. The study notes the following:

> They felt an obligation to continue their education as a result of the deep
> commitment of support personnel and the benefits of counseling, tutoring, and
> institutional guidance, and found that formal mentoring appeared to positively

affect student participation, retention, and success in college (Wallace, Abel, &

Ropers-Huilman, 2000).

In a study of lifelong learners, quality relationships with mentors flourished when they

shared emotional ties and a sense of equality (Bennetts, 2001). One research study that

focused on 15 physical education students seeking a post-graduate certificate in education

reported what the group valued in a mentor. The attributes were as follows:

- A mentor who functions as a professional

- A mentor with demonstrated competency in the subject area

- A mentor with communication skills

- A mentor who can be a facilitator

- A mentor who knows how to give positive feedback

- A mentor who stays on task

Mentees are looking for mentors who exhibit these qualities in the mentoring relationship

(Yau, 1995). It may be that mentees do not know what mentoring is, but they do know

what it is to be mentored or at least what they like in the relationship.

Some graduate schools have sought to formalize the work of faculty with graduate

students into mentoring programs. The University of Louisville has published a mentor

handbook entitled, "Mentor and Graduate Student: Strategies for Success." The purpose

is to define the responsibilities of faculty involved to be a role model; one who is

available to students, evaluates student progress, develops skills in both writing and

speaking, engages the student beyond the classroom, and emphasizes teaching. In

addition, faculty should foster collegiality, value diversity, and provide ethical guidance.

The responsibilities of the graduate student focus on proactive contact with the mentor,

contribute knowledge to others, seek advice from others, and change the mentoring relationship if it is unsuccessful (Graduate Council (Ed.), 1999).

Another attempt to promote mentoring among engineering, science, and medical students has been the presentation of the faculty mentor in four capacities. These are as follows:

- The mentor as faculty adviser

- The mentor as career adviser

- The mentor as skills consultant

- The mentor as role model

This joint publication of the National Academy of Engineering, National Academy of Sciences, and the Institute of Medicine encourages the practice of mentoring by recommending ways for improvement and resources to enhance the experience (2006).

The reality is that in higher education some relationships between students and faculty go beyond being acquainted or meeting academic expectations. In the process of working together the student becomes a protégé. The reality is that when a student uses the term mentor for someone who has contributed to their success it is because they stand out as being a real contributor to the achievement of that student. This means that the label itself gives validity to the fact that the designated mentor has in reality met the expectation of the student in some way, even if that expectation is unexpressed by the student to the mentor. In fact, it may only be after some reflection that the student is able to assess the influence exerted by another person. Since this study focuses on the factors that shape high-achieving, first-generation college students the influence of a mentor may provide another dimension to the data gathered in this study.

Conclusion

      There are certainly numerous opinions as to why some first-generation college students succeed when so many fail to persist and attain degrees. The best place to discover these answers may be among those students who succeed in a graduate doctoral program. This is typically the Ph.D. or a doctorate attached to a particular discipline (i.e., Ed.D.). The most accessible group of successful students out of these doctoral degree programs are university faculty. The doctorate is the credential for an academic career. These faculty should be accessible and somewhat receptive to a research project that focuses on high-achieving, first-generation college students within the professoriate. They should be representative of the percentages of doctorate completers from each category of parental educational attainment.

CHAPTER III

Methodology

The methodology for this inquiry into high-achieving, first-generation college students will bean intensive examination of research data generated in the study of first - generation college students from among the university faculty. The data from interviews, field notes, and other observations will be analyzed using the constant comparative method to develop a theory grounded in the research findings as introduced in *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Glaser & Strauss, 1967). This approach is focused on the generation of an explanation and hypotheses that emerges from the research data collected. The definition offered by one of Grounded Theories founding theorists states, "The grounded theory approach is a general methodology of analysis linked with data collection that uses a systematically applied set of methods to generate an inductive theory about a substantive area" (Glaser, 1992).

Introduction of Grounded Theory

In the 1960's two sociologists, Barney Glaser and Anselm Strauss, began to articulate a method of research that came to be known as grounded theory. This approach was developed during a field observational study of hospital employees working with dying patients. Anselm Strauss attributes two separate areas of work and thought that he contributed to the development: first, the general emphasis on problem solving found in the pragmatism of John Dewey and his disciples; second, the Chicago University emphasis on field observations and interviews in the sociological traditions. The Chicago sociological traditions about change are that it is a constant feature of social life, social interaction, participant viewpoints, and processes (Strauss, 1987). Barney Glaser received

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his academic training and education at Columbia University and was strongly influenced in his methodological approach by Paul F. Lazarfeld. His mentors and colleagues were doing inductive theory generation using both qualitative and quantitative data (Glaser, 1992). Both researchers were strongly oriented toward field work and documentation.

In contrast to the a priori theoretical orientation in sociology, they held that theories should be "grounded" in data from the field, especially in the actions, interactions, and social processes of people. Despite successful collaboration on a number of outstanding research projects resulting in numerous journal articles and books, they have differed about the direction of grounded theory in more recent years (Creswell, 1998).

The focus of grounded theory is the generation of a hypothesis from the data collected in the research of the phenomenon. The thrust of the grounded theory approach to qualitative data is toward the development of theory, without any particular commitment to specific kinds of data, lines of research, or theoretical interests. Grounded theory is not a specific method or technique. "It is a way of qualitative analysis that includes a number of distinct features: theoretical sampling, constant comparisons, coding paradigms, conceptual development and theory density" (Strauss, 1987, p. 5).

Grounded theory uses systematic data collection and analysis of data in the construction of a theoretical model. The most common data collection methods are participant interviews and the investigator's field notes and/or journals. Moustakas (1994) summarizes the grounded theory tenets used by Addison to investigate physician socialization. Grounded theory researchers continually question gaps in the data— omissions and inconsistencies, and incomplete understandings. They continually

recognize the need for obtaining information on what influences and directs the situations and people being studied (Moustakas, 1994):

1. Grounded theory researchers stress open processes in conducting of research rather than fixed methods and procedures.

2. Grounded theorists recognize the importance of context and social structure.

3. Grounded theory researchers generate theory and data from interviewing processes rather than from observing individual practices.

4. In grounded theory research, data collecting, coding, and analysis occur simultaneously and in relation to each other rather than as separate components of a research design.

5. Grounded theory is an inductive process: theory must grow out of the data and be grounded in that data (Moustakas, 1994, p. 5).

The data collection, data analysis and data presentation are intimately linked throughout the process. The adjustments to the emerging theory are made in order to conceptualize the data being generated (Glaser, 1992).

Sample

The sample for this study is composed of members of the higher education faculty, who have been identified as being first-generation college students through a self-administered questionnaire (see Appendix A). The data collected from the questionnaires will be reported in an appendix for comparative purposes. The preferred interview participants will hold an earned doctorate and have been a first-generation college student when he or she entered higher education. Individual faculty members are not obligated to participate in the questionnaire or interview. However, those who agree

to be interviewed will be asked to relate their family background and experiences, the story of their educational success, and path into the professoriate. It is estimated that from 6 to 20 participants will need to be interviewed in order to reach a data saturation. "Saturation means that no additional data are being found whereby the sociologist can develop properties of the category" (Glaser et al., 1967). Once the density of the data reaches this point, a theory should emerge that explains how first-generation college students succeed and become high-achievers in both college and graduate school.

The Process Toward A Grounded Theory

The researcher will seek to gain understanding of the experiences of the first-generation college students from among the professoriate through conversations, interviews, note-taking, and field observations. Follow-up questions are used, as deemed necessary by the investigator, to add data that will provide greater density and fill gaps in the emerging theory. The interview questions and participant answers are transcribed to insure accuracy. This procedure of adjusting questions and flexible methodology during data collecting is termed as an emergent design. This emergent design is common to a large number of qualitative research designs (Strauss & Corbin, 1998).

Data collection

The investigator will secure interviews with appropriate faculty and use an interview protocol (Appendix B) to guide responses (survey information will be compiled and described in an appendix for comparison with the information gained in the interviews). During responses and conversations with interviewees additional follow-up questions may be directed to the participants. Relevant questions will be added to the protocol and included in subsequent interviews. "Nvivo" software designed to

accommodate comparative research will be used to facilitate the efforts of the

investigator with field notes, memos, coding, and to journal the study.

Notes and observations

While the primary source of data collection is the interview process and the

transcripts generated, the investigator is not confined to this area. The observations about

the participants, conversations, and comparisons will be used to inform the researcher. A

journal will be kept by the investigator in order to provide a chronological record and

insight into the researcher's thought development during the study.

Constant comparison

The heart of grounded theory development is the constant comparative

methodology. Data, notes, and observations are compared to identify properties and

themes that will eventually become categories and sub-categories that reflect the shared

experience. In order to insure that the research is representative of the phenomenon,

additional participants will be observed and interviewed. This inductive approach to the

study of phenomena allows the researcher to add, subtract, integrate, and synthesize the

available data and its interpretation into an explanation of the evidence to date.

Four stages of development are used in the constant comparative method to

generate a theory about the phenomena being studied. The stages are explained by Glaser

and Strauss (1967) as interrelated procedures used to:

1. compare incidents to each category,

2. integrate the properties of each category to the others,

3. delimit the theory, and

4. write the theory (pp. 105-115).

The process requires that each stage flow out of the previous one while the succeeding stage(s) operate simultaneously with all the previous stages during the analysis. Thus as the process moves through the first cycle of all four stages the initial theory is generated. For the remainder of the process all the stages are in action throughout the analysis until the theory is completed and written by the investigator (Glaser et al., 1967).

While coding is a primary focus of constant comparison by the investigator the scope of the comparisons goes beyond simple coding. Literature is referenced as it becomes relevant and is incorporated into the comparisons made by the researcher. After enough data is collected to reflect the breath of experiences within the phenomenon, the categories are considered to be saturated. The theory that emerges is considered to be grounded in the data (Dick, 2002).

The investigator accumulates data to fill gaps in the explanation. Information is integrated from the first interview with the second and all subsequent interviews. Observations and emerging themes are analyzed into codes which will become the building blocks for a theory. The five elements of constant comparison are delineated as follows:

1. comparing the circumstances, experiences, viewpoints, and actions of different people,
2. comparing data from the same people over time,
3. comparing events and occurrences,
4. comparing data with a theme or category(ies), and
5. comparing a category to another category found within the same data (Charmaz, 2000; Denzin & Lincoln, 2000; Glaser, 1978; Glaser, 1992).

Coding and categories

Glaser (1978) gives a great deal of credit in code generation to his mentor Paul F. Lazarfeld. The process is articulated as the discovery of indicators within the study are combined into a unified concept. "Grounded theory is based on a *concept-indicator model*, which directs the conceptual coding of a set of empirical indicators. This model provides the essential link between data and concept, which results in a theory generated from data" (Glaser, 1978). These multiple indicators found in the data are combined into free standing concepts. The linkage is born out in the constant comparative methodology of grounded theory where data rise from themes to categories and on into a theory that has emerged from the data in the study.

The data generated are analyzed through open coding to gather segments of information for further analysis. Axial coding will then be used on the segments of information to explore causal conditions, interactions within the data, identify the context and any intervening conditions, plus possible consequences discovered from the data. The investigator will use selective coding in the third stage of analysis to formulate hypotheses about the nature of the findings. In the final stage the investigator identifies patterns of response in a visual format that will express the theory generated by the data (Strauss et al., 1998).

Open coding

The goal of the coding process is to identify a set of categories whose properties fit together into an appropriate integrated theory. "To achieve this goal the analyst begins with open coding, which is coding the data in everyway possible" (Glaser, 1978). The point is to provide as many possible categories as one can imagine from the data so as not

to preclude a valid explanation from the process. Open coding is not using preconceived themes. The open coding allows the explanation to emerge from the data and is confirmed as the density builds through the use of theoretical sampling. In this phase of the study the coding may be raw. One common device used by researchers during initial coding are "in vivo codes" that use the actual words of the informants. This use of actual words grabs the attention of the reader (Strauss & Corbin, 1990). The point to be made is that open coding should allow for a more objective view of the data.

In addition to the in vivo codes that mirror the actual words of the informants there are also codes that are constructs synthesized from the data by the investigator. The important linkage of the data to the codes is the test of the appropriate fit of a category in the emerging theory. Strauss (1987) gives the place of in vivo codes in ground theory:

> In vivo codes tend to be the behaviors or processes which will explain to the analyst how the basic problem of the actors is resolved or processed. These codes fracture the data directly because they represent analytic categories, as used by the researcher…In vivo codes have two characteristics: analytic usefulness and imagery (p. 33).

These two qualities of in vivo codes allow the researcher to carry consistent meaning forward into theory formulation through both analytic usefulness and imagery. The use of imagery relieves the writer of the need to repeatedly illustrate the concept. The in vivo codes capture the attention and yield analytic force to the theory (Strauss, 1987). Constructs on the other hand "are based on a combination of the researcher's scholarly knowledge and knowledge of the substantive field under study." Constructs have the potential of adding a broader more global meaning than the individual phrase of an

informant in the study. Many researchers prefer the construct to flatten out the in vivo imagery while some prefer the resonance of the code being in the informant's own words. The important activity is to first notice the phenomenon and then apply terms that describe the category in a way that is appropriate to the data (Strauss, 1987).

The process for open coding is best explained by Glaser (1978 and 1992). First, the researcher should ask the following set of questions:

1. What is this data a study of?

2. What category does this incident indicate?

3. What is actually happening in the data?

These questions assist the analyst in being theoretically sensitive through the collection, analysis, and coding process. Second, the data must be analyzed line by line. This appears to be cumbersome, but as categories emerge and saturation takes place the process gains speed. Third, the analyst must do his or her own coding, which will also help in the verification of the data. A list of codes must be compiled as they emerge from the data. Fourth, always interrupt coding to memo an idea in order to compare against other data and themes within the data. Fifth, stay within the confines of the substantive area or field of study so as not to lose relevance and fit for the theory. Sixth, and finally, never assume relevance of any category, variable, or characteristic until it emerges in and of itself (Glaser, 1978; Glaser, 1992; Glaser, 1998). Each acceptable category must earn its way into the developing theory. In many cases the categories will be formed from the actual words of the informants within the study. The goal is the generation of a theory that explains the phenomenon in a way that eliminates contradictions and provides the best possible fit for the density of the data.

Axial coding

The initial codes need shaping through a correction process. This does not mean that they are not accurate reflections of the themes and categories. The reality may be much richer than open codes and needs to be understood in a more mature fashion. In this phase the analyst will reevaluate each data set from individual informants and compare it to each of the others collected. In addition, the observations, settings, notes, ideas, and memos are incorporated in the analysis to identify and verify reoccurring themes. These themes or categories may be composed of one or more of the refined open codes from the initial analysis. Glaser (1978) speaks of this movement from open coding to more mature and integrated coding as follows:

> Open coding proliferates codes fast, which then begins to slow down the coding by continually verifying that each code fits, eventually saturating the code and placing the code in its true relevance among the other codes. This means finding its true relation to the *core variable* if it is not core itself. Verification, correction and saturation process is a part of the delayed action nature of grounded theory so the analyst should not be misled by initial quick results (p. 61).

In the constant comparison approach this is the second complete pass through the data and should force the investigator to review the data as a whole. This procedure will allow the researcher to make adjustments in the ideas and directions of his or her thinking. The researcher, through this correction process, attempts to put the various categories into their proper relationship within the experience. The result is insight into the interrelationships among the various categories and how they relate to what appears to be

the central category. The clearest definition in the literature describes axial coding as, "The process of relating categories to their subcategories, termed 'axial' because coding occurs around the axis of a category, linking categories at the level of properties and dimensions" (Strauss et al., 1990). It should be noted that in the use of the term subcategory some researchers use a hyphenated form sub-category to show the subordinate relationship of various categories to a larger more inclusive category. In their classic, *The Discovery of Grounded Theory*, Glaser and Strauss do not use the term. The practice would appear to be embedded in the second stage of the constant comparative method of integrating categories and their properties (Glaser et al., 1967). The hyphenated term is only used in actual quotations from sources and the term 'subcategory(ies)' is used in all other occurrences.

In addition to the constant comparison a number of researchers recommend the development of paradigm or coding diagram. This device is directed at helping contextualize the phenomenon and the actual relationships within the various elements to create a model of the emerging theory (Creswell, 1998; Strauss et al., 1990). The initial diagrams of the investigator's visualization of the emerging theory may be helpful in identifying any lapse in logic that may be present. In the case of unexplained or disconnected categories the investigator would return to the previous categories and assumptions. If the diagram appears to present a functional explanation then the investigator can move to the next step and begin more selective coding. Strauss (1998) articulates that, "Early diagrams are not elaborate. They become more complex over time" (p. 235). The various diagrams of the investigator should be used to discover and explain relationships in the data and the current state of the emerging theory.

Selective coding

In selective coding the researcher is attempting to construct a narrative presentation of the phenomenon. The relationships of the categories developed during open coding and the theoretical model as it appears after the corrections and modifications of the researcher in the axial coding phase, develop and link the various categories and subcategories. The coding moves from open to axial to selective which is the connection between themes, categories, relationships and the theory that will emerge. The decision to move into selective coding should be made only after a core category (variable) has been established within the data. This core category becomes a guide for any additional data collection and theoretical sampling. This delimits the work of open and axial coding to concentrate the effort on density of data and verification of existing categories and the emerging theory (Glaser, 1978). The process of coding is an effort to make sense of what an informant has said and interpret it in the context of the situation being studied in relationship with all other data, observations, interviews, and how it fits into the emerging theory (Dick, 2002).

This final phase of coding the information involves relating the various categories to a central category or core categories that explains the phenomenon. The refinement of the category relationships and the arrangement of the categories and subcategories into a paradigm form a foundation through selective coding for the emergence of the story. In order to be relevant the story must fit the individual cases in the study, in a general sense. This requires that the findings of the project be presented in their proper relationships and not just a list of themes or categories. The concepts are constructed out of the data. "By 'constructed,' we mean that an analyst reduces data from many cases into concepts and

sets of relational statements that can be used to explain, in a general sense, what is going on" (Strauss et al., 1990). This allows the narrative to rise from the individual stories to a generalized expression of the phenomenon.

Core category(ies)

Throughout the process of coding the investigator is looking for a central category that is common to the most informants and embodies the richest density of data (saturation). While a single category may provide the central phenomenon of the study, it is also possible that a cluster of categories and their supporting subcategories will form a more complete representation of what is actually occurring. The theory that emerges from the data is developed around the core concept(s) that is the most representative of the study (Creswell, 1998).

The core category accounts for most of the variation in behavioral patterns, is relevant to the experience, and completes the explanation of the phenomenon. While an analyst is coding, he or she must constantly be looking for the core category or central theme. The closer an investigator moves toward saturating the categories the more likely a core category will become obvious. Strauss (1987) gives six criteria to guide in the selection of a core category:

1. It must be central and related to the other major categories.

2. It must appear frequently in the data through multiple indicators.

3. The explanation that emerges is both logical and consistent.

4. The description of the phenomenon is abstract enough to allow for the development of a general theory.

5. The analysis and integration of the other categories adds richness to the explanation.

6. The concept is large enough to explain variations as well as verify the central idea (p.36).

The core category represents the central theme of the study. The central category evolves from the data, it too is an abstraction. There is a sense in which it consists of all the products of analysis condensed in a few words that seem to explain what 'this research is all about' (Strauss et al., 1990). When more than one core category is identified, the constant comparative procedure should be refocused to insure that the categories are equally necessary to the explanation of the phenomenon. It may be that categories identified as core are actually subcategories of the more complete saturated core category.

Saturation

This is defined as the point in the data collection at which a particular category no longer is receiving any new information. This means that the indicators for the category are becoming repetitive or no longer add to our understanding of the main concept or properties for the category. During the development of the theory there is no more support for connections between the category and the core category. When the indicators within the data cease to generate new concepts and categories the investigator should choose additional subjects to insure that all the categories are saturated. Even when it begins to appear that no new information or connectional relationships are being exhibited in the data, the constant comparative methodology will confirm that saturation

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has occurred and that the emerging theory is a fit for the data (Creswell, 1998; Dick, 2002; Glaser, 1978; Glaser, 1992; Strauss, 1987; Strauss et al., 1990).

Theoretical sampling

"Theoretical sampling is the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges" (Glaser, 1978). The collection of data is driven by concepts found within the previously analyzed data. This allows the researcher to compare the emerging theory against new events, observations, and informants who are included to enrich the study. This builds the data density to verify the core category and expands the variations among concepts to increase generalizability (Strauss et al., 1998). In grounded theory research individuals are selected for a study based on their contribution to theory development. This is true in the initial data collection, the comparisons of that data, and in seeking more informants to provide data that will both fill in the categories and verify the emerging theory (Creswell, 1998).

This approach to sampling falls into the general category of nonprobability or purposive sampling. The selection of individuals is based on the purpose of the research to discover high-achieving, first-generation college students who have found their way into the professoriate. While the individuals discovered through the internet survey will be the primary group from which to draw interviewees, there is the possibility that other appropriate candidates can be referred to the internet survey. This development would be similar to snowball or chain sampling where selected individuals enter the research based on the recommendation of other individuals (Tashakkori & Teddlie, 1998). The means of

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referral for various interview candidates is not the important element in the process. The point is that each interviewee meets the criteria of being a high-achieving, first-generation college student who is able to add information to the study. These approaches fit into the theoretical sampling methodology because the population is not known in advance, the criteria is redefined after each participant, the sample size is not set in advance, and the process is stopped after saturation is reached (Flick, 1998). The degree of theoretical sampling is seen by the proximity of the category to saturation. Glaser (1967) states, "The criterion for judging when to stop sampling … is the category's theoretical saturation. Saturation means that no additional data are being found whereby the sociologist can develop properties of the category (p. 61)."

Memoing and diagrams

Memoing is a continuous activity through the data collection, coding, and theorizing linked to the constant comparison methodology. A memo is a note to the investigator that preserves the ideas and insights of the study. These memos are snapshots of the thinking and possible theories related to the various categories at any point in time. The assumption of this methodology is that the theory is embedded in the data waiting to be discovered (Dick, 2002). The ideas about the evolving theory form early ideas about categories, relationships, and explanations of the emerging theory (Creswell, 1998).

Strauss and Corbin (1998) identify memos of several types that include code notes, theoretical notes, and operational notes, plus diagrams (visual depictions of relationships between concepts). Memos and diagrams are aimed at theory generation which is the goal of grounded theory. The discipline of writing ones thoughts should help reveal breaks in logic. The memo can be developed into a narrative story line or diagram

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to facilitate the process of integration. Diagrams help the researcher see relationships among categories and the validity of the core category.

Theory emergence

"The theory that emerges from the researcher's collection and analysis of qualitative data is in one sense equivalent to what he knows *systematically* about his own data" (Glaser et al., 1967). The theory that is thoroughly grounded in the data will fit the phenomenon studied, have correspondence to reality, and be flexible without losing a sense of generalizability. "The principal sources of grounded formal theory consist both of the data of diverse systematic research and the substantive theories generated from such data" (Glaser, 1978). The latter description by Glaser appears consistent with the definition found in the classic, *The Discovery of Grounded Theory*

Strauss (1987) gives a somewhat different view of the critical elements of a grounded theory: "a 'multi-area' theory, based on the comparative analysis of diverse substantive areas, and of numerous incidents drawn from those areas" (p. 248). In more recent writings the recommendation is that the theory should be refined through filling in underdeveloped categories, checking internal consistencies, and identifying gaps in logic. The theory must also account for variations in the data collected. The theory is then refined through comparing the explanation against the raw data and presenting the theory to respondents for their reactions and validation. The assertion is that a well-grounded theory will be recognizable to the participants as being generally applicable to their experience (Strauss et al., 1990; Strauss et al., 1998).

The concept presented in *The Discovery of Grounded Theory* does not seem to be contaminated by the continued development of its authors (Glaser and Strauss); rather

each has given more definition and form. Glaser, Strauss, and Corbin have continued in an objectivist approach to grounded theory, though Strauss and Corbin are less so than Glaser (Charmaz, 2000). Despite the divergent paths of Glaser and Strauss, the heart of both approaches is the constant comparative methodology necessary to insure that the raw data is used to study the phenomenon. While the researcher may not be able to be completely objective in the process of data collection, the constant comparative methodology requires that the emerging theory be reviewed against the data and modified to explain the phenomenon.

Literature

In grounded theory research the literature review is begun, but not completed prior to beginning the research study. In an emergent approach the literature is accessed as it becomes relevant. This can help the investigator in theory generation and consistency of thought. This means that literature actually becomes part of the data in the study. The literature is subjected to document analysis for verification of validity and triangulation of the study. Glaser (1978) states that the researcher must be careful in the use of literature: "His attitude should not be one adumbration, volume or reverence. It should be one of carefully weaving his theory into its place in the literature" (p. 137).

Glaser and Strauss (1967) were early proponents of literature being used as a relevant qualitative source of data by social science researchers. The contention is that documents can stand with field experience in the generation of theory. The authors supported this proposal with an explanation of the strengths and weaknesses inherent to literature and document analysis.

The strength of using the literature in grounded research is that it can be used to understand the substantive area of the research, incorporated in descriptive analysis, set the context (e.g., historic or cultural) for the data, and the general accessibility. There are also tactics that parallel field work such as the sequencing of related events, distinguishing the level of significance for various informants (even those who are dead or otherwise unavailable), and the contextualization of key terminology. The literature and documents are used to gain understanding and build the data. Glaser and Strauss (1967) present the emergence of a theory as an opportunity to consult pertinent materials when they state:

> At every step, appropriate hypotheses will develop and quickly integrate with each other. As hypotheses evolve, we are directed to new sources of comparative library materials…Our theory also directs us to seek, and be alert for, possible caches of useful material…hypotheses can lead us directly to certain comparative materials (p. 171).

There are five disadvantages of documents, literature, and other materials typically housed in a library. First, there can be stricture within the sources because some groups or organizations do not leave much of a literary trace or perhaps none at all. Second, the information left in a document can be biased and/or misleading. Third, the sources may be deficient and/or inaccurate. Fourth, there may not be enough detail provided to insure confidence in the authenticity of the events. Fifth, the literature and documents may lack the richness of the field experience that the investigator brings from interviews and observations. The cautionary note is that, no matter what the data source, it is to be used

in the generation of theory and the verification of that theory according to the density of the data (Glaser et al., 1967).

A key in this area is how the investigator treats contradictions in the literature and his or her own theory (Dick, 2002). The two (theory and literature) should be complimentary when possible differences can be explained in a rational fashion. The other possible problem is that the researcher will be intimidated by the literature and that creativity and analysis will be stifled (Strauss et al., 1998). Additional literature will be sought during the study to assist in the development of theory and reflect related research but not to direct the emerging data.

Interviews

The primary data collection approach in this study is the interview of high-achieving, first-generation college students. Participants will be added to the interview process until the point that the interviews fail to yield new properties, dimensions, or relationships during the analysis of the interviews (Strauss et al., 1998). This means until relevant data ceases to emerge, each category becomes robust and well developed, and the relationships among the categories are validated. This will be complete when the data is dense, developed, and distributed across the phenomenon. Given the focus on high-achieving, first-generation college students, theoretical saturation should be reached after the analysis of between 6 and 20 interviews. However, interviews will continue until open coding fails to generate new information from the raw data generated in the study and each category is saturated (Glaser et al., 1967; Strauss et al., 1998). The sample size for Rodriguez (2001) included gender sub-groups of seven females and eight males. Gándara (1995) used interview candidates based on doctorate sub-categories ranging

from 12 to 26 with larger gender groups across the degree categories. In an earlier study Gándara (1982) conducted interviews with 17 Mexican American women from low socioeconomic backgrounds who had earned a doctorate in their field. Seven participants were used in a phenomenological study examining Latina academic success (DuBois, 2003). The smallest number of participants used in the studies examined was two. The educational development and success of a male and female teacher were examined in a study conducted in Colorado (Galindo & Escamilla, 1995). The sample size for this study is only an estimate and will remain open until saturation is reached in order to provide data density.

Instrument

The interview protocol for the interviews is gathered from the literature review with particular focus on high-achieving, first-generation college students. Additional questions will be used within the interviews to gain understanding of each participant's story and significant questions will be added to subsequent interviews. The beginning protocol is outlined in Appendix B. The questions are designed to help the investigator explore the research questions of the study. In addition, it is hoped that the participants will bring information to the study that will increase the knowledge of high-achieving, first-generation college students and create enough data density to generate a theory about this phenomenon.

Procedures

The interviews of willing participants will use the interview protocols that will be revised through the successive interviews of additional participants. The basic questions used will be those of the interview protocol as appropriate, and additional questions will

be included by the researcher as needed. The interviews will be transcripted into

Microsoft word and analyzed using the constant comparative method. The investigator

will use "Nvivo" software to assist in the application of the constant comparative

methodology. This software has the capacity to incorporate the field notes, memos,

journal entries, and coding elements required for developing a grounded theory of a

phenomenon. In addition, the search function of the word processing software will also

be used to do comparisons of words and phrases of the documents.

CHAPTER IV

Interviews and Findings

Introduction

The preliminary problem in this particular study was discovering appropriate interview candidates. The population of high-achieving, first-generation college students is scattered throughout the United States in every conceivable vocation. While this might seem to provide numerous prospective participants, the identification of these individuals is no simple task. As a first step in gaining access to this group the researcher focused his attention on the professoriate in a comprehensive university. This is not meant to discount the value of contributions from other high-achieving, first-generation college students, but in order to bring a manageable focus to the research only members of the professoriate were interviewed. The interviews mirrored much of the information that emerged from the literature, but there were some compelling personal stories and the responses yielded insight into phenomenon.

Discovering the Sample

The sample for this study is composed of members of the faculty who have been identified as being first-generation college students through a self-administered questionnaire (see Appendix A). The introductory e-mail provided a link to the consent to participate form which fed into an internet survey. In addition to the faculty who were sought directly there appears to be some referrals to colleagues outside the university. At least one individual outside the university completed the survey (this snowball effect was identified in the theoretical sampling section in Chapter 3: Methodology). These instances are not considered to be outside the purpose of the study since the intent of the

internet survey and follow up activity was to discover appropriate candidates for possible interviews. The data collected from the online questionnaires is reported in Appendix D.

Each interview participant held an earned doctorate and was a first-generation college student when he or she entered higher education. Individual faculty members who participated in the questionnaire were not required to participate in an interview. However, those who agreed to be interviewed were asked to relate their family background and experiences, the story of their educational success and path into the professoriate. A total of nine interviews were conducted in this process and the pattern of the information gathered from the participants emerged during analysis. The researcher observed no new information beyond the sixth interview. The density of the data that emerged appears to give some insight into the experience of those interviewed and some of the influences that impacted these first-generation college students to become high achievers and move into the professoriate.

The introductory e-mail was sent out in mass to approximately 1,100 faculty. The introductory e-mails were released in groupings of about 275 with gaps of about three days allowing the entire data base to be released over a two week period. There were some technical difficulties such as unexplained returns of the e-mail and some human errors. Out of the broadcast of introductory e-mails there were 104 attempts to submit the survey. However, only 13 responders were considered to be preliminary candidates for interviews with the researcher.

The 13 potential interviewees were received in the survey e-mail inbox over a period of several months. Two early responders qualified as first-generation college students with terminal degrees. In keeping with the procedure of grounded theory no

more interviews were sought until the interview was conducted, transcribed, analyzed, and compared to the literature base. It was necessary to expand the literature review because of the growing number of categories in the analysis and to revisit the previous literature and article summaries in order to contextualize the interview. The next interview was only sought after completion of this cycle. The whole process of finding suitable participants at each point was, in retrospect, like being in a funnel. The following table illustrates the process:

Table 5

Internet Survey Submissions Required To Yield Interview Participants

| Item | Category | | Remaining | |
Category	%	Numbers	%	Numbers
Surveys submitted	100.00%	104	100.00%	104
Unusable surveys	6.73%	7	93.27%	97
Non-first-generation	69.24%	72	24.03%	25
Committee members	2.88%	3	21.15%	22
No terminal degree	4.81%	5	16.34%	17
Surveys without contact information	3.84%	4	12.50%	13
No response to interview requests	1.92%	2	10.58%	11
Declined to be interviewed	1.92%	2	8.66%	9
Interview participants	8.66%	9	0.00%	0

The two things that were unexpected in the search for appropriate participants were how few faculty responded to the online survey, even given the low expectation for responses to the introductory e-mail. The second surprise was the percentage of those responding who were first-generation college students. The interviews of the participants revealed

exceptional individuals who were able to overcome the various obstacles inherent to access, persistence, and degree attainment in their college and graduate education. These persons were guided by the interview questions, but in reality their own words revealed the journey that each took through higher education and into the professoriate.

Description of the Sample: Notes and Observations

General Observations

The nine interview participants persisted through numerous potential stop-out points in the research process. There was even variation within uniform categories like parental educational attainment. The definition of this category was that at the time each interview participant enrolled in college neither parent had any college experience. There were eight high school graduates. The average father had only completed the ninth grade in school while the average mother was able to complete the eleventh grade.

The intent of restricting the definition of first-generation college students to those whose parents did not have previous college experience was to investigate this factor in educational high achievers. The degree of experience, or lack thereof, was not the same for every participant. Two out of the nine interviewees had at least one sibling who preceded them into higher education; however, in one case religious considerations appear to have been a dominant factor in the college going and institutional selection. One participant enrolled in college the same semester as his older brother, who postponed college after high school to work.

Institution of First Enrollment

The institutions in which the participants first enrolled reveal a wide pattern. Eight of the nine entry institutions in which the participants enrolled were in the United

States of America. The one outside the United States was a comprehensive university in Greece. The American institutions represent the variety of access opportunities for these first-generation college students. The Carnegie Foundation for the Advancement of Teaching has developed a system to identify institutions according to function, scope, control (public or private), degrees granted, and production at the various degree levels. The actual system is designated as The Carnegie Classification of Institutions of Higher Education (Carnegie Foundation, 2006). The classifications, recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation (CHEA) are summarized with the number of participants that first enrolled in this type of institution:

- Two participants started in an institution with a basic rating of RU/H: Research University (high research activity).
- One person interviewed attended a private DRU: Doctoral/Research University.
- One first-generation college student interviewed began at a Master's S: Master's colleges and universities (smaller programs).
- Two participants started at a local community college. The basic rating for the one in New York was Assoc/Pub-U-MC: Associate's—Public Urban-serving Multicampus. The one in Oklahoma was Assoc/Pub-U-SC: Associate's—Public Urban-serving Single Campus.
- Two of the high-achievers interviewed began their careers in higher education with Specialized Faith-related institutions. The basic rating is Spec/Faith: Special Focus Institutions—Theological seminaries, Bible colleges, and other faith-related institutions.

These institutions represent the variety of entry points that the first-generation college students entered into higher education, but not the full range of institutions represented in American higher education (Carnegie Foundation, 2006). The university in Greece would be considered to fit in one of the Doctoral/Research University categories. The literature review indicated that 51% of first-generation college students begin their college careers in public 2-year institutions. Two of the participants interviewed started in an associate college. The "Survey of Earned Doctorates" reported that 10% of 2002 doctorate recipients first enrolled in a 2-year institution, but the definition of first-generation college students is different from this study. The 10% includes the children of parents who may have attended college without graduating (Hoffer et al., 2003). The two individuals interviewed in this study did not have parents with any college enrollment experience prior to their attendance.

If the Faith-related institutions are included, half of the students were outside the traditional public and private 4-year institutions. While this does not fit the expected enrollment pattern, it does reflect the difference between first-generation college students and non-first-generation college students. The majority of first-generation college students (72%) start college outside the 4-year college (public or private) and the majority of non-first-generation colleges students (55%) start at a 4-year institution (Striplin, 1999; Nuñez et al., 1998). The reality is that this group of first-generation college students show a pattern of enrollment where only two out of nine students enrolled in institutions that are less than 4-years. Given the finding that community colleges have a low transfer rate to a 4-year college and become a barrier to the baccalaureate, these participants were the exception to the rule (Cohen, 2003). These

first-generation college students not only enrolled in 4-year colleges (against the norm for first-generation college students), they persisted, earned degrees, and became high-achievers (Nuñez et al., 1998).

Demographics

The family of origin for the participants would be considered typical in many respects. The number of children ranged from two to seven with median being 4 and the average over 4.3 children per family. The participants were the baby of the family in three instances and the firstborn child twice. Five of the interviewees were among the youngest children in the family, rather than being among the first half of the children born into the family.

All of the participants have been given pseudonyms in order to protect their privacy. Ethnicity was left to the observation of the researcher unless it was self-identified by the individual in the interview. There were four female and five male participants (gender was collected through the internet survey). The two youngest participants were 36, two were in their forties, three were in their fifties, and the oldest two were 64. The place of birth was Greece and California, Kansas, Michigan, New York, Oklahoma (3), and Texas in the United States. All persons interviewed were serving as a higher education professional Eight of the participants had earned a Ph.D. and one librarian interviewed had earned a first professional degree (J.D.), which enhanced her resume as a potential faculty member. An overview of the demographic information about those interviewed in the study is presented in Table 6 that follows:

Table 6

Overview of Participant Demographics

Participant (Pseudonyms)	Ethnicity[1]	Gender	Birth Year	Age	Origin	Highest Degree	Discipline/ Professional practice
Allen	C	M	1948	57	Oklahoma	Ph.D.	Science Education
Bea	AA	F	1940	64	Oklahoma	Ph.D.	Educational Psychology
Carl	C[2]	M	1940	64	Michigan	Ph.D.	Educational Admin./ President
Dana	C	F	1963	42	Texas	J.D.	Law/Library Science
Ellen	C	F	1955	50	New York	Ph.D.	Neuroscience
Frank	C	M	1969	36	Oklahoma	Ph.D.	Accounting
Gregory	Med[3]	M	1969	36	Greece	Ph.D.	Chemical and Biological Engineering
Hope	NA	F	1960	44	California	Ph.D.	Educational Technology
Isaac	C[4]	M	1952	53	Kansas	Ph.D.	Strategic Planning

[1] AA = African-American, C = Caucasian, Med = Mediterranean, NA = Native-American

[2] Carl's father was raised in a family where French was the primary language of the home and developed bi-lingual skills.

[3] Gregory is both a first-generation college student and an immigrant to the United States.

[4] Isaac was raised as a member of a Mennonite community, a distinctive Christian religious group rooted in agricultural society.

Allen

Allen, whose Ph.D. is in Science Education was interviewed in his office that is adjacent to a laboratory. (During the interview a couple of students interrupted the interview with questions about the location of equipment needed to finish their work). He grew up moving around the country every two years because of his father's job, attending various types of schools, and ended up in a small town on the southern Great Plains. His father, who worked for the federal government, died when he was a sixteen year old high school student and he graduated from a small high school with 24 in his class. He states that college was an assumption by those around him and he first enrolled in a comprehensive university. Allen credits his wife with helping him succeed in college. He moved into the professoriate after being a secondary teacher, workshop trainer, and public school administrator.

Bea

Bea holds a Ph.D. in Educational Psychology for which she credits the support and sacrifice of her husband as the major influence for her pursuit and completion of the degree. Bea, along with her five sisters, was raised in an urban setting by her grandmother and her widowed mother who worked to support the family. The girls were raised in a community where the school, neighborhood, and church shared the same authority figures. Bea's female school teachers served as role models of success, attended the same church as her family, and lived in the neighborhood. Bea was the first in her family to attend college. Bea began her higher educational career in a junior college, but as an African-American female during the early stages of integration found it to be a

hostile environment. She transferred to a Historically Black University, commuted out of the city for night classes, continued to work full-time, got married, graduated with a major in elementary education like her mentors and went to work as a teacher in the public schools. She left the public schools and took a staff job at the university during her graduate studies. After completing the masters degree Bea was assigned teaching responsibilities that grew throughout her career. She is now semi-retired serving as a higher education consultant and adjunct instructor.

Carl

Carl holds a Ph.D. in Educational Administration and has over 30 years as a teacher, school administrator, faculty member, academic dean, and president. Carl is a Michigan native who grew up on a farm in the thumb region of the State by Lake Huron. His father, whose first language was French, always emphasized that he wanted his children to have more education than he had been able to receive. After high school graduation Carl had a disappointing experience in trying to work and save money for college. Carl entered the military and served four years during which time he expanded his linguistic skills. Upon the completion of his military service Carl entered an ultra-conservative private university from which he earned a bachelors degree. Carl started teaching in a private academy and soon added administrative duties. During his masters studies he helped to found another private academy. After completing a masters degree Carl then moved to the Phoenix area to work as a school administrator. His next career move was into a Bible college and then on to a seminary in which he has gained ascending administrative responsibilities. Preliminary conversations with Carl left the researcher impressed with his linguistic interest and skill.

Dana

Dana is a tenure track librarian with M.L.I.S. and J.D. Dana was born in the Southwestern United States and raised in a rural area by parents she self described as "back to nature people." Dana learned to read before going to school, excelled in class, and succeeded in high school speech competition. Dana is reserved in her speech; however, she is articulate and emphatic that she saw education as her way to a better life. Neither her father nor her mother graduated from high school and Dana was the first person in her family to attend college. She enrolled in a comprehensive university and stayed through three degrees, gaining a faculty position along the way in the same library where she served as a student work study.

Ellen

Ellen who earned a Ph.D. in Neuroscience from the University of Florida is about fifty years of age with family, teaching, and research responsibilities. (It was particularly difficult to find a time to do the interview due to the busy schedule created by these priorities). The publications list on her web site is extensive and she granted an interview at her laboratory. Ellen conversed and answered questions all the while painstakingly applying drops of a clear liquid into a rack of test tubes. The motions were deliberate, controlled, and automatic – it was as though she could have done this procedure in her sleep. She is the oldest child and the first in her family to go to college. Her mother helped her go to the local community college and one of her instructors assisted her in transferring to a private 4-year women's college. After two years working as a research assistant at the University of Pennsylvania, without doing additional graduate work toward a masters, she was admitted into the Ph.D. program in Florida.

Frank

Frank holds a Ph.D. in Accounting and accepted a faculty appointment in Accounting following completion of his doctorate. Frank is a mid-thirties husband and father who enjoys both teaching and research. In the interview he revealed that his parents were divorced when he was growing up and would fit into the socioeconomic category of working poor. Even though his parents were not educated beyond high school they stressed the need for Frank to go to college. With the help of an effective counselor, Frank was able to achieve in high school and graduate as the valedictorian. One other element that helped him was that he won an athletic scholarship to attend a regional university. When Frank met the interviewer in his university office, his dress and grooming looked like he had stepped out of Gentleman's Quarterly. He credits his wife with being the greatest help to him in graduate school and believes himself to be overqualified for an accounting practice. After the Ph.D. the move to the faculty seemed right and supports a life style that enhances the family environment.

Gregory

Gregory is a foreign born professor with a Ph.D. in Chemical and Biological Engineering. He is articulate in English with just a hint of an accent. The flavor of his conversation and its frankness was engaging. Gregory was more eager than previous participants to do the interview. He related that even though he has not enjoyed the educational advantage of being in the better schools he was still able to achieve in his discipline. Gregory earned his bachelors degree in his native Greece and then served two years in the army. His parents, who wanted him to go to college, have not understood the long grind of American graduate school and seemed most concerned about why he

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delayed marriage. Gregory credits his peers in graduate school with his persistence and success. He worked for a time with a company but sited the lack of corporate loyalty to employees as a reason to pursue the freedom of university research.

Hope

Hope is a mom who returned to graduate school after her children were in school, twenty years after she quit a doctoral program to raise children. She had worked in higher education at a regional university following a divorce that left her as the bread winner for her four children. Hope conveys expression through pacing, tone and volume fluctuations in her voice. She self-identifies herself as a Native American and is emphatic in stating, "Education was the only thing that ever satisfied my hunger to know." Hope says that her parents, neither of whom graduated from high school, suffered constrained employment opportunities and were powerful negative examples for her. She began teaching on the college level as a graduate assistant and continued after earning her masters. The attainment of the doctorate appears to be a declaration of empowerment by Hope.

Isaac

Isaac grew up on a family farm on the plains of Kansas in a community centered around the Christian religious sect to which the family belonged. Isaac was born last in a large family of seven children when his parents were in their forties. While neither parent graduated from high school, their work ethic is evidenced in both his career success and academic accomplishments. The family expectation was for all of their children to attend a Mennonite Bible college near the farm. The change to a secular university and Isaac's advances through graduate degree programs received little support from his family. Isaac had success in two careers prior to enrolling in graduate school. An undergraduate

classmate (who was teaching at their alma mater) and his wife appear to have provided the necessary support through graduate school and the tenure process. Teaching at the university level is the fulfillment of a personal dream.

In Their Own Words: The Interview Open Coding Process

The following section focuses on the interviews that provide the data for this study. The interviews are presented under the pseudonyms assigned to the study participants. The geographic locations in some instances have been generalized and any events which might identify the participant have been masked. In addition, the names of family, friends, and people involved in the lives of those interviewed have been replaced with titles that represent the relationship, occupation, or authority position with respect to the participant.

The interviews transcribed by the investigator have been edited and are presented as narratives in this section. These should be considered equivalent but not exact. The modifications have not changed the essence of the interviews. Furthermore, these representations will be used to illustrate the rationale of the open coding process. Each interview will be presented in a narrative form, with the questions from the interview protocol being incorporated into the interview responses, to shape a seamless presentation of the contents of the narrative. There may be some rearrangement or repetition of the material. This is to compensate for times when the participant's conversation or story went beyond a particular question and unknowingly gave responses to later questions. In some instances participants would revert back to a previous question and expand the information he or she had already given. This section should give the reader a good perspective on the interview content without betraying the identity of the participants.

The researcher is acting as the redactor to lead the reader through the coding process. The term redactor (borrowed from classical and biblical literary criticism) is used instead of editor due to the nature of this process that rearranges and edits material in order to put it into literary form. The participant responses will be grouped and linked to the actual protocol questions when the process moves into open coding (Appendix E). After the first interview a comparison to the previous interview content will be conducted to identify data that might need to be included in the developing theory. The subsequent interviews will be compared to those analyzed previously along with the literature that may need to be revisited. The constant comparison method will be used to analyze the data generated from the interview participants, integrate it with the investigator's observations, and emergent literature that may need to be reviewed.

Allen

Background Information

I was born in 1948 in a small city in northern Oklahoma. I would describe my family as typical: 2 boys, 2 girls, my Mom who was a homemaker and my father who was a federal employee. My Dad died when he was 43 years old; I was a 16 year old high school student. My father and mother never went beyond high school graduation in their educational attainment. My older sister went to college first, I was the second to begin college and the others were younger.

People of Influence

There was no one outside my family who influenced me during my undergraduate studies. In graduate school my major professor had a great influence on me. In my family

the person who had the most influence on my educational attainment was my spouse. That would be true for both undergraduate and graduate education.

Community Characteristics

We moved around frequently when I was growing up; my father was with the Immigration and Naturalization Service, so I never went to the same school more than two years at a time. The most extreme example was during high school. I started in a school of over 3,500 where we only went half days because of limited space and finished at a school with a graduating class of 24. After my Dad died we had to move and that is the reason for the last move to the small high school. I think that there was always the assumption of college within my family and in school.

School and College Characteristics

My school experience was ordinary up until high school. I was lost in high school, the spark for education occurred in college. I enrolled in the University of Oklahoma the fall after high school graduation. There were many obstacles for me in college. The first was financial. We had zero family money, but I got a scholarship because of father's death and some rehabilitation assistance due to a knee injury. The second big obstacle was that I was unprepared during high school, the result being that I could only stay three semesters before I had to quit. The last obstacle, looking back, was my emotional state over my father's death.

It is really a wonder that I ever went back and finished. I had undetermined goals, but my future wife helped me learn how to study. I learned study strategies for courses and for professors. A class in science was a turning point for me. I applied my skills to

an area of interest and I succeeded dramatically. During those days I learned how to get by on nothing. When I got married I moved up to poverty.

When I started having success, my focus was sharpened. I had started in pre-med, changed to research, but never had an aptitude test. I got some experience with teaching labs and discovered my gifts, and then I finished a B.S. in Education and started teaching high school. The graduate work began as professional and personal development. My masters work is where I met my mentor (on my work study job) who would become my major professor. I worked as his lab assistant and tutor. I finished the Master of Science Education degree. I think I was comfortable with methods of science education and the faculty. I taught high school for eight years, but had an additional desire to multiply my efforts through other teachers. I think those are the reasons I completed the Ph.D. in Science Education.

Path to the Professoriate

Through and after the Ph.D. I changed my career goals. I began to evolve. Branching out into curriculum development I moved into administration and started doing workshops and in-service programs. The journey to become a professor took five years. I was offered an appointment as the science coordinator in the school district. I was not ready to leave because I had a good job and was able to teach as an adjunct. Then after four years I did not receive a faculty appointment to teach part-time. I started attending class as an observer and decided to pursue a faculty position. The offer came from an out of state institution. I took the job and four years later I came back to the university. It was just the logical next step.

Reflections of High-achieving, first-generation College Students

It is difficult to explain why I had educational success. I am sure that the support and encouragement of my partner is the most important element. My marriage gave me support at an early stage and it was a critical time. There was something internal that made me feel like a seeker and explorer. The thought that it would please my parents is in there as well. I think in retrospect my best advice for first-generation college students would be that success in college is not about money and not about the intelligence factor. You need a desire to complete. It needs to be a passion or a personal calling.

Open coding

The open coding for the Allen narrative and all of the subsequent participants is presented in Appendix E. Each interview was examined in light of the research questions from Chapter One of this study. The questions follow in sequence and are italicized with the appropriate excerpts from the narrative in regular type below the research question. The in vivo codes are marked for future comparison with the other interviews and linkage to the literature review. The comparison of the participants, the literature, and the emerging categories are related in the constant comparison section that follows each interview. The open coding for each participant can be found in Appendix E.

Constant Comparison (First interview subject is compared to the literature only)

Allen was eager to tell his story about being a first-generation college student and the obstacles he had to overcome to achieve his status as a university professor. The analysis yielded a total of 36 data slices that seem important to the researcher. While both of Allen's parents graduated from high school, he reported that neither parent enrolled in college. However, when speaking of the role his parents played in his educational success

Allen said, "I think that there was always the assumption of college within my family and in school." The going to college expectation of Allen's parents was reaffirmed in his school environment. This parallels the literature with regard to the influence of parents on the college going of children (Astin, 1993). This is reaffirmed by the findings among Latino students where the impetus of a parent, generally a mother, behind their children's striving (Gándara, 1982) and highly supportive mothers with high educational standards (Gándara, 1995).

The influence of this expectation resulted in Allen enrolling in a comprehensive university located in his state of residence and earning three degrees. His highest degree earned being the Ph.D. in Science Education. Allen said, "the spark for education occurred in college … I think I was comfortable with methods of science education and the faculty." Once Allen found himself in college his intellectual capacities were stimulated by the in-class experiences (Pascarella et al., 1995) and student-faculty interactions (Astin, 1993). These appear to have helped Allen assimilate at the university.

It is remarkable that Allen became a high-achieving university student after the death of his father and its effects on him are considered. Even after 40 years there is no way to over estimate the pain of these words, "My Dad died at 43 years old when I was a 16 year old high school student." This statement was paced and controlled, but Allen's eyes flashed as he looked away. This crisis event was an unexpected moment in the interview. Allen moved on quickly and the emotion faded into the story. Allen, "We moved around frequently … so I never went to the same school more than two years at a time … I was unprepared during high school, the result being that I could only stay three semesters [at the university] before I had to quit … I had undetermined goals." The

combination of his father's death, frequent moves to new schools, and lack of purpose resulted in low academic preparation (Pascarella et al., 1995). The brief stop out supports the research that first-generation college students are less likely to return to college and persist (Riehl, 1994). The interview also revealed another obstacle, "we had zero family money," which reflects the literature findings that first-generation college students have lower parental income (Barahona, 1990; Billson et al., 1982), lack of parental support (Nuñez et al., 1998) and tend to have lower incomes than the general population (Terenzini et al., 1996). Then Allen said, "The last obstacle, looking back, was my emotional state over my father's death." The interview had continued for several minutes, he had moved on into the story, but the reality was not forgotten.

The negative influences that converged onto Allen would predict failure. But the positive influences, along with his personal determination, brought academic success and personal satisfaction. Allen said, "my future wife helped me learn how to study … my marriage gave me support … the person who had the most influence on my educational attainment was my spouse." The opportunity for college was provided by a scholarship because of his father's death and some rehabilitation assistance. This combination provided a means for Allen to go to college. The scholarships did not eliminate financial hardship, "During those days I learned how to get by on nothing. When I got married I moved up to poverty." The academic success was reported in terms of learning study strategies, a class in science being the turning point, the discovery of gifts, and finishing the masters degree. There is also evidence of student/faculty interaction when Allen reported comfort with the faculty and that he met his mentor, who would later be his major professor (Astin, 1993). While reflecting on his university experience Allen said,

"There was something internal that made me feel like a seeker and explorer." The internal drive to go is referenced as a 'seeker;' London (1992) designated this as an 'interest in attaining.' The reference of Allen to being an explorer closely resembles the 'risk taker' characteristic in "Giants Among Us" (Rodríguez, 2001). The dual themes of 'parental motivation' and 'interest in attaining' connected with London (1992) are seen in Allen's phrase, "it would please my parents."

Allen's path into the professoriate followed a four year journey from the granting of the Ph.D. Allen started as a high school science teacher, who did some part-time instruction, through a promotion and pay raise into administration of the school district, and finally to seeking and securing a faculty position at a university in an adjoining state. In reference to data collected in the "Survey of Earned Doctorates" Allen was employed in a secondary school position teaching science that is included in the 'Other' category that makes up 16% of the employment commitments in the 2002 survey (Hoffer et al., 2003).

When asked to share his best advice for other first-generation college students Allen gave four pieces of wisdom. Allen said, "Success in college [1] is not about money, [2] is not about the intelligence factor, [3] is about desire to complete, [4] is passion or personal calling." Allen felt that his desire to complete and the discovery of his passion led him through the maze of higher education and into the professoriate.

Memos and observations

The experience of Allen is reflected in the literature review, but the impact of his father's death appears to be the greater crisis. It seems that any student, regardless of parental education, academic preparation, or economic circumstances would struggle

after the loss of a parent. The similarities to the first-generation college students literature

seem to be somewhat parallel during the preliminary analysis. The general categories of

the literature review and the data that emerged from Allen's interview fall into the

following areas:

1. Parental influence

    - College expectation (Astin, 1993) Impetus of parents (Gándara, 1982;
      Gándara, 1995)

    - Lack of parental support (Nuñez et al., 1998)

    - Lower parental income (Barahona, 1990; Billson et al., 1982)

    - Financial assistance (Astin, 1993)

2. Persistence through higher education

    - Emotional support, opposite of lack of support (Barahona, 1990)

    - In-class experiences (Pascarella et al., 1995)

    - Student-faculty interactions (Astin, 1993)

    - Low academic preparation (Pascarella et al., 1995)

    - Low personal income (Terenzini et al., 1996)

    - Lower persistence [dropped out after three semesters (Riehl, 1994)]

    - Without strategy (Rodríguez, 2001)

3. Achievement and degree attainment

    - Seeker, interest in attaining (London, 1992)

    - Explorer, risk taker (Rodríguez, 2001)

    - Eager to advance (London, 1992)

The full dimension of the student-faculty interaction may need to be reviewed further. The use of the title, mentor, for his major professor may be important. The advice for first-generation college students may fall into a pattern as the interviews progress. First, success in college is not about money or the intelligence factor. Second, success in college is about the desire to complete, passion, or personal calling.

Bea

The goal for the second interview candidate was to find a female who qualified as a first-generation college student. Bea agreed to be interviewed and during the session provided additional data. She identified herself as an African-American. However, this interview also proved to contain the most difficult event in the interview process.

Background Information

I was born in 1940. My father was deceased when I was very young, and had no college. I was the fifth of the six girls with a single working mother. Mom was a high school graduate. None of my older sisters had attended college before I went to community college.

People of Influence

In college my English composition teacher was the person who influenced me to achieve. After college I was working in the public school as an elementary teacher. I had a friend, who knew a friend who had a HEW scholarship and could not use it. I had 18 hours at a regional university on a masters, but this university had a masters in Psychometry. The last day of enrollment I went to campus for the first time. No one would help me and I could not find the College of Education. At about 6 p.m. I was sitting on a bench crying when the Special Assistant to the President found me. Monday,

when classes began, I spoke to the right administrator, got the scholarship, and he sent me to class. The scholarship covered tuition, fees, books and $500 per month for a year. My husband was teaching school locally and had been hired for a teaching job in California making more money. He got other employment, so I could do the Masters. No one helped me more in my educational attainment than my spouse. My husband gave up a financial promotion and personal time, plus he was my cheerleader.

Community Characteristics

My community growing up was a low socioeconomic urban area (but I had no consciousness of that). Home and church and school were interwoven - teachers at school also went to my church. My <u>Grandmother</u> kept us while Mom worked. My role models were female elementary teachers; principals were men. Most kids wanted to be nurses and teachers - "I said I wanted to be a child psychologist." I had just learned the word and it stuck with me. I could spell it – we had spelling bees in class back then.

School/College Characteristics

When I went to High School I liked it, did well. From the time I started school we were grouped A B C D F. I would miss words and questions just so I would not be the one out front. Some of my teachers figured it out and asked, "Why are you jeopardizing your future"?

I started out at the community college. I was working and took five classes the first year. All five instructors said that I should not be there. It was the beginning of integration and these nice Christian people – white – said, "You need to go somewhere else, for your own good." I was unwelcome and they demonstrated it in terms of grades. After two semesters I got discouraged and said I would never go back to school again. I

was working 40 hours a week in a factory, it was hard work and I had to study late at night.

I did not mean it when I said I would never go back. I started commuting to the Historically Black College about forty miles away. I was working and commuted for four years. At first, I commuted with my sister and later with my husband. The obstacles were: a 40 hour job, family, husband, and no advisement. The hardest challenge to overcome was to just keep doing it. I kept making the choice to keep on going. I just picked classes for Elementary Education. I knew I could get a job; that is what I had seen.

Path to the Professoriate

I worked as a teacher with the Public Schools for five years. Started going summer and night to the regional university near me and then changed over to the comprehensive university. After the Masters I was finished, but I just kept going. I told the Lord I'll go, then I told the Lord I lied, I don't really want to go. That's why it took 14 years. I was working and enrolling continuously; I finished coursework and spent six years working on the dissertation all the time working at the University. I started with student services and remedial instruction. Then I moved to advisement and teaching undergraduates. Throughout my graduate work most of the time I was teaching, mentoring, pushing and shoving students on. I did not make the decision to be a university professor, it just happened. People were placed in my life to take me from point to point. My major professor called, "Girl I want to retire – get done with this degree." After I got the Ph.D. in Educational Psychology all I felt was relief that it was done. You get to a place that you don't consider procedures you just want to get done.

Reflections of high-achieving, first-generation college students

I wish I could put a word to it as to why I was successful in educational attainment. Others were smarter and had better opportunity. I never got financial aid for the bachelor or for the Ph.D. The Lord said, 'go' and I said, 'no!' But I just kept on going. I think it was obedience; the Lord sent people my way when I needed it. My best advice for first-generation college students is that education has to be valued – it's key. Hidden determination and a positive attitude to keep going – Persistence, day to day.

Constant Comparison

The experience of Bea is reflected in the literature review and has many similarities to the data gathered from Allen. The fact that both of the candidates interviewed lost their fathers is an almost unbelievable coincidence. The general categories of the literature review, the interviews, and the data emerged in the following areas:

1. Parental influence

    - College expectation (Astin, 1993) Impetus of parents (Gándara, 1982; Gándara, 1995) [Allen & Bea]

    - Culture of possibility (Gándara, 1995) [Bea]

    - Lack of parental support (Nuñez et al., 1998) [Allen & Bea]

    - Models of hard work (Gándara, 1995) [Bea]

2. Access into higher education

    - Financial assistance (Astin, 1993) [Allen & Bea, masters scholarship]

    - Going to college (Hsiao, 1992; Rendón, Romero, & Nora, 2005) [Allen & Bea]

- Lower parental income (Barahona, 1990; Billson et al., 1982) [Allen & Bea]

3. Persistence through higher education

   - Emotional support, opposite of lack of support (Barahona, 1990) [Allen & Bea]

   - In-class experiences (Pascarella et al., 1995) [Allen & Bea]

   - Low academic preparation (Pascarella et al., 1995) [Allen]

   - Low personal income (Terenzini et al., 1996) [Allen & Bea]

   - Lower persistence [Allen dropped out after three semesters and Bea dropped out of community college and transferred to a historically black college (Riehl, 1994)]

   - Separation from the culture of origin (Striplin, 1999) [Bea]

   - Student-faculty interactions (Astin, 1993) [Allen & Bea]

   - Without strategy (Rodríguez, 2001) [Allen & Bea]

   - Work and family commitments (Astin, 1993; Nuñez et al., 1998; Riehl, 1994; Stein, 1992; Terenzini et al., 1995) [Bea]

4. Achievement and degree attainment

   - Eager to advance (London, 1992) [Allen & Bea]

   - Explorer, risk taker (Rodríguez, 2001) [Allen & Bea]

   - Seeker, interest in attaining (London, 1992) [Allen & Bea]

   - Value education (Hsiao, 1992; Terenzini et al., 1995) [Bea]

The dimensions of the student-faculty interaction are still underdeveloped, but it should be investigated with each participant. Bea did not use the title, mentor, for her

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major professor. However, there does appear to be interaction with at least one faculty member. The female teachers in her community appear to be strong role models. The family ruled by grandmother and fueled by a working mom seems to give Bea a strong sense of identity. The advice for first-generation college students may fall into a pattern as the interviews progress. Both the hidden determination of Bea and the desire to complete of Allen have an internal quality. There is an emerging pattern of persistence and the value of education being important to the interviewees.

Carl

Background Information

I was born in Bad Axe, Michigan on an 80 acre farm to a hardworking dad and a homemaking mom who was loving and good. We were raised with solid family values. We four children, especially the older three, were expected to help with farm and housework. No vacations.

Dad completed five years in the one-room school house that his mom attended when it was built in 1895; I attended it through grade 8. It still operates. Dad was bi-lingual; his first language was French because he was reared by my grandparents. Mom graduated from high school and she loved French. I was the first to go to college. My older sister was a high school graduate and my younger sister had some business college training.

People of Influence

Outside my family the people who influenced me the most to go on to college were my pastor's son and two other college grads that influenced me when I was attached to the US Embassy in Nicosia, Cyprus. When I went to college the most influential person was my father. Dad wanted us to have more education than he had; mom had been an excellent student and loved to read. In graduate school it was most likely dad, we did not discuss it; however, he was a role model of hard work.

Community Characteristics

A selfless man who attended our small country church took interest in the young people. For example, he knew I only had a couple of music lessons and lost my teacher; he encouraged me to come to his house and practice long enough that I could play in our small church orchestra. Further, he took a group of perhaps eight young fellows and formed a 4-H club; we did wood work. Dad was a skilled stone layer, block and brick layer, and good at general construction.

The first person to speak to me about college was the son of our pastor. He was home for Christmas vacation and he said, "Carl, you ought to consider college to prepare for your future." I never got away from that. However, after high school I discussed with dad leaving the farm to pursue a college education. He was fearful of our not being able to pay for such a luxury. So, after a disappointing experience trying to work to save money for college, I joined the Navy and with quick promotion found myself having to write monthly reports to the Pentagon. I was the only non-college degreed person faced with this. The "community" of the Navy convinced me that I was desperately ignorant and must pursue a college education.

School/College Characteristics

I attended a one-room country school in the Thumb of Michigan, some 100 miles north of Detroit. One year our teacher had just over 60 students. I was an 8th grade student and there were a couple of others in grades 7 or 8. The teacher asked me to teach the students a course on natural science. I was painfully ignorant, yet I tried. In that small school it was common for older students to help slower younger students. It was an honor to do so. At the end of our 8th grade we took a standardized achievement test. I was good in math but I saw a question on that test that deeply troubled me. I had never seen such a funny math symbol. I did not know what it was. I later learned it was a radical sign asking for the square root of the number 16 inside. That gave me a hunger to know more about math.

However, when I began high school the next fall I took a very light load. This was so new for me. Many classrooms and not one teacher—a mother, or grandmother image. I signed up for agriculture, band, shop, study hall, English, and world history. I did very poorly in history. I cared much more about our herd of cattle and the farm land I was working. Well, toward the end of the 9th grade, the high school principal called me into his office. I was quite shaken; he had been a successful fighter. The Principal said to me, "Carl, I am ashamed of you. I have been looking at your elementary record and noted that you are good in math and you did not take any math this year. I want you in my math class in the fall." I said, "yes, sir." He had come out to our farm a number of times in harvest to buy oats from us; he knew I had learned to work and was submissive to my parents. Well, at the end of the first marking period, the Principal said to me, "Carl, I am proud of you; you made a B+, with a bit more effort you could have made an A." That

did it; I began to apply myself, not only in math but in other subjects. I ended up taking all the math our high school offered, plus chemistry and physics and made the honor roll. He had turned me around. Many years later I went to visit him to thank him for his challenges to me. You see our neighbor and that Principal believed in me enough to pull me aside for a direct confrontation. They were caring enough to go the extra mile.

After four years in the Navy I attended the Bob Jones University that our pastor's son was attending when he spoke to me six years earlier. I declared myself a math major and had a secret desire to teach math at the junior college level. However, my years in the Navy changed my interests. I had seen a variety of cultures and had been exposed to many countries. I wanted to teach and was convinced I needed a lot of help. So I studied English, the origin of English words; I had studied Modern Greek while in Cyprus and now I dove into French. When I switched from math to Bible at the end of my junior year, I jumped into Koine Greek and later into biblical Hebrew.

After the B.A. I spent a summer ministering in 17 countries of Europe and the British Isles. From there I began the Master of Arts studies in Bible. However, I was invited to teach Math, French, and Bible in the Academy operated by the university while finishing the course work for the Masters. I continued teaching for three years and then took a position as a private school administrator. Again, I was convinced I needed more education. I attended Clemson University as I began to work on a master's degree in school administration. I had founded a private school and it was at the end of that time that I completed the masters in administration.

I took a position as a private school administrator out West. Within four months I was asked to consider starting a Bible college. I was convinced I must pursue a doctorate

in educational administration. I took courses at Arizona State University and earned the Education Specialist. I completed the Ph.D. in Educational Administration in California. By this time our Bible College was finishing its first seven years of operation. It has been a joy to see men and women trained for church-related vocations in the West and around the world.

The obstacles for us going to college were big. I was married; we had no financial assistance. My wife worked; we lived a very frugal life and kept focused on degree completion. I kept reminding myself of the value of the advanced education. I wanted to succeed in my profession. I had others looking to me: a boss, a board, students, faculty, other administrators, parents, etc. My first graduate study was in biblical languages and Bible content. However, as I began to work following the first year of full time graduate work I found myself in the classroom and soon in an administrator's chair. My three earned graduate degrees have all been in educational administration; they were "vocational specific." More specifically, after becoming the administrator of a private school I recognized the need for a master's degree in school administration. When I was asked to help with the development of a Bible college, I was convinced I needed a higher level of professional training. I began pursuit of the doctorate and along the way received an Ed. Specialist degree, changed institutions for philosophical reasons and completed the Ph.D. degree in California.

Path to the Professoriate

I would describe my journey into the professoriate in simple terms–it has grown out of a desire to help others: in the one-room school house, in the Navy I taught at night

school, in Cyprus, tutoring, becoming a principal, and training men and women for church-related vocations through the Bible College and Seminary.

I think that the change into higher education was solidified when I was getting the Education Specialist at Arizona State. In the first summer of graduate study we analyzed in depth a recent study of over 3,000 colleges by the Carnegie Council. I was convinced the added study would be a help. It has been. I saw I could teach part time and still serve in administration.

Reflections of high-achieving, first-generation college students

I think I was successful in college and graduate school because of the encouragement that I have received over the years from people who "believed in me" and opened the door by helping, or in some cases just by their speaking a word of encouragement. Another underlying reason is the model of parents that stuck with it when life got difficult. Further, Dad said a number of times, "I want my children to get more education than I was able to get." However, it was made clear to me in the world of work and ministry that I needed to (and could) borrow brain, not character. Character must be developed in the inner man. Knowledge can be purchased.

My best advice to share with first-generation college students would be: Learn from Timothy Dwight, early president of Yale College. He said that the first two economic lessons a person must learn is INDUSTRY AND ECONOMY. Second, set your academic goal high. Realize that it is best to get all the education you can as soon in life as you can get it. Be willing to suffer now, do without, for the sake of the future— take the long look. Recognize that immediate self-gratification is a quick and sure way to destruction, even academically.

Constant Comparison

Carl shows more distinction than the first two interviewees. This may be in part because he was raised by two parents without the trauma of losing a parent. The other difference seems to be the comfort that Carl has with authority and his view of submission as being a positive attribute. Persons in authority appear to have served as role models for Carl (i.e., parents, 4-H leader, principal, pastor's son, etc.) The general categories of the literature review, the interviews (the correspondence of individual participants is in brackets), and the data emerged in the following areas:

1. Parental influence

   - Academic success and sense of belonging (Dubois, Holloway, Valentine, & Cooper, 2002; Gándara, 1982; Gándara, 1995) [Carl]

   - College expectation (Astin, 1993) Impetus of parents (Gándara, 1982; Gándara, 1995) [Allen, Bea, & Carl]

   - Culture of possibility (Gándara, 1995) [Bea]

   - Lack of parental support (Nuñez et al., 1998) [Allen & Bea]

   - Models of hard work (Gándara, 1995) [Bea & Carl]

2. Access into higher education

   - Financial assistance (Astin, 1993) [Allen & Bea, masters scholarship]

   - Going to college (Hsiao, 1992; Rendón et al., 2005) Persistence (Gándara, 1995) [Allen, Bea, & Carl]

   - Lower parental income (Barahona, 1990; Billson et al., 1982) [Allen, Bea, & Carl]

3. Persistence through higher education

- Emotional support, opposite of lack of support (Barahona, 1990) [Allen, Bea, & Carl]

- In-class experiences (Pascarella et al., 1995) [Allen & Bea]

- Low academic preparation (Pascarella et al., 1995) [Allen]

- Low personal income (Terenzini et al., 1996) [Allen, Bea, & Carl]

- Lower persistence [Allen dropped out after three semesters and Bea dropped out of community college and transferred to a historically black college (Riehl, 1994)]

- Separation from the culture of origin (Striplin, 1999) [Bea]

- Student-faculty interactions (Astin, 1993) [Allen & Bea]

- Without strategy (Rodríguez, 2001) [Allen & Bea]

- Work and family commitments (Astin, 1993; Nuñez et al., 1998; Riehl, 1994; Stein, 1992; Terenzini et al., 1995) [Bea]

4. Achievement and degree attainment

- Eager to advance (London, 1992) [Allen, Bea, & Carl]

- Explorer, risk taker (Rodríguez, 2001) [Allen, Bea, & Carl]

- Persistence (Gándara, 1995) [Carl]

- Seeker, interest in attaining (London, 1992) [Allen, Bea, & Carl]

- Value education (Hsiao, 1992; Terenzini et al., 1995) [Bea, & Carl]

The dimensions of the student-faculty interaction are still underdeveloped, but it should be noted that the positive interaction with teachers by Carl occurred in the one-room school. Neither Bea nor Carl used the title of mentor for anyone during their

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graduate studies. The authority figures (i.e., 4-H leader, principal, etc.) within Carl's community during childhood appear to be positive influences. Carl reflects the pattern of determination with his statements on "secret desire to teach" and "succeed in my profession." There is an internal desire expressed by Allen, Bea, and Carl to succeed. The call for persistence and the value of education continues to be important to the interviewees.

Memos and Observations

Carl has a powerful connection to his parents. He draws great confidence from his farming background and the power of hard work. This work ethic seems to have been reinforced in the military. One other factor may be that Carl started college six years after high school graduation and did not stop out of the institution during the bachelor's degree process like Allen and Bea. The tone of this interview was much more positive than the previous two.

Dana

The interview began somewhat awkwardly. When meeting at the appointed place in the library the researcher asked for Dana. A lady stepped out of the cubicles and said, "Follow me." We walked through the stacks into a back area with a seating area and then she disappeared through a door into a side room. A short time later, she reappeared and said, "We can talk in here." It was only at that moment that I realized the lady leading me was my interview. Dana tells her story well and answers several questions without prompting.

Background Information

I was born in 1963 before my parents moved from Texas. Our family was made up of Dad, Mom, two older twin sisters, one older brother, and two younger sisters. My father's mother lived with us for a time, also my father's brother. My Father finished the eighth grade and my Mother went through the ninth grade. I was the first to go to college and graduate. Since then my twin sisters have become nurses (one with a bachelor's degree and the other with a 2 year degree). Both of the younger sisters have bachelor degrees.

People of Influence

There was really no one outside my family who was influential. I determined at a very young age to be an attorney. I met a cousin once who was an attorney, but I had my mind made up long before I met her or knew that she was an attorney. There was not really anyone in my family either, but my Mom persuaded my Dad to let me enter Speech in High School and go to the tournaments. My strongest category was Extemporaneous Speaking. I placed in the tournaments and went to State in Ladies Extemporaneous Speech. When I went to Law School it was just time to go.

Community Characteristics

Our family moved to a small community in eastern Oklahoma when I was small. I guess the teachers at school made an impact; I made very good grades. My grandmother was sick when I was small, so to keep me quiet they taught me how to read. I could read before I started school. At first, they were going to move me up. The problem was that my brother had been held back and that would have put us in the same grade. So I stayed on grade, but got lots of personal attention from the teacher. The real influence that my

community had on my educational attainment was that I did not want to stay there, no matter what it took to leave.

School/College Characteristics

I read a book about Abraham Lincoln. We lived in a rural area outside the community. We had a wood stove. My parents were back to nature people. I related to Lincoln. I came to The University of Oklahoma for my undergraduate degree and stayed. My husband was not too excited about me going to Law School; we had a baby so I put it off for five years. I was working in the library as para-professional and started taking Masters Classes in Library Science. Then I decided it was time to go to Law School, so I quit my job and started full-time. My husband was supportive. When I graduated in 1992 the job market was bad for lawyers. So I went back to the library and soon after started back in the Masters program.

I had a number of obstacles in college. The culture shock of leaving a town of less than 600 people and coming to the university was the worst. My family wrote me letters, they did not have a phone. My parents only got a phone last year. My brother lived in Tulsa and tried to call me once a month. I traveled by bus back and forth in the early 1980's, until I bought a car. The money was a problem I guess. I got financial aid and a $500 renewable scholarship to come. After the first year I won other scholarships and I worked 16 hours a week.

The biggest advantage I had in persistence was my work. My work study job in the library helped me in my classes, especially in Library School. The time in Law School was stressful, by then we had a second child. There was a five year gap (the job

market would have been better if I had gone straight through), three years in Law and 18 months before going back for the M.L.I.S.

Path to the Professoriate

I was working as a para-professional and a full-time job was posted in the library. I did not know it, but they wanted someone with a history background. One of the supervisors told me that another position would be coming open soon and that I would have a real good chance of getting it. They offered me a temporary position while I was waiting. It took about nine months. This is a tenure track position so my 40 hours is considered my teaching, then I must publish and do service on library or university committees. The percentages are 70% work, 20% publication, and 10% service. I felt like at this time it is best for my family for me to have a stable position. The Law market is not stable. Until tenure this could be unstable too. Six years of peace that blows up.

Reflections of high-achieving, first-generation college students

It was an internal motivation. I did not want to stay there. I was willing to do what it took to go. I was lucky I went to college, otherwise I would have been expected to get married and I didn't want to marry anyone there. I was motivated to get out and my grades were my ticket out. Have a plan and personal goals. If you're not sure what you're doing it is very easy to drop out. I did not have friends to depend on; I didn't know anyone when I came here.

Constant Comparison

Like the previous participants, Dana shows eagerness to advance beyond her rural upbringing. The theme of leaving her childhood circumstances seems to be the source of Dana's internal drive. There does seem to be an absence of college expectation on the

part of Dana's parents or at least it is not expressed by Dana. The sense of belonging is strong and evidenced by the fact that Dana came to the University, stayed through three degrees and continues in the faculty. In some respects Dana is similar to Bea when the change of culture is taken into account. Even though their origins are different there is a great distance from where each is starting and the higher education environment they are seeking to find a place. The distinction may be that Dana does not seem to have the degree of support from family and community that Bea draws from in her culture. The general categories of the literature review, the interviews (the correspondence of individual participants is in brackets), and the data continues to emerge in the following areas:

1. Parental influence

   - Academic success (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Carl & Dana]

   - College expectation (Astin, 1993) Impetus of parents (Gándara, 1982; Gándara, 1995) [Allen, Bea, & Carl]

   - Culture of possibility (Gándara, 1995) [Bea, & Dana (reading)]

   - Lack of parental support (Nuñez et al., 1998) [Allen, Bea, & Dana]

   - Models of hard work (Gándara, 1995) [Bea & Carl]

2. Access into higher education

   - Financial assistance (Astin, 1993) [Allen, Bea (masters scholarship), & Dana (scholarships and work study)]

   - Going to college (Hsiao, 1992; Rendón et al., 2005) Persistence (Gándara, 1995) [Allen, Bea, & Carl]

- Lower parental income (Barahona, 1990; Billson et al., 1982) [Allen, Bea, Carl, & Dana]

3. Persistence through higher education

- Emotional support, opposite of lack of support (Barahona, 1990) [Allen, Bea, & Carl]

- In-class experiences (Pascarella et al., 1995) [Allen & Bea]

- Low academic preparation (Pascarella et al., 1995) [Allen]

- Low personal income (Terenzini et al., 1996) [Allen, Bea, Carl, & Dana]

- Lower persistence [Allen dropped out after three semesters and Bea dropped out of community college and transferred to a historically black college (Riehl, 1994)]

- Sense of belonging (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Dana]

- Separation from the culture of origin (Striplin, 1999) [Bea & Dana]

- Student-faculty interactions (Astin, 1993) [Allen & Bea]

- Without strategy (Rodríguez, 2001) [Allen & Bea]

- Work and family commitments (Astin, 1993; Nuñez et al., 1998; Riehl, 1994; Stein, 1992; Terenzini et al., 1995) [Bea & Dana]

4. Achievement and degree attainment

- Eager to advance (London, 1992) [Allen, Bea, Carl, & Dana]

- Explorer, risk taker (Rodríguez, 2001) [Allen, Bea, & Carl]

- Persistence (Gándara, 1995) [Carl & Dana]

- Seeker, interest in attaining (London, 1992) [Allen, Bea, Carl, & Dana]

- Value education (Hsiao, 1992; Terenzini et al., 1995) [Bea, Carl, & Dana]

There is an internal desire expressed by all participants interviewed to succeed. The call for persistence and the value of education continues to be important to the interviewees. Dana emphasizes the value of a plan and goals for educational success. It seems her primary goal was to leave the rural area of her childhood and her grades were her ticket out.

Ellen

Background Information

I was born in Syracuse, NY in 1955. We lived in a little house on the south side of town built on my grandma's land (she was my Dad's mom). My Dad ran a TV and appliance repair shop and my Mom was a homemaker. Our relatives all lived in central New York. My brothers have remained in the area; one brother lives in Port Bryan and the second brother lives in Courtland. Both of my parents graduated from high school, but did not go on to college. I was the oldest and the first to go to college. The next child, the oldest brother, attended a 2 year technical school instead of college. He works for himself and does computer hardware repair. He also owns a radio tower that he rents out to generate a revenue stream. The youngest brother dropped out of high school, but recently got his GED. He worked a lot as an auto mechanic; now he is working with our other brother.

People of Influence

My Mom helped me go to the community college, that's all we could afford. While I was at the community college one of the teachers helped me and told me about Wells College. She helped me get into a 4-year college. After I graduated with my bachelor's degree I went to work at the University of Pennsylvania as a research assistant for two years. My supervisor was going to introduce me to my major professor, but my professor took another position so I was on my own.

Community Characteristics

We lived in a neighborhood on the edge of town, but we were like most of the families around us. Dad worked and Mom took care of us at home. I went to a Catholic school and early on was nothing special in school. Then at 13 I went to public high school.

School/College Characteristics

I think coming out of high school I did not knowwhat I wanted to do. But when I got into community college I started to learn some things that were really interesting to me. I was taking Physiological Psychology and I was really interested. I was at the community college for two years and then finished at Wells College. The Ph.D. was my goal and I got in the program at Florida.

My obstacles in college were money, mostly from ignorance, plus my grandmother and aunts were real social and they made fun of me reading books. They put a lot of pressure on me to socialize. At Wells I did not have that pressure, it was a women's college. I loved learning, I could not imagine quitting; that is probably why I

went into research. I did not go for a masters degree; I thought it was a waste of two years.

Path to the Professoriate

I got the Ph.D. in Neuroscience from the Florida University, and then I went on and did two post-doc studies. In my mind the choice was either academia or industry – there was much more freedom in academia, so that was the way I went. At that point in my life, I could not conceive of any other route. If research is part of you, you have found your niche.

Reflections of high-achieving, first-generation college students

The main reason I was successful in education was the love of learning. I always did well, I never found learning difficult. I could not imagine not finishing. At Wells College there was little pressure for social life. I did not imagine there was an option. The only thing that made it difficult was ignorance; my Mom helped me get through the applications.

My best advice for first-generation college students would be: Don't waste your tuition money by partying. Focus on your studies and you can party after you're done. My boys say it is hard to find good friends because they talk about stupid stuff. When you are paying to learn, work hard, the rewards come later. Listen to what your gut says about what you want to do, don't let other people tell you.

Constant Comparison

Like the previous participants, Ellen shows eagerness to advance and she draws a great deal of confidence from her academic ability. The distinction that Ellen exhibits is a drive to persistence and accomplish her goals (Gándara, 1995). The general categories of

the literature review, the interviews (the correspondence of individual participants is in brackets), and the data emerged in the following areas:

1. Parental influence

   - Academic success (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Carl & Dana]

   - College expectation (Astin, 1993) Impetus of parents (Gándara, 1982; Gándara, 1995) [Allen, Bea, Carl, & Ellen]

   - Culture of possibility (Gándara, 1995) [Bea, & Dana (reading)]

   - Negative circumstances (Barahona, 1990; Billson et al., 1982; Stein, 1992; Terenzini et al., 1996) Lack of parental support (Nuñez et al., 1998) [Allen, Bea, & Dana]

   - Models of hard work (Gándara, 1995) [Bea & Carl]

2. Access into higher education

   - Financial assistance (Astin, 1993) [Allen, Bea (masters scholarship), & Dana (scholarships and work study)]

   - Going to college (Hsiao, 1992; Rendón et al., 2005) Persistence (Gándara, 1995) [Allen, Bea, Carl, Dana, & Ellen]

   - Lower parental income (Barahona, 1990; Billson et al., 1982) [Allen, Bea, Carl, Dana, & Ellen]

3. Persistence through higher education

   - Changes unappreciated (Hsiao, 1992) [Ellen]

   - Emotional support, opposite of lack of support (Barahona, 1990) [Allen, Bea, & Carl]

- In-class experiences (Pascarella et al., 1995) [Allen, Bea, & Ellen]

- Low academic preparation (Pascarella et al., 1995) [Allen]

- Low personal income (Terenzini et al., 1996) [Allen, Bea, Carl, & Dana]

- Lower persistence [Allen stopped out after three semesters and Bea stopped out of community college and transferred to a historically black college (Riehl, 1994)]

- Sense of belonging (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Dana]

- Separation from the culture of origin (Striplin, 1999) merged with a non-welcoming environment (Pascarella et al., 1995) [Bea & Dana]

- Student-faculty interactions (Astin, 1993) [Allen, Bea, & Ellen]

- Without strategy (Rodríguez, 2001) [Allen & Bea]

- Work and family commitments (Astin, 1993; Nuñez et al., 1998; Riehl, 1994; Stein, 1992; Terenzini et al., 1995) [Bea & Dana]

4. Achievement and degree attainment

- Eager to advance (London, 1992) [Allen, Bea, Carl, & Dana]

- Explorer, risk taker (Rodríguez, 2001) [Allen, Bea, Carl, & Ellen]

- Passion (London, 1992; Rodríguez, 2001) [Allen & Ellen]

- Persistence (Gándara, 1995) [Carl, Dana & Ellen]

- Seeker, interest in attaining (London, 1992) [Allen, Bea, Carl, & Dana]

- Value education (Hsiao, 1992; Terenzini et al., 1995) [Bea, Carl, & Dana]

There is an internal desire expressed by all participants interviewed to succeed. The call for persistence and the value of education continues to be important to the interviewees. Ellen reinforces the emphasis of Dana on the value of a plan and goals. In fact, it appears that getting the degree is the only goal that Ellen values and that anything else is a waste of tuition money.

Memos and Observations

Ellen does not express the sense of belonging to the same degree that others have, but it does appear to be expressed in the sense of being out of step with her family. She gets less encouragement from family and friends (Gándara et al., 1998) who do not appreciate changes in her as a student (Hsiao, 1992). The women of the family seem to have put more emphasis on socialization than Ellen was comfortable with. The assumption is that socialization is code for an expectation that Ellen needed to date more. Her memory is that they made fun of her love of reading. The drive to complete the degree seemed to be urgent, so much so that she considered a masters degree to be a waste of time.

Frank

Background Information

I was born in Oklahoma City in 1969. My parents were divorced without much money – working poor. Dad and Mom were high school graduates. I have one older brother. We went to college together even though I was younger.

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People of Influence

My High School Counselor influenced me more than anyone else. She was big on education; a friend who did a lot for me, even helped with money. She went beyond the call. In graduate school my professors helped me. My parents always told me, "You need to go to college." But I don't think I would have made it without my wife.

Community Characteristics

A low percentage of my High School classmates went to college. There was not a lot of talk about college and it didn't seem to be important to very many people in my high school. Well, you look around and figure no one is going to help you out, so you have to help yourself.

School/College Characteristics

I had a positive high school experience. I had lots of friends and graduated as the class valedictorian. I went to SWOSU on a tennis scholarship. I was not good enough to play for a Division I school, but I could compete there. I think being in athletics helped me be more disciplined and have success in school. I got a BS in Accounting. The biggest obstacle was money. I had to work. I got the maximum in Pell Grants, but I still had to work. By graduate school I was married. My wife worked and largely supported me. I was a TA at OSU and got some loans. I got the masters in accounting and then decided to stay for a Ph.D. in accounting. So I got a BS, Masters, and Ph.D., allin accounting .

Path to the Professoriate

I went straight through school and then took a position. I like research and this gives me that opportunity. I think when I was about half way through my master's degree is when I made the decision to become a professor. I looked at the salary and it would

support a family. The lifestyle is conducive to a good family environment. Once I got the Ph.D. I was over qualified for the practice of accounting. People who get to this point just continue on into the faculty.

Reflections of high-achieving, first-generation college students

My parents were hard workers; I respect that [work ethic]. I had ability, God given, but that work ethic got me through. There is a pride in doing your best. I tell my students, "When you do something you are only a failure if you do not do it to the best of your ability." If you have the potential then work and time management will get you through.

Constant Comparison

While Frank as valedictorian of his class does not lack ability he seems to draw his confidence from his work ethic and discipline. These were modeled by his parents and also brought him success in athletics. The most telling remark in the interview was, "you have to help yourself." This decision point is what marks Frank as a risk taker, even though he had tremendous input from his high school counselor. She served as a role model, friend, and mentor to Frank, even though he does not use the term. It seems that Frank was seeking a life outside of his childhood experience with working poor parents. In his opinion he has found it in his discipline of accounting and the professoriate. The general categories of the literature review, the interviews (the correspondence of individual participants is in brackets), and the data emerged in the following areas:

1. Parental influence

    • Academic success (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Carl, Dana, Ellen, & Frank]

- College expectation (Astin, 1993) Impetus of parents (Gándara, 1982; Gándara, 1995) [Allen, Bea, Carl, Ellen, & Frank]

- Culture of possibility (Gándara, 1995) [Bea & Dana (reading)]

- Negative circumstances (Barahona, 1990; Billson et al., 1982; Stein, 1992; Terenzini et al., 1996) Lack of parental support (Nuñez et al., 1998) [Allen, Bea, Dana, & Frank]

- Models of hard work (Gándara, 1995) [Bea, Carl, & Frank]

2. Access into higher education

- Going to college (Hsiao, 1992; Rendón et al., 2005) Persistence (Gándara, 1995) [Allen, Bea, Carl, Dana, Ellen, & Frank]

- Lower parental income (Barahona, 1990; Billson et al., 1982) [Allen, Bea, Carl, Dana, Ellen, & Frank]

- Resources to realize the goal of higher education (Gándara, 1995) equivalent to Financial assistance (Astin, 1993) [Allen, Bea (masters scholarship), Dana (scholarships and work study), & Frank (athletic scholarship)]

3. Persistence through higher education

- Changes unappreciated (Hsiao, 1992) [Ellen]

- Emotional support, opposite of lack of support (Barahona, 1990) [Allen, Bea, Carl, & Frank]

- In-class experiences (Pascarella et al., 1995) [Allen, Bea, & Ellen]

- Low academic preparation (Pascarella et al., 1995) [Allen]

- Low personal income (Terenzini et al., 1996) [Allen, Bea, Carl, Dana, & Frank]

- Lower persistence [Allen stopped out after three semesters and Bea stopped out of community college and transferred to a historically black college (Riehl, 1994)]

- Sense of belonging (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Dana, Ellen, & Frank]

- Separation from the culture of origin (Striplin, 1999) merged with a non-welcoming environment (Pascarella et al., 1995) [Bea & Dana]

- Student-faculty interactions (Astin, 1993) [Allen, Bea, Ellen, & Frank]

- Without strategy (Rodríguez, 2001) [Allen & Bea]

- Work and family commitments (Astin, 1993; Nuñez et al., 1998; Riehl, 1994; Stein, 1992; Terenzini et al., 1995) [Bea & Dana]

4. Achievement and degree attainment

- Eager to advance (London, 1992) [Allen, Bea, Carl, Dana, & Frank]

- Explorer, risk taker (Rodríguez, 2001) [Allen, Bea, Carl, Ellen, & Frank]

- Mentor (Little, 1990) [Allen & Frank]

- Passion (London, 1992; Rodríguez, 2001) [Allen & Ellen]

- Persistence (Gándara, 1995) [Carl, Dana, Ellen, & Frank]

- Seeker, interest in attaining (London, 1992) [Allen, Bea, Carl, Dana, Ellen, & Frank]

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- Value education (Hsiao, 1992; Terenzini et al., 1995) [Bea, Carl, & Dana]

Frank joins Ellen in the drive to persistence and accomplish goals (Gándara, 1995). The difference between these two is that Frank appears to follow the pattern for success among first-generation college students who are integrated both socially and academically. Ellen appeared to consider socialization a nuisance, if not an obstacle to her goals. There is an internal desire expressed by all participants interviewed to succeed, this is being interpreted as interest in attaining and coded as seeker.

Memos and Observations

The mentor theme has reappeared. It was first identified by Allen and described by Frank in the role of his high school counselor. Frank alluded to it in the help that his professors gave him in graduate school. Bea had female role models in her community. Carl had a cast of male authority figures in his life who seem to have provided benchmarks for Carl to measure himself against (role models). Dana seems to have become attached to the location of the university and especially the environment within the library.

Gregory

Background Information

I was born in Greece in 1969. I have one brother who is younger than me by seven years. My father was a bus driver and my Mom stayed at home. My father went to the fourth grade in school. My mother finished the eighth grade in school. I was the only child who was able to enter into the university; my younger brother never attended college.

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People of Influence

I have cousins and an aunt who are medical doctors, but I chose engineering. There was social pressure on poor children to improve their social status and to move to the middle class through education. I'm not sure if it is as true today. When I was in college I never thought about graduate school. I served two years in the army and then decided to go to graduate school. I missed college; I could not get enough of school. My Mom was very happy that I did so well in school and encouraged me to keep going. I think after college my parents kind of lost track of what I was doing. My Mom was more interested in when I was going to get married. I'm engaged to be married now, so she is happy.

Community Characteristics

I grew up in the poor section of a city of about one million people, like Oklahoma City. I was one of the few in my school to get into college; it was me and one other girl. In the agricultural areas kids would kill themselves studying for the entrance test to college, so they could get out of the area. The areas of my country are divided between the poor and rich. There is not much opportunity to get out of the low socioeconomic communities.

School/College Characteristics

I did well, but I was not challenged like kids from more affluent neighborhoods and the private high schools. The student to teacher ratios in areas like mine were high. One story that might show more is from when I was in the sixth grade. We took a test for admission to the U.S. school in the region. It was mostly for the children of American business and political families living in our country. I was one of only three students in

the whole city selected to attend, but Dad said, "You do not belong with those rich people; they will be a bad influence." I went to Aristotle University for five years and then went into the army for two years. After that I had no clear direction on what I wanted to do. The U.S. was taking foreigners. I had contact with a professor who introduced me to other professors. He encouraged me to apply for Graduate School in Buffalo, NY. I got right into my classes and at that moment I knew this was what I wanted to do. The older more succesful graduate students were very helpful to me. They kept showing me how to do things and encouraging me to keep going. My bachelors degree in Greece was in Chemical Engineering. In America I got the Master of Science in Chemical Engineering from SUNY and then I went on to get the Ph.D. in Chemical and Biological Engineering. This was a new area of study that was opening up at that time and I wanted to be a part of this new discipline.

Path to the Professoriate

There were two major things in my journey to the professoriate: First, I did an internship with a company. I liked my time there and thought it was nice, but the company was not loyal to employees. I saw real good engineers laid off in downsizing. Second, I enjoyed the university freedom in research and wanted to continue there.

I was offered Post-doctoral fellowships from two universities. They came to me; I visited both, and did two and a half years at the one I chose. I felt like I had to do this because I was not from a prestigious university. I got a good education at SUNY, Buffalo, but it does not have the reputation of a Princeton or Harvard. I needed to add strength to my resume.

Reflections of high-achieving, first-generation college students

I was from a poor family, so there was no advantage there. I did have talent and determination. The social problems were minor to me, because I appreciated the education and it became all that was important. My Dad's supervisor's daughter got special direction on activities and classes. She wanted to go to medical school. My best advice for first-generation college students would first be to seek the advise of people who you know care about students. You need to remain hungry for learning and strive to be the best, be ambitious.

Constant Comparison

Gregory is obviously a risk taker, who left his home to pursue graduate school in the United States. The general categories of the literature review, the interviews (the correspondence of individual participants is in brackets), and the data emerged in the following areas:

1. Parental influence

   - College expectation (Astin, 1993) Impetus of parents (Gándara, 1982; Gándara, 1995) [Allen, Bea, Carl, Ellen, & Frank]

   - Culture of possibility (Gándara, 1995) [Bea & Dana (reading)]

   - Models of hard work (Gándara, 1995) [Bea, Carl, Frank, & Gregory]

2. Access into higher education

   - Academic success (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Carl, Dana, Ellen, Frank, & Gregory]

   - Going to college (Hsiao, 1992; Rendón et al., 2005) Persistence (Gándara, 1995) [Allen, Bea, Carl, Dana, Ellen, & Frank]

- Lower parental income (Barahona, 1990; Billson et al., 1982) [Allen, Bea, Carl, Dana, Ellen, & Frank]

- Negative circumstances (Barahona, 1990; Billson et al., 1982; Stein, 1992; Terenzini et al., 1996) Lack of parental support (Nuñez et al., 1998) [Allen, Bea, Dana, Frank, & Gregory]

- Resources to realize the goal of higher education (Gándara, 1995) equivalent to Financial assistance (Astin, 1993) [Allen, Bea (masters scholarship), Dana (scholarships and work study), & Frank (athletic scholarship)]

3. Persistence through higher education

- Changes unappreciated (Hsiao, 1992) [Ellen]

- Emotional support, opposite of lack of support (Barahona, 1990) [Allen, Bea, Carl, & Frank]

- In-class experiences (Pascarella et al., 1995) [Allen, Bea, & Ellen]

- Low academic preparation (Pascarella et al., 1995) [Allen]

- Low personal income (Terenzini et al., 1996) [Allen, Bea, Carl, Dana, Frank, & Gregory]

- Lower persistence [Allen stopped out after three semesters and Bea stopped out of community college and transferred to a historically black college (Riehl, 1994)]

- Sense of belonging (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Dana, Ellen, & Frank]

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- Separation from the culture of origin (Striplin, 1999) merged with a non-welcoming environment (Pascarella et al., 1995) [Bea, Dana, & Gregory]

- Student-faculty interactions (Astin, 1993) [Allen, Bea, Ellen, Frank, & Gregory]

- Without strategy (Rodríguez, 2001) [Allen, Bea, & Gregory]

- Work and family commitments (Astin, 1993; Nuñez et al., 1998; Riehl, 1994; Stein, 1992; Terenzini et al., 1995) [Bea & Dana]

4. Achievement and degree attainment

- Eager to advance (London, 1992) [Allen, Bea, Carl, Dana, Frank, & Gregory]

- Explorer, risk taker (Rodríguez, 2001) [Allen, Bea, Carl, Dana, Frank, & Gregory]

- Mentor (Bennetts, 2001; Little, 1990; Philip, 2000; Stanley et al., 1992) [Allen, Frank, & Gregory]

- Passion (London, 1992; Rodríguez, 2001) [Allen & Ellen]

- Persistence (Gándara, 1995) [Carl, Dana, Ellen, Frank, & Gregory]

- Seeker, interest in attaining (London, 1992) [Allen, Bea, Carl, Dana, Ellen, Frank, & Gregory]

- Value education (Hsiao, 1992; Terenzini et al., 1995) [Bea, Carl, Dana, & Gregory]

Gregory joins the overwhelming majority of the interviewees in the drive to persistence and accomplish goals (Gándara, 1995). Gregory, like Ellen, appears to consider

socialization an obstacle to the educational goal. There is an internal drive exhibited by these participants that seems to make them eager to advance and attain through education (London, 1992). All seven participants to date show interest in attaining and are being coded as a seeker.

Memos and Observations

The mentor theme is reaffirmed through the interaction of Gregory with his professors and the collaborative peer mentors of his fellow graduate students. To this point three participants, Allen, Frank, and Gregory, have specifically mentioned people serving as in the role of mentor. Both Bea and Carl described people who functioned as role models (one dimension of mentorship) during their interviews. Two categories are added to this section. The first, 'Negative school experience' (Barahona, 1990) while more than the curriculum is involved during the K-12 educational experience this enables the researcher to distinguish between negative factors inhibiting access from the 'low academic preparation' factors that impact persistence. These certainly have overlap, but at this point are not being considered equivalent. The second, 'Pre-college academic success' (Gándara, 1995) which is reported by four participants runs counter to the first-generation college student characteristics reported for the majority of these students. Like the mentor category these last two categories are not late entries to interview data. They have been added due to the repetition of the theme within the participants. No new information has appeared since Ellen reported agitation toward her female family members who wanted her to be more social. This event may be the negative side to the sense of belonging that Ellen gained in the academic environment of higher education

and the sense of identity she gains from her skills in research. Given the narrow focus of this study saturation may have been reached.

Hope

Hope is a mom who returned to graduate school after her children were in school, twenty years after she quit a doctoral program to raise children. She had worked in higher education at a regional university following a divorce that left her as the bread winner for her children. The interview was held in Hope's campus office where Native American art is displayed around the room and on the walls. When the researcher complimented one particular piece that was on display, Hope describes the origin of the piece, and self-identifies herself as a Native American.

Background Information

I was born in Los Angeles, California in 1960. I was the youngest of five children. There were two older children and then an 11 year gap to the third. The last three were pretty close together in age. Our Mom had to work and Dad stayed home. He was a disabled veteran of the Korean War. My Dad spent five years in a one room school house in Michigan. Mom went through the seventh grade in Michigan, also in a one room school house with five students. I was the only person in my extended family to go to college out of high school. Now some have retired from first careers and have gone to college in their forties.

People of Influence

Outside my family, the teachers and administrators had the most influence on me in my education. One High School counselor was insistent with me, "You have potential, where are you going to college?" I said, "We cannot afford for me to go; only the smart

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kids can go." Then she sat me down and showed me the file documents and test scores. It was probably some violation for me to see all that stuff. She was the first voice that said, "College is not out of reach for you." My parents were negative examples. They were constrained in employment due to their educational attainment. Their life circumstances were like an individual message to me. No One! (Raised voice level in emphasis) from my family helped me in graduate school. By the time I got into Graduate school I thought I was not going to stop.

Community Characteristics

Our parents moved around a lot. There was violence in the part of LA we lived in and we were kind of driven out. Then later we returned to inner city for the jobs my Mom could get. The community did influence me in my educational attainment. There was a lot of reason to want to get out, but the staff in our school was wonderful toward me. They all seemed to want me to succeed.

School/College Characteristics

My school experience was a roller coaster, we moved six times by the second grade. My older brother taught me how to read before I went to school and I have been reading ever since, but all the moving crippled my ability to perform in class. I could not figure out the goal. Then I went to a smaller school outside LA. The second grade teacher took interest in me. At the end of the year I got the award for the best progress. We were there a while, then in the fifth grade we moved back into LA and stayed through high school. I had the opportunity to make and keep friends; I did not get to do much of that early on. In high school I was in music, band, and drama. I was in the vocational track, not college. I did high school in three years. But even though I graduated a year early I

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could not afford to go to college. I moved in with my older brother who was in northern California. My high school adviser made me take the SAT and I did very well. Finally, in what should have been my senior year the college offers started flooding in. They did not know that I had already graduated, but that I had the scores they wanted. I took a free ride to a small private university. I went to the University of the Pacific, a small institution that was great for me. There were good role models among both the students and the faculty. I finished my bachelors in 2 ½ years and then went on for 1 ½ years to get my Master of Arts when I was 21 years old.

I was so hungry for education. I was an avid reader as a child and I think it laid the foundation for college. It helped me succeed in college, but there were some obstacles for me. My age, when I was teaching during my masters' studies, some of my students were older than me. I had to figure out how to manage money, because I had never had any.

There were many reasons I was able to persist in college and graduate school. I did well in almost everything, but I did not buy into general education. There was this art class. I did not like the studio time, it bored me and I started doing other things. The teacher talked to me after class and said, "You're really bright, but you're not doing the work." I was flunking. I only valued what was relevant to me. She said that if I would work really hard I might be able to pass the class. I worked myself to death and pulled a 'B.' I am prouder of that grade than all my A's in my undergrad. I still have the project that I put together for that class, I have told the story to my kids. After that experience I just started going to school, no breaks, I enrolled in every term straight through the summers. By the time my scholarships were done I had a master's degree.

I got two degrees at the University of the Pacific. First, I earned aB.A. in English with emphasis in Literary Criticism. I had a minor in foreign language and I wound up teaching French and English while I got my masters. Then I earned an M.A. in English with emphasis in Literary Criticism. I applied to the University of Oregon and got accepted with a teaching position. It was an intimidating time. One, I was married and pregnant. Two, I was dissatisfied with English and comparative literature, so I took a year off. At the deadline to return I was pregnant with my second child. I took 20 years out and raised four children. Then I returned for the Ph.D. at the University of Iowa in Educational Technology; it was good timing. I was hired and started at the University the August after graduation.

Path to the Professoriate

I worked as an adjunct instructor at a regional university for a number of years, went to graduate school and was hired right after my Ph.D. I wanted to be a professor for a long time. I never lost the dream. At the University of the Pacific I was paid to research language and literature. In Southern Oregon I was an adjunct for composition through research writing and then freshman rhetoric. I loved curriculum design. After teaching full-time for three years I moved to the main campus. I went through a divorce and became the breadwinner. I wanted to finish a doctorate and spent a couple of years looking for a program. I had an epiphany during orientation of new professors at my university. One of the new professors came up after my session and asked, "Do you have a Ph.D. in Instructional Design?" I had fallen in love and now I knew the name. I started looking for Instructional Design programs with a fellowship and teaching position for

living expenses. When I found the one at the University of Iowa I packed up my family and went to Iowa.

Reflections of high-achieving, first-generation college students

Why did I succeed in higher education? I wanted it so badly. I think the combination of good and bad role models. I chose reading instead of travel or taking vacations. Education was the only thing that ever satisfied my hunger to know. I had to keep going, my research is about motivation. What helps some students go on, when others do not? In order to navigate your way you have to have strategies for staying. Know why you are there, what will satisfy you. Find a navigator and finish college without knowing why or what, just finish.

Constant Comparison

Hope has been on a journey of discovery since she was a young girl. She has overcome an accumulation of negative factors (Barahona, 1990) in her personal life and school experience. The counselor who revealed to her the reality of a gifted and talented student sparked an epiphany of opportunity, which Gándara (1995) called a culture of possibility. However, it might all have gone for naught if it had not been for the scholarship offer that went to the girl with the good test score. Hope, like Allen, Dana, and Frank, was eager to advance, but needed resources to realize the goal of higher education (Gándara, 1995). The selection of a 4-year private institution is only the second time a participant has reported this choice, but only two participants have not gone to a 4-year institution (public or private).

Reading opened up a world of possibilities for Hope. This, along with the model of hard work her Mom exhibited, adds to the picture that Hope had a way out. Her early

academic success in upper elementary school seems to help Hope gain confidence in her capacity. The surprise is that all of this success came into being amidst a mountain of negative factors within and without the family. The scholarships provided resources for her higher education and her in-class experiences helped her find a place at the university. The largest obstacle for Hope was her growing family. She stopped out of a doctoral program to care for her children and did not start back for 20 years. The general categories of the literature review, the interviews (the correspondence of individual participants is in brackets), and the data emerged in the following areas:

1. Parental influence

   - College expectation (Astin, 1993) Impetus of parents (Gándara, 1982; Gándara, 1995) [Allen, Bea, Carl, Ellen, & Frank]

   - Culture of possibility (Gándara, 1995) [Bea, Dana & Hope (readers)]

   - Models of hard work (Gándara, 1995) [Bea (Mom), Carl (Farm family), Frank, Gregory, & Hope (Mom)]

2. Access into higher education

   - Academic success (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Carl, Dana, Ellen, Frank, Gregory, & Hope]

   - Going to college (Hsiao, 1992; Rendón et al., 2005) Persistence (Gándara, 1995) [Allen, Bea, Carl, Dana, Ellen, Frank, & Hope]

   - Lower parental income (Barahona, 1990; Billson et al., 1982) [Allen, Bea, Carl, Dana, Ellen, Frank, Gregory, & Hope]

- Negative circumstances (Barahona, 1990; Billson et al., 1982; Stein, 1992; Terenzini et al., 1996) Lack of parental support (Nuñez et al., 1998) [Allen, Bea, Dana, Frank, Gregory, & Hope]

- Resources to realize the goal of higher education (Gándara, 1995) equivalent to Financial assistance (Astin, 1993) [Allen, Bea (masters scholarship), Dana (scholarships and work study), Frank (athletic scholarship), & Hope (academic scholarship)]

3. Persistence through higher education

- Changes unappreciated (Hsiao, 1992) [Ellen]

- Emotional support, opposite of lack of support (Barahona, 1990) [Allen, Bea, Carl, Frank, Gregory]

- In-class experiences (Pascarella et al., 1995) [Allen, Bea, Ellen, Frank, & Hope]

- Low academic preparation (Pascarella et al., 1995) [Allen]

- Low personal income (Terenzini et al., 1996) [Allen, Bea, Carl, Dana, Frank, Gregory, & Hope]

- Lower persistence [Allen stopped out after three semesters and Bea stopped out of community college and transferred to a historically black college (Riehl, 1994)]

- Sense of belonging (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Dana, Ellen, Frank, & Hope]

- Separation from the culture of origin (Striplin, 1999) merged with a non-welcoming environment (Pascarella et al., 1995) [Bea, Dana, & Gregory]

- Student-faculty interactions (Astin, 1993) [Allen, Bea, Ellen, Frank, Gregory, & Hope]

- Without strategy (Rodríguez, 2001) [Allen, Bea, Gregory, & Hope]

- Work and family commitments (Astin, 1993; Nuñez et al., 1998; Riehl, 1994; Stein, 1992; Terenzini et al., 1995) [Bea, Dana, & Hope]

4. Achievement and degree attainment

- Eager to advance (London, 1992) [Allen, Bea, Carl, Dana, Frank, Gregory, & Hope]

- Explorer, risk taker (Rodríguez, 2001) [Allen, Bea, Carl, Dana, Frank, Gregory, & Hope]

- Mentor (Bennetts, 2001; Little, 1990; Philip, 2000; Stanley et al., 1992) [Allen, Frank, Gregory, & Hope (Navigator)]

- Passion (London, 1992; Rodríguez, 2001) [Allen, Ellen, & Hope]

- Persistence (Gándara, 1995) [Carl, Dana, Ellen, Frank, Gregory, & Hope (I had to keep going)]

- Seeker, interest in attaining (London, 1992) [Allen, Bea, Carl, Dana, Ellen, Frank, Gregory, & Hope]

- Value education (Hsiao, 1992; Terenzini et al., 1995) [Bea, Carl, Dana, Gregory, & Hope (I had fallen in love and now I knew the name.)]

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The description of her elementary schools would seem to indicate low academic preparation, so the academic success is in spite of the environment. Hope exhibits an internal drive (London, 1992) that the interviewees used to persistence and accomplish goals (Gándara, 1995). All eight participants to date show interest in attaining and are being coded as a seeker and as eager to advance (London, 1992). Hope's goal in education shows her value for the degree and is the secret of her persistence. The combination of the factors of internal drive, persistence, goals, and attaining have given Hope a sense of her own identity and a sense of belonging within the higher education community (Rodríguez, 2001).

Memos and Observations

Four participants (Allen, Frank, Gregory, and Hope) have specifically mentioned people serving in the role of mentor. Both Bea and Carl described people who functioned as role models (one dimension of mentorship) during their interviews. Two categories are added to this section. Pre-college academic success (Gándara, 1995; Gándara, 1982) which is reported by five out of eight participants runs counter to the first-generation college student characteristics reported for the majority of these students. Even those who do not deal with pre-college academic success speak of the discovery of a love of learning or a later spark in college.

The most exciting development in the analysis of this interview is that Hope has given a definite idea of how to label the varying degrees of mentorship within the experiences described by the participants. The label may have been shaped in one of Hope's previous responses in which she directed first-generation college students to: "navigate your way . . . have strategies for staying." She has personified Gándara's

(1995) quadrivium of achievement characteristics: persistence, ability (capacity not intelligence), goals, and interpersonal skills. Hope gives simple straight forward advice to would be achievers: "find a navigator." This imagery brings the mentor category into focus.

Isaac

Background Information

I was born in 1952 in Newton, Kansas. I was the last of a family of six boys and a girl. There were twin boys just older than me; we all worked together to make the farm go. My Dad was 48 and my Mom 42 when I was born. My father went to the eighth grade and my mother went through the tenth. All of us finished high school and everyone took at least one semester of college. We all went to Bible college our first year or first semester.

I don't know how much of this you want for your study? I had a brother who finished a Masters degree and he is the only sibling who finished. No one else even got a bachelors degree. I think everyone else just had no more than one year of college. I went to Bible College and was a freshman in 1970 and over Christmas break went to Urbana. I was involved in the Intervarsity Christian Fellowship and I was not happy with where I was at spiritually. I also went to a Christian high school by the way, and I just did not think that people's faith was very alive. I had been in a Christian community since birth and at Urbana I actually met a lot of Christians from secular campuses and I saw the vitality of their faith. I liked what I saw and so I transferred when I got back home to a state university that had an Intervarsity chapter, Emporia State. It was one of the best things that ever happened to me spiritually. I took part in that chapter and soon started

taking part in leadership kinds of things. I worked my way through school in the dorms as a Resident Assistant.

I had back problems that became evident during high school and did not think that I could make it in farming, as it turns out I could have. My Dad was starting out four of my brothers farming and he was feeling kind of up to here (raising hand to chin) with getting my older brothers started. I enjoyed school a lot, but it was a struggle for me academically. I got through by cramming four years into five, but I made it. When I finished my bachelor's degree I figured I'd never darken the door of a classroom again.

People of Influence

Spiritually yes, there was an Intervarsity staff worker and also a Baptist pastor. I met with the pastor every week in sort of a discipleship relationship. He was very influential and affected my whole life, predominately spiritual. But I remember him working with me on study skills as well and I went from earning a few B's, mostly C's and a few D's to earning mostly A's and a few B's my last two years of college. He simply gave me some tools to become more disciplined in my study habits. So I finished college on a strong note and he was influential in that regard too.

Some new people moved in next door and they were teaching at a local university. At about the same time we went and visited some old friends. He was back at Emporia State teaching and working on a Ph.D. I started looking into teaching business on the college level and what it would take. I knew from my years at Intervarsity that I enjoyed the environment. I did a lot of teaching, workshops, conferences and the like. I like students and this could be my way back, but then I thought do I have to get a Ph.D. to do this? I'll never make it. I discovered that business schools were disparate for

teachers and that there were not enough doctorates to go around. Many regional universities were using business people with only a masters. I thought maybe if I'm lucky, if I really work hard at it, maybe I can put a master's degree together.

I took the GRE and went back to Emporia State for my MBA. I was self conscious walking back onto the campus after 12 years, but it only took a few days to shed that feeling. Soon I decided that I really like this and school seemed to be radically different from what it had been twelve years earlier. I just loved it. My friend, Scott, from college (we were in Intervarsity together) was back teaching. I actually stayed at his home one night a week and he was a major mentor to me during this time. All of a sudden I was pulling good grades. I started to talk with him some about this Ph.D. thing. Sott encouraged me more and pretty soon I decided that if I don't try this I will always wonder if I could have made it. I really had doubts whether I could make it or not. I decided to apply to some different schools. So we pulled out the maps and started looking. We applied and got accepted to Texas A&M for some reason or another. By God's intervention, actually I should have never been accepted into that good of a Ph.D. program but that year, the circumstances worked out that I did. Another year it probably would not have happened.

I think I should give you the full picture here. I was out of school 12 years between my bachelors and masters. When I finished my bachelors I figured I would never darken the door of a classroom again, I thought I was done. I figured I was lucky to get to that point, only one other person in my family had. My Dad had an 8th grade education. I remember going to my Dad and trying to get him to help me with my 6th, 7th grade math. He tried to help me and couldn't so he said, "I can't, that's beyond me, I'm

just a farmer. I don't know, I can't help you." Probably that phrase "that's beyond me, I'm just a farmer" that is when I knew I'd gone beyond my Dad. I never had a lot of confidence academically and expected myself to perform at the C level. If I got a C, well that's pretty good at least I did not fail the course. In my family that was really decent.

What was their attitude about me finishing college? I think it was kind of a non-event. They did not throw a big party for me, like wow you made it through something that most of us have not. They came to my graduation, but you know it was kind of a non-event. In my own community career wise you did one of two things. You either went into full-time Christian work or you farmed and supported those who went into full-time Christian work. My time at Emporia State was very influential in my life, Urbana '70 with Paul Little and Elizabeth Elliott were two speakers that had a major impact on me. They gave me hope and vitality about the work of faith. So when I graduated from Emporia I joined the Intervarsity Staff, raised support and my family was very supportive of that. Maybe that was kind of the significant event or achievement for them. I did that for six years working at Wichita State and points west, at the various private and community colleges in western Kansas. I was a circuit rider, my wife started working through some pretty difficult emotional issues toward the end of those six years. We had started a family, our oldest daughter was born, and I was burned out. I worked very hard. With my background I thought that if you did not work from sunup to sundown doing hard physical labor you had not worked. I did not figure that out until I was completely burned out. I was working six and seven days a week. Those years were very good years even though in the end they did end on a down note.

I had a friend who was in the construction industry and he said, "I've got more than I know what to do with." I worked with him for a year and after that I went out on my own, started my own construction company. I did that and got into counseling. I did about a year and a half of counseling, one of the best things I ever did. The physical work was therapeutic for me, but after about five years I started getting restless with construction. As I healed emotionally I figured some things out. The construction industry was not going to hold me the rest of my life. I'm a curious person an active learner and I got bored with construction. I knew 95% of what there was in construction and got bored. My wife and I would sit on the front porch planning what else we wanted to do. One thing would seem interesting for a month or so and then we would move to something else.

I don't remember my family's reaction to me going back and getting my masters degree. When I told my brothers and my Mom that I was going back for a Masters degree, I had graduated college, Intervarsity staff for six years, and had my own business. We were at a family gathering and toward the end when people were leaving I said, "by the way, I'm going back to get a masters degree." One of my brothers got up to leave and as he went out the door said, "You better decide what you want to do when you grow up." (long pause) When I told my Mom that I was going back to get my Ph.D. she was shocked. She said, "Oh my, you mean there's that much more they can teach you." Something like that was beyond her comprehension. I guess she thought with a masters I must know 90% of what there is to know and surely I did not need a Ph.D. to learn the rest. But I was determined and that did not derail me.

Community Characteristics

We grew up in a Mennonite community; the church was about 400 people 12 miles from the nearest town of 15,000 people. It was literally on the corner of an intersection in the middle of the cornfields. I'm first or second cousin to half the people in the church.

School/College Characteristics

I grew up in Christian schools near our farm and church. I entered higher education at Emporia State University, Emporia KS . I was determined the farther I went. I was a poor student to begin with; we've already talked about that. I was conditioned to finish what you start. At Emporia State University I earned both a B.S. in Business and an M.B.A., then at Texas A&M the Ph.D. in Strategic Planning.

Path to the Professoriate

The decision to be a university professor was made at the same time I decided to pursue a masters degree at Emporia State. I went to the University of Houston after finishing at Texas A&M. I got my first pay check on my 40th birthday. It was a tenure track position, but in the sixth year I started looking around just in case things did not go as planned. I got tenure at Houston, but I also got an offer from this university. So we decided to move.

Reflections of high-achieving, first-generation college students

My brothers never intended on finishing college. They just went for my parents' sake. Their life goals were farming. It was the Vietnam era and I was called for a physical just before the draft was shut down. I had a strong work ethic. In farming you work every

day no matter what the weather or season. I never felt disadvantaged because I had to work.

I don't know where to start; I'm not an advocate that a person can do anything. I was pursuing things that I was passionate about. I learned about leadership in Intervarsity. My bachelor's degree was about my development as a person and my spiritual life. I was majoring in Intervarsity, minoring in business, and learning so much.

Advice

Find something that you want to do and complete things. Find out how you are put together. We do not know ourselves well as undergraduates. Press your own boundaries and develop yourself as a person. I want to be (a long silent pause) we probably are like a sailboat; we turn to catch the wind. The bachelor degree just provides a foundation.

Constant Comparison

Isaac joins the other first-generation college students into the new territory of higher education. He has overcome an accumulation of negative factors (Barahona, 1990) in his personal life and a lack of academic preparation. Isaac was eager to advance (London, 1992) and used his hard work capacity to provide himself the resources to realize the goal of higher education (Gándara, 1995). The selection of a 4-year private institution is only the third time a participant has reported this choice, but only two participants have not gone to a 4-year institution (public or private). This means that seven of the nine participants first enrolled at a 4-year institution. The difference in this instance is that Isaac's parents actually chose his first college. He said, "We all went to Bible college our first year or first semester." The first decision that Isaac made about

college was to leave the Bible college and transfer to the university. This is an act of separation in which Isaac puts distance between himself and his Mennonite upbringing. It is obvious that his culture of origin has had great influence, but he has taken a number of risks in order to find a sense of his own identity and a sense of belonging within the college (Rodríguez, 2001). In fact, the risk of moving from the culture of origin to a sense of belonging and positive sense of identity are common to four participants: Bea (African American culture), Dana (rural culture), Gregory (international student), and Isaac (Mennonite religious sect). It may appear that Hope should be included in this group because of her Native American ethnicity, however, her ethnicity does not appear to have been formative to her identity and the cultural distance for her appears minimal. The difference between these four is the distance between their cultures of origin and assimilation into the higher education community. The general categories of the literature review, the interviews (the correspondence of individual participants is in brackets), and the data emerged in the following areas:

1. Parental influence

   - College expectation (Astin, 1993) Impetus of parents (Gándara, 1982; Gándara, 1995) [Allen, Bea, Carl, Ellen, Frank, & Isaac]

   - Culture of possibility (Gándara, 1995) [Bea, Dana & Hope (readers)]

   - Models of hard work (Gándara, 1995) [Bea (Mom), Carl (Farm), Frank, Gregory, Hope (Mom), & Isaac]

2. Access into higher education

   - Academic success (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Carl, Dana, Ellen, Frank, Gregory, & Hope]

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- Going to college (Hsiao, 1992; Rendón et al., 2005) Persistence (Gándara, 1995) [Allen, Bea, Carl, Dana, Ellen, Frank, Hope, & Isaac]

- Institutional selection (Nuñez et al., 1998) [Allen, Bea, Carl, Dana, Ellen, Frank, Hope, & Isaac]

- Lower parental income (Barahona, 1990; Billson et al., 1982) [Allen, Bea, Carl, Dana, Ellen, Frank, Gregory, Hope, & Isaac]

- Negative circumstances (Barahona, 1990; Billson et al., 1982; Stein, 1992; Terenzini et al., 1996) Lack of parental support (Nuñez et al., 1998) [Allen, Bea, Dana, Frank, Gregory, & Hope]

- Resources to realize the goal of higher education (Gándara, 1995) equivalent to Financial assistance (Astin, 1993) [Allen, Bea (masters scholarship), Dana (scholarships and work study), Frank (athletic scholarship), Hope (academic scholarship), & Isaac (Resident Assistant)]

3. Persistence through higher education

- Changes unappreciated (Hsiao, 1992) [Ellen]

- Emotional support, opposite of lack of support (Barahona, 1990) [Allen, Bea, Carl, Frank, Gregory, & Isaac]

- In-class experiences (Pascarella et al., 1995) [Allen, Bea, Ellen, Frank, & Hope], this includes Allen's Spark for education.

- Low academic preparation (Pascarella et al., 1995) [Allen, Gregory, & Isaac]

- Low personal income (Terenzini et al., 1996) [Allen, Bea, Carl, Dana, Frank, Gregory, Hope, & Isaac]

- Lower persistence [Allen stopped out after three semesters and Bea stopped out of community college and transferred to a historically black college (Riehl, 1994; Riehl, 2003)]

- Sense of belonging (Dubois et al., 2002; Gándara, 1982; Gándara, 1995; Rodríguez, 2001) [Dana, Ellen, Frank, Hope, & Isaac]

- Separation from the culture of origin (Striplin, 1999) merged with a non-welcoming environment (Pascarella et al., 1995) [Bea, Dana, Gregory, & Isaac (transfer from Bible College)]

- Student-faculty interactions (Astin, 1993) [Allen, Bea, Ellen, Frank, Gregory, Hope, & Isaac]

- Without strategy (Rodríguez, 2001) [Allen, Bea, Gregory, Hope, Isaac]

- Work and family commitments (Astin, 1993; Nuñez et al., 1998; Riehl, 1994; Stein, 1992; Terenzini et al., 1995) [Bea, Dana, & Hope]

4. Achievement and degree attainment

- Eager to advance (London, 1992) [Allen, Bea, Carl, Dana, Frank, Gregory, Hope, & Isaac]

- Explorer, risk taker (Rodríguez, 2001) [Allen, Bea, Carl, Dana, Frank, Gregory, Hope, & Isaac]

- Navigator/Mentor (Bennetts, 2001; Little, 1990; Philip, 2000; Stanley et al., 1992) [Allen, Bea (female teachers), Carl (4-H sponsor), Dana

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(teachers and Library supervisor), Ellen (community college

instructor), Frank, Gregory, Hope (Navigator), & Isaac]

- Passion (London, 1992; Rodríguez, 2001) [Allen, Ellen, Hope, &

  Isaac] related to an internal drive.

- Persistence (Gándara, 1995) [Carl, Dana, Ellen, Frank, Gregory, &

  Hope (I had to keep going)]

- Seeker, interest in attaining (London, 1992) [Allen, Bea, Carl, Dana,

  Ellen, Frank, Gregory, Hope, & Isaac]

- Value education (Hsiao, 1992; Terenzini et al., 1995) [Bea, Carl,

  Dana, Gregory, Hope (I had fallen in love and now I knew the name.),

  & Isaac)]

The internal drive (London, 1992) continues to be reported by all interviewees who

persist and accomplish their goals (Gándara, 1995). All participants show an interest in

attaining are being coded in the seeker category as well as eager to advance (London,

1992).

Memos and Observations

Allen, Frank, Gregory, Hope, and Isaac all point to a mentor who has served as a

navigator to assist them in personal accomplishments. Both Bea and Carl described

people who functioned as role models (one dimension of mentorship) during their

interviews. The female teachers were great role models for Bea and the male authority

figures helped Carl succeed, especially the 4-H leader. Dana, like Bea, enjoyed teachers

who took an interest and helped her achieve at the home town school. The library

supervisor who helped her get a job served as a navigator for Dana. A reexamination of

Ellen's narrative yields this quote, "While I was at the community college one of the teachers helped me and told me about Wells College. She helped me get into a 4-year college." No categories are added to this section. Pre-college academic success (Gándara, 1995) which is reported by five out of nine participants runs counter to the first-generation college student characteristics reported for the majority of these students. Even those who do not deal with pre-college academic success speak of the discovery of a love of learning or a later spark in college.

Constant comparison

The process of analyzing the interviews is an all consuming experience. The mechanics are simple: just interview the participant and convert the responses into a narrative of the interview. The first narrative was analyzed using the literature review in Chapter Two, which was expanded in search of topics that related to the interview. The second and subsequent narratives were compared to the previous interviews using printouts, side by side comparisons of the lines and phrases for each participant, plus the use of computer software to find repeating words and themes. The data that emerged required that the coding be revised for all the narrative to reflect the increased understanding of the data slices from the interviews. Also it was necessary to include a growing body of literature to reflect the themes presented by the interview participants. The most obvious example of this in the review was the need to include literature on mentorship and its role in higher education. The codes identified in the interviews grew from 18 that emerged in the analysis of the first participant responses to 31 during the analysis of all nine interviews. One last category was identified in the sixth interview, but no other categories emerged through the remaining interviews.

Coding and categories

Open Coding

    Initial coding

The codes first identified in the analysis of Allen's interview were as follows: academic success and a sense of belonging, college expectation, crisis and circumstances (including lack of parental support), educational attainment, father's education, mother's education, eager to advance, spark for education (merged into In-class experiences), emotional support, institution selected, low academic preparation, lower parental income, lower persistence, passion (not inserted until repeated by Ellen), resources to realize the goal of higher education, seeker (interest in attaining and internal drive), student/faculty interaction, and without strategy. These original 18 codes and those that emerged from subsequent interviews were used in comparison to the next interview narrative. The original code of "academic success and a sense of belonging" was later split into two categories. In addition, the literature references were coupled with the data slices. This procedure was followed to strengthen the validity of the findings through the parallels to previous research findings.

The second participant was Bea and her interview narrative yielded seven new codes and confirmed 12 out of the 18 original Allen codes. The "separation from culture of origin" by Bea is a common finding for minority college students. Six other categories emerged in the second interview and enriched the data. The codes for these categories were: culture of Possibility, going to college (other siblings), in-class experiences, models of hard work, work and family commitments, and value education (for higher education). These seven codes brought the total after two interviews to 25.

There were only four new categories that emerged in the interviews of the next four participants. Carl, who grew up on a Michigan farm, affirmed much of the data in the previous two interviews and added "persistence" as a positive characteristic for high-achieving, first-generation college students. Dana focused on her "low personal income" that shaped her educational experience in the university and the "sense of belonging" represented by her treasured work study position in the campus library. This "sense of belonging" is from a larger category that was identified in Allen's data and split from academic success after Dana's interview. The relatives did not appreciate Ellen's reading and wanted her to socialize more. The literature anticipated that many times families do not appreciate changes to the student. Ellen's "risk taker" attitude about skipping the masters and getting into a doctoral program without her professor's help was heard in this quote, "I was on my own." The passion of her pursuit and advice prompted this insertion of this category, which had actually been emphasized by Allen. The last code entered was "mentor," following the analysis of the sixth participant, Frank. After previous information was revisited, the term mentor was first mentioned by Allen in speaking of his major professor. Variations of this theme were reported by both Bea and Carl who referred to role models and help from authority figures, without using the term mentor.

This actually means that no new codes were revealed from the analysis after the fifth interview. The density of the data appears to have been embedded in the interviews. The participant and the codes discovered in parentheses are as follows: Allen (18), Bea (7), Carl (1), Dana (2), Ellen (2), and Frank (1). Since evidence of mentors was found in earlier interviews, but not coded until after Frank reintroduced the theme, the research actually introduced the last new code when Ellen explained that her female relatives did

not appreciate her commitment to reading and they would prompt her to be more social (changes unappreciated). Allen was the only participant to speak of the "spark for education" and this in vivo code when compared to the others actually seemed to fit into the "in-class experience" category. The codes were populated through the remaining interviews and reached the saturation point during the seventh interview with Hope.

While comparing the categories and integrating the properties of each, as explained by Glaser and Strauss (1967), two distinctions became obvious in the experiences of high-achieving, first-generation college students. This is not a particular category but whether the nature of the category was positive or negative. All of the participants reflected many of the accumulated negative factors that make up the typical profile of first-generation college students. There were also a number of positive experiences that emerged. The categories were then grouped together as negative or positive factors in the participants' experience.

Coding categories defined

The categories identified in the constant comparison of the data from the interview participants emerged during the analysis. The 31 categories are presented, defined, and annotated for review. When the category was identified, after the analysis of Allen's narrative, the pseudonym of the participant appears in brackets (e.g., [Bea]). The categories are as follows:

- Academic success: reflects pre-college academic success. The first use of this code was all inclusive for academic success as an avenue into the educational world. This was later divided into two codes. The result was that academic success focuses on pre-college academic success, while

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sense of belonging became equivalent for assimilation into higher

education (Gándara, 1982; Gándara, 1995; DuBois, 2003).

- Changes unappreciated [Ellen]: First-generation college students feel that family and friends do not appreciate changes to the student (Hsiao, 1992).

- College expectation: The perception by students of their parents' expectations for their higher education (Astin, 1993), similar to the impetus of parents (Gándara, 1982; Gándara, 1995).

- Culture of possibility [Bea]: The use of family stories to instill the belief that the child has the capacity for achievement (Gándara, 1995).

- Eager to advance: Students who are eager to advance into new territory beyond the previous experience of their families (London, 1992).

- Educational attainment: The highest degree earned by the high-achieving, first-generation college students who participated in the research.

- Emotional support: Encouragement and support of the high-achieving, first-generation college student by family and friends. This is opposite the expected finding of lack of support (Barahona, 1990) and the pressure of family responsibilities on the student (Stein, 1992).

- Father's education: When student began college her or his father had not attended college (Astin, 1993; Barahona, 1990; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Rendón, 2003a).

- Going to college (other siblings) [Bea]: The college enrollment pattern for the siblings in the family of origin. First-generation college students are more likely to be from working class families, ethnic minorities, women,

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and/or adults with a higher-than-average number of dependent children resulting in lower participation in higher education (Hsiao, 1992; Terenzini et al., 1995). They often are the first in their families to even consider higher education (Rendón, Hope, & Associates, 1996; Rendón, 2003b; Rendón et al., 2005; Rendón et al., 1996).

- In-class experiences [Bea]: In-class experiences that affected the perceptions and success of first-generation college students (Pascarella et al., 1995). This is related to student/faculty interaction, but includes the full range of experiences by the student in the classroom.

- Institution selected: the type of institution in which the students began their collegiate careers whether a public comprehensive university (doctorate granting), private comprehensive university (doctorate granting), public 4-year college or regional university, private 4-year college or regional university, or 2-year community or junior college (Nuñez et al., 1998).

- Low academic preparation: Enrollment in a non-college preparatory curriculum yields lower cognitive skills when entering college (Hsiao, 1992; Terenzini et al., 1995).

- Low personal income [Dana]: Lack the personal resources to relieve the economic pressures inherent to higher education enrollment and degree attainment (Riehl, 1994).

- Lower parental income: First-generation college students generally come from families with lower incomes (Barahona, 1990; Riehl, 1994).

- Lower persistence: First-generation college students are less likely to persist and graduate than students whose parents went to college(Nuñez et al., 1998; Riehl, 1994).

- Models of hard work [Bea]: Parents' pattern of work convinces the child that effort is more important to success than ability (Gándara, 1995).

- Mother's education: When student began college his or her mother had not attended college (Astin, 1993; Barahona, 1990; Pascarella et al., 2004; Rendón, 2003c).

- Navigator/mentor [Frank]: Assists the student as a teacher, role model, sponsor, and navigator to facilitate development or empowerment (Lauland, 1998; Little, 1990; Stanley et al., 1992).

- Negative circumstances (originally Crisis and circumstances, includes Lack of parental support): Accumulated factors such as lack of support, lack of siblings in college, lower social integration, more non-academic demands, personal situations, lower grades, and less academic preparation (Barahona, 1990; Billson et al., 1982; Nuñez et al., 1998; Stein, 1992; Terenzini et al., 1995)).

- Passion: The desire or internal drive to be involved in an activity, role, or lifestyle.

- Persistence [Carl]: Reliance on the personal characteristics of persistence, ability, goals, and interpersonal skills to continue in higher education (Gándara, 1995).

- Resources to realize the goal of Higher Education: The resources to allow access, persistence, and attainment in higher education (Gándara, 1995).

- Risk taker [Ellen]: First-generation college students who have a personal willingness to take risks (Rodríguez, 2001).

- Seeker (interest in attaining and internal drive): The drive to go to college expressed as an interest in attaining and motivated by an internal drive to seek a better position in life (London, 1992).

- Sense of belonging [Split from academic success after Dana's interview]: The participant perceived that a positive sense of identity and belonging within the college influenced their success (Rodríguez, 2001).

- Separation from culture of origin [Bea]: The assimilation into higher education creates a separation from the student's culture of origin (Nuñez et al., 1998; Rendón, 1994; Striplin, 1999).

- Student/Faculty interaction: The student's college success is positively affected by interaction with faculty (Astin, 1993).

- Without strategy: First-generation college students earned college degrees without a formal plan or strategy (Rodríguez, 2001).

- Work and family commitments [Bea]: More work and family commitments which tend to hinder persistence and require more time for students to attain degrees (Astin, 1993; Nuñez et al., 1998; Riehl, 1994; Stein, 1992; Terenzini et al., 1995).

- Value education [Bea]: Considers higher education and degree attainment as an important goal. This is opposite of the previous research that first-

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generation college students have lower degree aspirations, lower financial ability, and lower persistence in higher education than those whose parents had college going experience (Hsiao, 1992; Terenzini et al., 1995).

Observations from open coding

The 30 open codes were compared and reinterpreted throughout the analysis of the interview narratives. The codes were distributed into a pattern of negative and positive factors identified by the participants as well as general categories. The code categories are placed under the general factor categories as follows:

- General factors:
  1. Educational attainment
  2. Going to college
  3. Institution selected

- Negative factors:
  1. Changes unappreciated
  2. Father's education
  3. Low academic preparation
  4. Low personal income
  5. Lower parental income
  6. Lower persistence
  7. Mother's education
  8. Negative circumstances simplified to Negatives.
  9. Separation from culture of origin simplified to Separation.
  10. Without strategy

11. Work and family commitments, simplified to Commitments.

- Positive factors:

  1. Academic success

  2. College expectation

  3. Culture of possibility, simplified to Possibility.

  4. Eager to advance

  5. Emotional support

  6. In-class experiences (Spark for education) simplified to In-class.

  7. Models of hard work, simplified to Work models.

  8. Navigator/Mentor, simplified to Navigator.

  9. Passion

  10. Persistence

  11. Resources to realize the goal of higher education, simplified to
      Resources.

  12. Risk taker (explorer)

  13. Seeker

  14. Sense of belonging, simplified to Belonging.

  15. Student/Faculty interaction, simplified to Faculty Interaction.

  16. Value Education

Open Coding Summary

The multiple indicators found in the interview data have been combined into free standing concepts. The coding did not use preconceived themes, but the categories emerged from the data. To insure that the developing theory is objective many "in vivo

codes" were identified using the actual words of the informants. These codes are both analytically useful and the imagery brings the phenomenon into view through the eyes of the participants. Allen, the most prolific in vivo producer with phrases such as: "Spark for education;" "it is a passion," began to be coded as simply passion; and "There was something internal that made me feel like a seeker and explorer," opened up two categories. The first was an in vivo code, "seeker," which incorporates the characteristics identified as the interest in attaining with internal drive (London, 1992; Rendón, 1994). The second, "explorer," led to the researcher's discovery of the construct, "risk taker," that Rodríguez (2001) used to describe behavior of first-generation college students who become activists in either education or society. The simultaneous discovery has lead to the reflection that the term "seeker" identifies the attitude or motivation of the participant, while "explorer" is more behavioral and describes the activity of the participant. In her advice to first-generation college students Bea said, "Persistence," and "that education had to be valued" (coded as value education), these themes were repeated throughout the interviews. Finally, in giving her advice to first-generation college students Hope said, "Find a navigator." This gave an in vivo definition to the mentor code which had been the last code added, but the range of definitions available had made it unwieldy. The navigator label is a more vivid term than mentor. It seems that the function of these navigators is to navigate the student from here to there and assist in developing the student. The navigators within graduate education are helping students move from the position of outsider to that of an insider.

The six in vivo codes come from the participant descriptions of their paths through higher education and into the professoriate. These were in many cases counter to

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the general literature on the subject, when considering that most of the previous studies focused on the difficulties and failures of first-generation college students. The remaining codes from the data are constructs that have been developed in previous studies or findings from the literature review that were adapted into codes. These have been drawn from the first-generation college student literature and are based on the cumulative knowledge of the researchers in the field. The researcher has endeavored to be true to the study in analyzing the narratives for data and true to the grounded methodology in developing the coding categories. As Strauss (1987) states, the important activity is to first notice the phenomenon and then apply terms that describe the category in a way that is appropriate to the data (Strauss, 1987). The process for open coding followed the test established by Glaser (1978 and 1992); when looking at the data the researcher tried to remember what the study was about, then examine what happened to the people and within the events related to the phenomenon. Finally, what does the data discovered indicate?

Axial Coding

The initial codes need shaping through a correction process to understand the codes in a more mature fashion. In this phase each data set from individual informants is reevaluated and compared to each of the others collected in order to verify reoccurring themes. The coding categories are related to one another to identify the dominant themes and the core variable(s).The first step was to categorize the codes into those with internal characteristics and external behaviors as illustrated in the following table:

Table 7

Code Characteristics and Relationships

Coding Categories and (shortened code)	Internal Attitude	External Behavior	Related Code
Academic success		X	Faculty interaction
Changes unappreciated	X	X	Separation
College expectation	X		Possibility
Culture of (possibility)	X		College expectation
Eager to advance	X		Possibility
Educational attainment		X	Eager to advance
Emotional support	X		Persistence
Father's education		X	Mother's Education
Going to college		X	Academic success
(In-class) experiences	X	X	Faculty interaction
Institution selected		X	Going to college
Low academic preparation	X		Persistence
Low personal income		X	Persistence
Lower parental income		X	Persistence
Lower persistence		X	Educational attainment
Models of hard work	X	X	Navigator
Mother's education		X	Father's education
(Navigator) Mentor	X	X	Models of hard work
(Negatives) circumstances	X	X	Lower persistence
Passion	X		Persistence, Value
Persistence		X	Passion, Resources
(Resources) to realize the goal of Higher Education		X	Low personal income Lower parental income
Risk Taker		X	Eager to advance, Seeker
Seeker	X		Risk Taker
Sense of (belonging)	X		Separation, In-class
(Separation) from culture of origin	X		Belonging, Negatives
Student/(Faculty Interaction)		X	Sense of belonging
Value education	X		Passion, Persistence
Without Strategy	X	X	Lower persistence
Work and Family (Commitments)		X	Lower persistence

Coding clusters

Allen said, "There was something internal that made me feel like a seeker and explorer." This self-description by Allen encapsulates the high achieving, first-generation college student. The in vivo code "Seeker" represents the participants from this study who report the strong drive to go to college. It is expressed as an interest in attaining

motivated by an internal drive to seek a better position in life (London, 1992). The term, Seeker, appears to give clarity to experience of these high-achieving students who seek to find a place within the world of higher education and advance into the academy.

The category related to the internal drive of the Seeker is that of the Navigator. The Navigator is a mentor who assists the Seeker in development and/or achievement. He or she assists the student as a teacher, role model, sponsor, and navigator to facilitate development or empowerment (Lauland, 1998; Little, 1990; Stanley et al., 1992). While the Seeker category is described by the participants as an internal quality, the corresponding Navigators are observable through the story. Even when there is no label attached, the function of a Navigator is evident. Ellen's narrative yields a Navigator description when she says, "While I was at the community college one of the teachers helped me and told me about Wells College. She helped me get into a 4-year college." Ellen had gone to community college because that was all her family could afford. This instructor opened the door to achievement for an unknowing protégé.

The parents' educational attainment has been considered a negative factor for first-generation college students seeking to access, persistence, and degree attainment in higher education. The codes for Father's and Mother's education combine to form this category. However, three related factors have a positive affect on first-generation college students. The college expectations of the parents, also known as the impetus of parents, can affect the college going of students. Some parents provided a sense of empowerment for their children by using family histories to create a culture of possibility for their family. Others were models of hard work who instilled in their children confidence in

their capacity to achieve through diligent labor. The combinations of these codes form the construct of Parental influence.

The construct of pre-college experience incorporates the academic, economic, and social aspects that are related to Parental influence. These codes interact with the dimensions of Parental influence, but extend beyond the domain of the parents. The contrasting codes of Academic success and Low academic preparation make up the academic possibilities. The economic theme contains the Lower parental income and Low personal income. The aggregate category of Negative circumstances contains the many hardships shared through the narratives.

The category for institution(s) selected tracks the type of institution where the interviewees first enrolled. In those cases where transfers were used to adjust the participant's track through higher education, the perception of the student was investigated. One companion finding in the interviews was the Going to college pattern for the other siblings in the informant's family. This is considered to be a tangible expression of the category under Parental influence coded as College expectations.

The construct category Persistence has both positive and negative aspects for the first-generation college student's enrollment and achievement in the institution selected. This reflects the true nature of persistence in real life where conditions are not always perfect. It should be noted that some categories within the study included data that stretched across the Pre-college experience and the Persistence code that focuses on the higher education experience. In this case the code categories are subdivided to separate the chronology of the student's life experience. The positive factors of persistence are: Sense of belonging, Emotional support, In-class experiences, Student/Faculty interaction,

and Resources to realize the goal of Higher Education. The negative factors put a drag on the first-generation college student's achievement in higher education. These negative factors are:Low personal income, Lower parental income, Lower persistence, Negative circumstances, Separation from the culture of origin (Changes unappreciated), Without strategy, plus Work and family commitments.

The construct Attainment qualities is identified through the codes of Eager to advance, Passion, Persistence, Risk Taker, and Value education. These codes were gleaned through the life experiences reported by the high-achieving, first-generation college students who were interviewed. The richest source for this information was the "Reflections of high-achieving, first-generation college students" section of the interview protocol (Appendix B). These Attainment qualities may be related to the internal drive of the first-generation college students (Seekers) interviewed.

Two categories were used to quantify high achievement for the purposes of the study. The code of Educational attainment is used to record the degrees earned by the participants. Since an earned doctorate was required to qualify for an interview there is a sense in which the category is both an entry requirement as well as an achievement measure. The last category is the Professoriate. While many first-generation college students who do not enter the professoriate are successful, the professoriate was considered a logical place to discover high-achieving, first-generation college students.

Coding diagram

A coding diagram helps to contextualize the phenomenon and the actual relationships within the various elements to create a model of the emerging theory (Creswell, 1998; Strauss et al., 1990). This diagram is a visualization of the theory of

how first-generation college students become high-achievers and members of the

professoriate. The diagram below shows the relationship of the coding clusters and

explanatory constructs to the phenomenon:

Figure 1

Path to the professoriate diagram

```
                      ┌─────────────────┐
                      │ High achieving  │
┌──────────┐          │ first-generation│          ┌──────────────┐
│ Parental │ ───────▶ │ college student │ ◀─────── │  Pre-college │
│ Influence│          │     SEEKER      │          │  Experience  │
└──────────┘          └─────────────────┘          └──────────────┘

┌──────────────┐         ┌───────────────┐         ┌──────────────┐
│ Persistence  │ ◀─────▶ │  Navigator(s) │ ◀─────▶ │  Institution │
│   Factors    │         └───────────────┘         │   Selected   │
└──────────────┘                                   └──────────────┘

┌──────────────┐                                   ┌──────────────┐
│  Attainment  │ ─────────────────────────────────▶│ Educational  │
│   Qualities  │                                   │  Attainment  │
└──────────────┘                                   └──────────────┘

                      ┌──────────────┐
                      │    Career    │
                      │    Choice    │
                      └──────────────┘

┌──────────────┐                        ┌──────────────┐
│    Non-      │ ◀────────────────────▶ │ Professoriate│
│ Professoriate│                        └──────────────┘
└──────────────┘
```
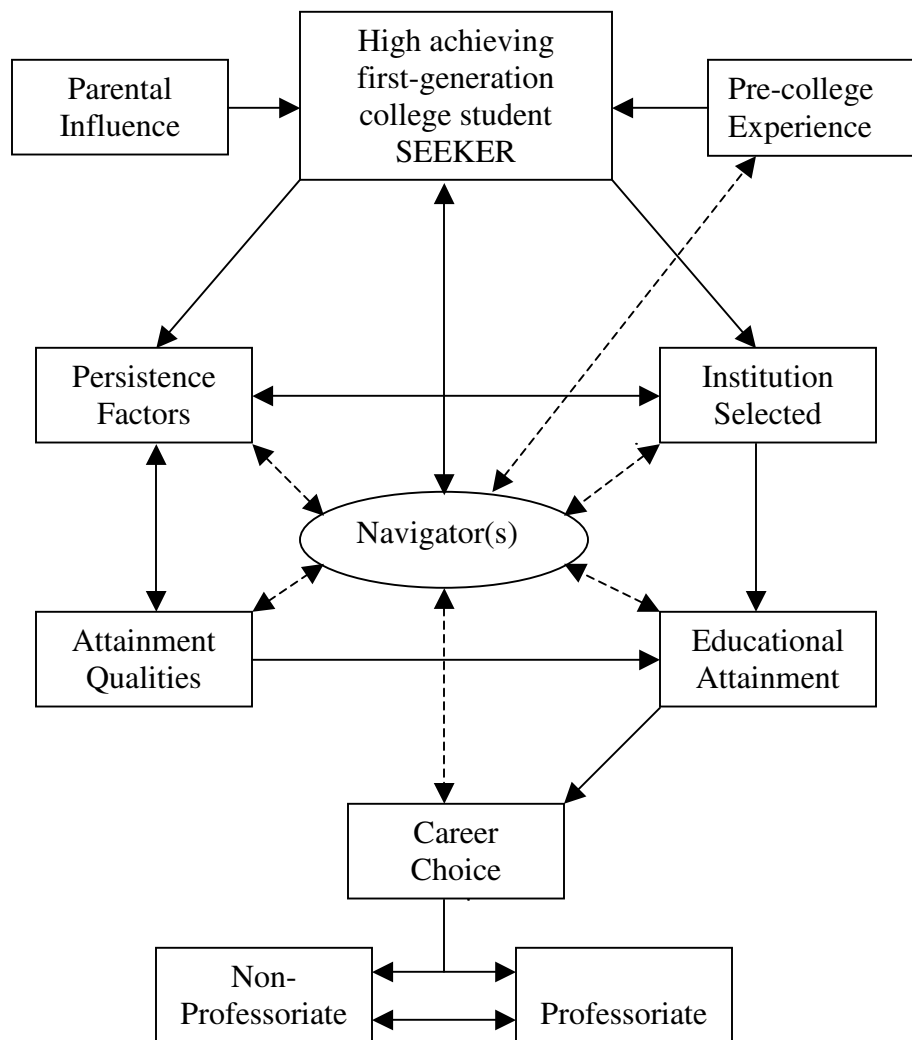
The diagram appears to present a functional explanation for the movement of high-achieving, first-generation college students through the educational process and into the professoriate. The categories must be aligned to a core code.

Selective Coding

The theory represented in Figure 1 illustrates the phenomenon described by the nine participants interviewed. In retrospect, these members of the professoriate began in homes where their parents were outsiders to higher education. Yet the mixture of parental influence and other pre-college experiences helped create an internal drive that compelled these first-generation college students to seek a place in higher education. The first step was to go to college. Two out of nine started in a 2-year institution which is almost double that reported for the general population of doctorate recipients (Hoffer et al., 2003). None of those interviewed expressed an early desire to be a college professor. Only Carl after his time in the Navy expressed interest, "I had a secret desire to teach math in a junior college." But there is a strong drive to go to college. Each of the participants expressed as an interest in attaining motivated by an internal drive to seek a better position in life (London, 1992). The seekers are trying to find a place within the world of higher education.

Coupled with this characteristic of being a seeker the participants reported a strategy that appears to advance them personally and educationally. The high-achieving, first-generation college students find navigators as they go through life to assist the seeker in development and/or achievement. This person assists the student as an adviser, teacher, role model, sponsor, and navigator to facilitate development or empowerment (Lauland, 1998; Little, 1990; Stanley et al., 1992). Allen had his major professor who

was his mentor. Bea used her female teachers as role models for academic success and employment as an elementary teacher. Carl describes sequential authority figures who helped him navigate through life and higher education. Dana had role models in the library who guided her to a secure position. Ellen started where her family could afford, but a community college instructor opened the doors for transfer and Ellen found a place to belong. Frank appears to have attracted navigators at every juncture to gain increasing success and opportunity. Gregory had peer navigators (graduate international students) and graduate professors who guided him through American higher education and career opportunities. Hope's school counselor was her first navigator, but not the last. Isaac's discipleship partner, who helped him remediate his low academic preparation, and later his friend guided Isaac through the graduate school maze and facilitated the move into the professoriate. There were times when the internal drive and other skills carried them through, but each high-achiever reported someone who helped to navigate them during some period of time.

Bea summarized the drudgery of getting through higher education with the following quote, "The hardest challenge to overcome was to just keep doing it. I kept making the choice to keep on going." The construct category of persistence incorporates the positive and negative aspects for the first-generation college student's enrollment (access), continuance (persistence), and achievement (attainment) in higher education. This pattern distinguishes these high-achievers from other first-generation college students.

Closely related to the internal drive of these seekers are the Attainment qualities of these high-achieving, first-generation college students. It is evident in the data that

each of these individuals exhibits attitudes and behaviors leading to the attainment of degrees and positions in the academy. The mystery at this point is what produces these qualities of Eager to advance, Passion, Persistence, Risk Taker, and Value education. Are these traits present as a result of the internal drives of the seeker or does the interaction with the navigator develop them.

The attainment of the doctorate is a requisite for the opportunity to enter the professoriate. Even though some of the participants remained in the jobs they were working when they graduated they eventually chose to move into the professoriate. To put it in Allen's words, "It was just the logical next step."

Core Coding

In the beginning the working title for this study was the "Path to the Professoriate." Along with the working title the researcher should confess that there was an assumption that the move into the professoriate would be a momentous event in the life of these high-achieving, first-generation college students. In retrospect, the event is not the job, but there are numerous events through the life of the student that moved the participants toward the professoriate. The reality that emerged from the data is that the significance is in the path, the journey through the obstacles encountered by students, especially those who are first-generation college students. There are difficulties in access, persistence, and attainment that must be overcome along the way for every student. The journey of these high-achieving, first-generation college students yielded two core categories: the Seeker and the Navigator.

The Seeker is the label given to explain the internal drive to seek and attain success found among the high-achieving, first-generation college students who

participated in this study. These students are the first persons out of their families to go to college. This means that they leave the family they know and try to become a member of the higher education community (Nuñez et al., 1998). The drive to attain a degree serves as the preliminary accomplishment in qualifying for the professoriate. One first-generation college student expressed the difficulty of her circumstances in the following: "I had no idea how that translated into day-to-day behavior. I was the first member of my family to attend college, let alone the first with any thoughts of teaching in one (Gallos, 1996)." There does not seem to be any help for these high-achieving students who seek to find a place in the academy.

While the core category of the seeker explains the push to start and continue through higher education it may be the reason for many successes by high-achieving, first-generation college students, but not all. The second category that fills the gaps in the theory and provides the necessary logic is the presence of Navigators along the Seekers path through the education process. These Seekers overcame many obstacles on their own abilities, diligence, and passion for the task. However, each of the participants reported at least one person, who served as a guide to navigate the first-generation college student from the outside to the inside or open the path of opportunity. The Navigator is a mentor who assists the seeker in development and/or achievement. He or she assists the student as a teacher, role model, sponsor, adviser, and navigator to facilitate development or empowerment (Lauland, 1998; Little, 1990; Stanley et al., 1992).

The interaction of the coding categories that emerged during the constant comparison of the interview narratives provided an explanation of the phenomenon. The

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Parental influences and pre-college experiences contribute to the institutional selection of the high-achieving, first-generation college students (Seekers). Seeker is a core category that emerged in the axial coding process and explains the relationships of the codes in pre-college, access, persistence, and attainment. Navigators were chosen as a second core category because of the reoccurrence of their presence in the story told by each Seeker. These dual coding categories further explained the interaction of the constructed categories represented by Persistence factors, Attainment qualities, Educational attainment, and Career choice.

<center>*Saturation*</center>

The theory that emerged is grounded in the data gathered from participant narratives. Each narrative was divided into data slices then correlated to the five research questions of the study. Each data slice was also compared to the literature on first-generation college students and the literature that was added to the review in order to support the interview analysis. The literature on high-achieving first-generation college students was expanded in the areas of graduate enrollment, graduate achievement, and the path into the professoriate. In addition, a new section of literature was added to support the emerging data of the role of mentoring (Navigator) for these successful students. Following this procedure the categories identified were arranged under the following constructs: parental influence, pre-college experience, Institution(s) selected, persistence factors, attainment qualities, educational attainment, and career choice. This procedure was employed to insure that the circumstances, experiences, viewpoints, actions, events, themes, and categories were compared repeatedly (Charmaz, 2000; Denzin et al., 2000; Glaser, 1978; Glaser, 1992). The constructed categories were related to the in vivo codes

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of Seeker (high-achieving, first-generation college student) and Navigator (mentor or role model) in order to explain the phenomenon.

Theory Emergence

The theory that emerged is that the high-achieving, first-generation college student (Seeker) is conditioned through his or her parental influences and pre-college experiences prior to going to college. The combination of these factors may affect the institutional selection, but not the attainment of the degrees necessary to advance into the professoriate. The Seeker moves through higher education and persists because of his or her capacity to overcome obstacles and when necessary acquires Navigators, who guide these students in development of Attainment qualities and Educational attainment. After attaining the advanced degree, the Seeker then sorts through the career choices available, with or without the assistance of the Navigator. The choice of the professoriate seems to be linked to the passion and value for education that the Seeker possesses. As Ellen said, "The choice was either academia or industry – more freedom in academia. At that point I could not conceive of any other route. Research is part of you, if you have found your niche."

CHAPTER V

Conclusions

Discussion of Research Questions

The discussion of the data generated in this study is organized through the

original questions stated in the introduction to the research. These questions were

investigated through interviews conducted with professors who were first-generation

college students when they entered higher education. The intent of the study was to

research possible factors that influenced educational success of first-generation college

students in access, persistence, and attainment. The research questions were used to study

faculty who are high-achieving, first-generation college students and also sought

information on how they moved into the professoriate. The research questions are as

follows:

Research Question 1: What role does parental educational attainment play in the
educational success of high-achieving, first-generation college students?

This study reaffirmed the previous findings regarding the influence parental

educational attainment has on first-generation college students. None of the participants

had parents with any college experience prior to their enrollment. Three of the

participants had siblings who went to college before or with them. Allen had an older

sister who preceded him and Isaac was the last of seven children to attend the Bible

college where all of his Mennonite siblings had enrolled before him. Frank had an older

brother who had delayed college one year, but then enrolled at the same time as Frank.

The other six were the first in their families to enroll in college. The reality is that only

two families had any previous experience with children attending college before the

participants enrolled. The fact that some families had previous experience in college

going may have impacted the participants. However, it is aknowledged that siblings'

impact is not represented in the data. There is an accumulation of negative circumstances

that hinder first-generation college students in college access and degree attainment

(London, 1992; Terenzini et al., 1996). One negative factor repeated through the

narratives was lower parental income (Hope, "My parents were negative examples. They

were constrained in employment due to their educational attainment. Their life

circumstances were like an individual message to me."). In addition, lack of support, lack

of siblings in college, lower academic preparation, as well as other negative

circumstances combined to form barriers against these students as Dana reported, "The

real influence that my community had on my educational attainment was that I did not

want to stay there." Barahona (1990) found a first-generation college student "effect" that

restricts these students beyond family income, race, or ability. These high-achievers have

overcome the odds to persist and earn advanced degrees.

Three related factors have a positive affect on first-generation college students.

First, the college expectations of the parents, also known as the impetus of parents, can

affect the college going of students (Gándara, 1982; Nuñez et al., 1998). Allen said, "I

think that there was always the assumption of college within my family." Carl

remembered, "Dad said a number of times, 'I want my children to get more education

than I was able to get.'" And finally Frank, "My parents always told me, 'You need to go

to college.'" Second, some parents provided a sense of empowerment for their children

by using family histories to create a culture of possibility for their family (Gándara,

1995). Dana recounted, "I read a book about Abraham Lincoln. My parents were back to

nature people. I related to Lincoln." Third, others were models of hard work who instilled

in their children confidence in their capacity to achieve through diligent labor (Gándara, 1995). Bea learned early, "Grandmother kept us while Mom worked." These three categories, combined with the parent's educational attainment, represent the influence of parents on the educational success of first-generation college students.

The construct of Pre-college experience incorporates the academic, economic, and social aspects that are related to Parental influence. These codes interact with the dimensions of Parental influence, but extend beyond the domain of the parents. The contrasting codes of academic success (Ellen, "The main reason I was successful in education was the love of learning. I always did well, I never found learning difficult" Gándara, 1995) and low academic preparation (Astin, 1993; Terenzini et al., 1995) make up the range of academic possibilities. The economic theme contains the lower parental income (Allen, "We had zero family money") and low personal income (Frank, "The biggest obstacle was money"). Carl joined the Navy for a tour of duty after he failed to earn enough money to go to college and did not enroll until six years after high school graduation. The aggregate category of negative circumstances (Terenzini et al., 1995) contains the many hardships shared by the participants through the narratives. Allen shared his trauma, "My Dad died at 43 years old when I was a 16 year old high school student."

The educational attainment of parents does influence the success of first-generation college students. The constraint of finances and naïveté about higher education interact with the many pre-college circumstances for first generation college students seeking access to higher education. While the participants provided evidence to confirm negative factors found in previous research and working against these students,

there are also some positive forces found within the stories of these high achievers. Each of the nine participants exhibited as least two of the four positive categories which are: college expectation, culture of possibility, models of hard work, and academic success. To some degree parents can affect these categories. While the educational attainment of the parents does appear to restrict first-generation college students, the high-achieving, first-generation college students in this study gained access to higher education, persisted, and attained advanced degrees.

Research Question 2: What is the personal educational attainment of high-achieving, first-generation college students?

The four women and five men who participated in the interviews earned doctorates in a variety of disciplines. Eight participants earned the Ph.D. which is the academic credential for the faculty. Dana earned a J.D. (first professional degree) before deciding to make higher education a career and returning to graduate school to complete a degree in Library Science. The responses to this particular question lacks the multiple dimensions of the other data and as a result is limited in its application to the theory that emerged. The personal educational attainment of these seekers actually served as the access point by which the researcher qualified participants to proceed on to an interview. These high-achievers pushed beyond their parents' educational attainment and succeeded. This is not to dismiss or diminish the accomplishments of other first-generation college students who have succeeded in many arenas, but the statistics gathered by the U.S. Department of Education show that less than 5 out of 1,000 first-generation college students who enter higher education enroll in a doctoral program. Even fewer complete the degree. The general enrollment figures reveal that there are 11 students whose parents attended college for every 2 first-generation college students who gain access into a

doctoral program (Choy, 2001; Nuñez et al., 1998). The following table shows the

highest degree earned, the discipline/professional practice, and the first occupation after

the doctorate:

Table 8

Earned doctorate and first occupation after degree

Participant (Pseudonym)	Highest Degree	Discipline/ Professional practice	First occupation after doctorate
Allen	Ph.D.	Science Education	High School Science Teacher
Bea	Ph.D.	Educational Psychology	University staff/faculty
Carl	Ph.D.	Educational Admin.	College Administrator/ President
Dana	J.D.	Law/Library Science	Library Para-professional
Ellen	Ph.D.	Neuroscience	Post-doctoral Research
Frank	Ph.D.	Accounting	Faculty
Gregory	Ph.D.	Chemical and Biological Engineering	Industrial Internship
Hope	Ph.D.	Educational Technology	Faculty
Isaac	Ph.D.	Strategic Planning	Faculty

Against the odds these first-generation college students succeeded in attaining advanced

degrees and gained the opportunity to join the academy. The accomplishment is all the

more remarkable when one considers that none of these individuals received any

extraordinary financial assistance in undergraduate or graduate school. There was

virtually no family assistance and only a few scholarships among the nine. The common

element seems to be work. Allen received a small scholarship due to his father's death

and a little rehabilitation money, but worked his way through college and graduate

school. Bea worked a 40 hour a week job through college and her doctoral program; her break seems to be the HEW Fellowship, but that was still work. Carl brought his veteran's benefits, but still worked his way through. Dana parlayed a work study job in the library into a tenure track faculty position. Ellen discovered her passion for research and used it to push through the Ph.D., without using the Masters degree as a stepping stone. Frank got the tennis scholarship, but he still worked. Hope used her scholarship to get both a bachelor degree and a masters degree in four years. This allowed her to work as a teacher and tutor by the time she was 20. Finally Isaac, the farm boy from Kansas, used his work capacity to carve out a place for himself as a resident assistant. Gregory is the unknown in this area since he did not share how he paid for his education. The other important element for many of these students was a supportive spouse who worked and encouraged them in the pursuit of higher degrees.

Research Question 3: How does institutional selection affect high-achieving, first-generation college students' degree attainment?

The institutional selection patterns for the high-achieving, first-generation college students who were interviewed as a part of this study are unique when compared to both first-generation college students and non-first-generation college students. Table 9 below reports the institutional selection pattern of the interview participants in this study. The percentages reported in Table 1 are provided for comparative purposes. They were first reported by the U.S. Department of Education, National Center for Educational Statistics, 1989-90 Beginning Postsecondary Students Longitudinal Study [BPS:90/94], Second Follow-up BPS:90/94, Data Analysis System conducted in 1998 (Nuñez et al., 1998). The table reports the percentages for Non-first-generation college students (Non-fgc), first-generation college students (Fgc), and interview participants who are high-achieving,

first-generation college students (HiA fgc) yielding institutional enrollmentpatterns for the three groups as follows:

Table 9

Institutional selection pattern of the interview participants (9 total)

Category/ Year	Public 4-yr.	Private 4-yr.	Public 2-yr.	Private, For-profit	Other less-Than-4-yr.
Non-fgc	36%	19%	37%	05.5%	2.5%
Fgc	20%	8%	51%	15.5%	5.5%
HiA fgc	44.5% (4)	33.3% (3)	22.2% (2)	0%	0%

The institutions in which the participants first enrolled reveal a wide pattern. It should be noted that none of the high-achievers started their postsecondary education in either Private For-profit schools or other less-than-4-year institutions. The literature review indicated that 51% of first-generation college students begin their college careers in public 2-year institutions. Two of the participants interviewed started in a 2-year college. Ellen said, "My Mom helped me go to the community college, that's all we could afford." The "Survey of Earned Doctorates" reported that 10% of 2002 doctoral recipients first enrolled in a 2-year institution. The survey report definition of first-generation college students includes the children of parents who may have attended college without graduating (Hoffer et al., 2003). The individuals interviewed in this study had parents without any college enrollment experience prior to their attendance. If these high-achievers followed the pattern of other first-generation college students one would expect at least 4 participants to have selected a 2-year institution as an entry into higher education. On the other hand when compared to those who completed the doctorate in Hoffer's (2003) study, these high-achieving, first-generation college students more than

doubled the percentage expected for first-generation college students (High achievers = 22% vs. Survey of Earned Doctorates = 10%) who began their college career in a 2-year institution.

If the Faith-related institutions are included, almost half of the students were outside traditional public and private 4-year institutions. While this does not fit the expected enrollment pattern, it does reflect the difference between first-generation college students and non-first-generation college students. The majority of first-generation college students (72%) start college outside the 4-year college (public or private) and the majority of non-first-generation colleges students (55%) start at a 4-year institution (Nuñez et al., 1998; Striplin, 1999).

This group of first-generation college students show a pattern of enrollment where only two out of nine students enrolled in institutions that are less than 4-years. Given the finding that community colleges have a low transfer rate to a 4-year college and may become a barrier to the baccalaureate, the interview participants were the exception to the expected pattern that the majority of first-generation college students enroll in 2-year institutions (Cohen, 2003). These first-generation college students not only enrolled in 4-year colleges (against the norm for first-generation college students), they persisted, earned degrees, and became high-achievers (Nuñez et al., 1998).

One aspect of institutional selection that should be considered is that economics and personal considerations seemed to determine the choices of four participants. Carl and Isaac chose Faith-based institutions because of religious convictions. Carl had a positive experience while Isaac transferred to a public university after one semester. Two students, Bea and Ellen, began in the community college for convenience and economics.

Again, the experience of each is far removed from the other. Ellen found a teacher who facilitated her transfer to a women's college in which Ellen excelled. Bea, an African American, began her community college studies during the early days of integration. She found resistance and outright discrimination that eventually caused her to stop-out of college. She later transferred to a historically Black institution. The remaining five participants all enrolled in a 4-year institution. Frank received an athletic scholarship to enroll at a regional university. The remaining four enrolled in a university. Dana, Gregory, and Hope received scholarships based on their academic performance in high school. Allen, who admitted he was unprepared for college academics was awarded assistance to attend the university due to his circumstances after the death of his father and because of a knee injury. The selection of 4-year institutions appears to have a positive influence on persistence and attainment for these high-achieving, first-generation college students.

Research Question 4: Are there educational influences for high-achieving, first-generation college students that they perceive as having contributed toward their educational success?

The analysis of the interviews revealed 30 coding categories that flowed from the stories of the high-achieving, first-generation college students who participated. There were codes that represented academic, economic, personal, and social aspects relating to the life circumstances of the participants. The eleven negative factors were present in the accounts given by the participants. The negative factors reported ranged from four to nine out of the eleven that emerged from the data. The positive characteristics that rose from the narratives of the participants were present with a minimum of nine to a maximum of 14 for one participant. Table 10, with negative (N) and neutral (X) categories is followed

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by Table 11, which summarizes positive (P) categories for the participants. The presence of this category is marked under the first letter of the participant's pseudonym as follows:

Table 10

Negative and neutral coding categories

Coding Categories	*Interview participants first initial*									Coding Count
	A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	
Changes unappreciated					N					1
Educational attainment	X	X	X	X	X	X	X	X	X	9
Father's education	N	N	N	N	N	N	N	N	N	9
Going to college	X	X	X	X	X	X	X	X	X	9
Institution selected	X	X	X	X	X	X	X	X	X	9
Low academic preparation	N							N	N	3
Low personal income	N	N	N	N		N	N	N	N	8
Lower parental income	N	N	N	N	N	N	N	N	N	9
Lower persistence	N	N								2
Mother's education	N	N	N	N	N	N	N	N	N	9
Negatives circumstances	N	N		N		N	N	N		6
Separation from culture of origin		N		N			N		N	4
Without Strategy	N	N					N	N	N	5
Work and Family Commitments		N		N				N		3
Negative Count (11)	8	9	4	7	4	5	7	8	7	6.5
Neutral Count (3)	3	3	3	3	3	3	3	3	3	3

Table 11

Positive coding categories

Coding Categories	Interview participants first initial									Coding Count
	A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*Count*
Academic success			P	P	P	P	P	P		6
College expectation	P	P	P		P	P			P	6
Culture of possibility		P		P				P		3
Eager to advance	P	P	P	P		P	P	P	P	8
Emotional support	P	P	P			P	P		P	6
In-class experiences	P	P			P	P		P		5
Models of hard work		P	P			P	P	P	P	5
Navigator/number named (CORE)	P/1	P/3	P/4	P/1	P/1	P/3	P/2	P/3	P/2	9/20
Passion	P				P			P	P	5
Persistence			P	P	P	P	P	P		6
Resources to realize the goal of Higher Education	P			P		P	P	P		5
Risk Taker	P	P	P	P	P	P	P	P	P	9
Seeker (CORE)	P	P	P	P	P	P	P	P	P	9
Sense of belonging				P	P	P		P	P	5
Student/Faculty Interaction	P	P			P	P	P	P	P	7
Value education		P	P	P			P	P	P	6
Positive Count (16)	10	11	9	10	9	13	11	14	11	10.8

The in vivo code "Seeker" represents the interest in attaining motivated by an internal drive that produced the strong desire to go to college for these first-generation college students (Seekers). These first-generation seekers were also able to find persons to act in roles from facilitator to mentor. Hope provided a name that described the full range of assistance from these individuals when she gave the advice, "Find a navigator." The Navigator is a mentor who assists the seeker in development and/or achievement. He or she assists the student as a teacher, role model, sponsor, and navigator to facilitate development or empowerment (Lauland, 1998; Little, 1990; Stanley et al., 1992). While the Seeker category is described by the participants as an internal quality, the corresponding Navigators are observable through the stories. Even when there is no label attached, the function of a Navigator is evident.

Through the analysis of the narratives there were no less than 20 navigators that could be identified as moving the Seekers forward through the maze of higher education and into the professoriate. Allen referred to his major professor as his mentor. Bea had female role models who were her examples in the African-American community and her inspiration in her undergraduate studies, "I just picked classes for Elementary Education. I knew I could get a job; that is what I had seen." Carl had a positive experience with the authority figures in his life. Dana got her university position through her supervisor. Ellen found her navigator in the person of a community college instructor, who connected her to a women's college. Frank started with a high school counselor who made him her personal success project and seemed to gain guides from the faculty through the completion of his Ph.D. Gregory found his navigators among the international students who were ahead of him in graduate school and helped him succeed. Hope is perhaps the

most winsome of all with help from her teachers, a high school counselor who showed Hope her potential, and a wonderful faculty at Pacific University that enabled her to get a Masters by the time she was 21. Isaac had a spiritual role model who taught him how to study and an old college buddy who guided him into graduate school. The skill of gaining these Navigators may be as important as the internal drive of the Seeker or it may be the by-product of being a Seeker in higher education.

The related characteristics to being a Seeker are found within the construct Attainment qualities. The codes identified as composing Attainment qualities are: Eager to advance, Passion, Persistence, Risk Taker, and Value education. The richest source for this information was the "Reflections of high-achieving, first-generation college students" section of the interview protocol (Appendix B). The presence of these qualities may in part be what attracted the Navigators to these first-generation college students and what drove them to be high-achievers. Each of the interview participants possessed at least three of the five categories that make up this construct of Attainment qualities. Hope, the most contagious interviewee, demonstrated all five codes in her narrative. She also reported three navigators during her educational journey.

The code of Educational attainment is used to record the degrees earned by the participants. Since an earned doctorate was required to qualify for an interview there is a sense in which the category is both an entry requirement as well as an achievement measure for education. However, the presence of the Seeker characteristics appears to be a starter characteristic for these high-achieving, first-generation college students. The Attainment qualities provide the coping skills that enable these students to push through the obstacles inherent to access, persistence, and degree attainment. The Navigators

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appear to facilitate the success of these high-achieving, first-generation college students as a voluntary or an above and beyond the call of duty job task. The combination of being a Seeker who possesses at least three of the five Attainment qualities does appear to influence the educational success of these interview participants, and their navigators stand in the gap when needed to help these first-generation college students achieve advanced degrees.

The path to the professoriate by the interview participants is represented by figure 1. It starts with the parental influence combined with pre-college experiences and leads to the institution selected. After enrolling in the institution the various persistence factors (positive or negative) begin to interact with the Seeker (first-generation college student) and in many cases Navigators assist these students at points along the way. While navigators appear intermittently through the stories of these Seekers, all possess Attainment qualities that drive them toward educational attainment. These doctorate recipients then work through their various opportunities and career choices to move into the professoriate.

Research Question 5: What paths did first-generation college students follow or take into the professoriate?

The high-achieving, first-generation college students all earned doctorates in various disciplines. While five of the nine went directly from the degree into the academy, it does appear to be a combination of opportunity and choice by the high-achievers. In order to present the career path to the professoriate for these high-achievers in context, the cumulative information from Table 4 is incorporated to provide a comparison to the employment pattern of the interview participants from Table 8 that shows the earned docorate and first occupation after degree. The majority of the high-

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achieving, first-generation college students move into the professoriate as their first job

after graduation. There is not a complete spread of the available job categories due to the

fact that none of the participants went to work for the government. Allen was employed

as a high school science teacher after earning the Ph.D. Ellen went on to do post-doctoral

research before moving on to the faculty and Gregory did an industrial internship to

strengthen his resume before seeking a position in the professoriate. Both Ellen and

Gregory cited the freedom to do research as a positive factor in the choice to become a

university professor. The appeal to do research in combination with academic freedom

does appear to be an important factor in the choice to seek a faculty position. Table 12

follows:

Table 12

Employment commitments of doctorate recipients in 2002 and interview participants

Employment	2002 reported		Interview participants	
Category	%	Numbers	%	Numbers
Academy	52.4	8,439	66.67	6
Industry/self-employed	24.2	3,898	22.22	2
Government	7.4	1,192	0.0	0
Other [*]	16	2,577	11.11	1
Commitment Totals	100%	16,106	100%	9

[*] Includes elementary and secondary school employment

The number of interview participants is not large enough to use as a benchmark for the

employment patterns of high-achieving, first-generation college students, but it is note-

worthy that the top three categories of employment are filled by the participants. Only the

Government category is not represented. The majority of the participants went into the professoriate (6), followed by Industry/self-employment (2), and the smallest category being occupied by the single high school teacher (1).

All of the nine participants did make their way into the professoriate through various opportunities and choices. Allen said, "The journey to become a professor took five years." There does appear to be a particular path for each individual in the study. Bea was hired by the university following her masters and similarly Carl was in place at the college prior to becoming involved in pursuing the doctorate.

Dana appears to have been in the right place at the right time; she was working in the Library following her graduation from Law School, and concerned about what she perceived as a bad job market for attorneys. She explained,

> One of the supervisors told me that another position would be coming open soon and that I would have a real good chance of getting it. They offered me a temporary position while I was waiting. It took about nine months. This is a tenure track position so my 40 hours is considered my teaching, then I must publish and do service on library or university committees. The percentages are 70% work, 20% publication, and 10% service (refer back to page 104 for the context of this statement).

Dana had been desperate to get out of her small rural community and returned to graduate school soon after getting the job to earn a library degree. She said earlier, "I came to the university . . . for my undergraduate degree and stayed." The sense of belonging that Dana exhibits may be the key to her position within academy; not only did she stay after her bachelors, she does not want to leave.

Ellen, like Dana, presents a comfort with the environment as if she was always meant to be a university professor:

I got the Ph.D. in Neuroscience from the Florida University, and then I went on and did two post-doc studies. In my mind the choice was either academia or industry – there was much more freedom in academia, so that was the way I went. At that point in my life, I could not conceive of any other route. If research is part of you, you have found your niche.

Once she discovered that there was an intersection between her research talent and the freedom to pursue it in the university, Ellen is convinced that she has found her niche in academia. Gregory shows a parallel interest when he says, "I enjoyed the university freedom in research and wanted to continue there."

With hindsight it appears that Frank was heading for the professoriate from the first day he enrolled as an undergraduate, he tells it a little differently:

I went straight through school and then took a position. I like research and this gives me that opportunity. I think when I was about halfway through my master's degree is when I made the decision to become a professor. I looked at the salary and it would support a family. The lifestyle is conducive to a good family environment. Once I got the Ph.D. I was overqualified for the practice of accounting. People who get to this point just continue on into the faculty.

It is interesting that while many of the other participants communicate that earning the doctorate was followed by the career choices of these individuals, in Frank's recounting the degree had just the opposite effect. He considered the Ph.D. as making the professoriate a foregone conclusion.

Hope, the working Mom, returned to a doctoral program twenty years after she quit her first doctoral program to take care of four children. She held a masters degree and worked as an adjunct instructor for a regional university. Hope said, "I wanted to be a professor for a long time. I never lost the dream." She parlayed an adjunct teaching job into a full time position and discovered a passion for curriculum design. Hope's dream was to be a professor, but the trouble was she could not find the right program. Then she had a clarifying moment, "I had an epiphany during orientation of new professors at my university. One of the new professors came up after my session and asked, 'Do you have a Ph.D. in Instructional Design?' I had fallen in love and now I knew the name." Shortly after that she packed up her family and went to the University of Iowa seeking a Ph.D. Isaac had the same desire to be a professor, "The decision to be a university professor was made at the same time I decided to pursue a masters degree." It had started on his front porch where he and his wife, secure in their construction business, would sit in the evening and talk about what they wanted to do in the future.

The path to the professoriate is a result of the motivation to achieve or belong by some of the participants. In others cases it is the opportunity that follows the degree and for many it is a passion that drives them to seek a place in the academy. In each case the interview participants viewed the professoriate as the right choice for them. Reflecting on his five year journey to the professoriate Allen said, "It was just the logical next step." The feeling projected by these high-achieving, first-generation college students project is, I am where I ought to be.

In retrospect, King (1998) captured the essence of the path to the professoriate by high-achieving, first-generation college students through this quotation from *The Teachings of Don Juan* (p. 105):

> Anything is one of a million paths [un camino entre cantidades de caminos].
> Therefore, you must always keep in mind that a path is only a path. If you feel
> you should not follow it you must not stay with it under any conditions…Look
> at every path closely and deliberately. Try it as many times as you think
> necessary. Then ask yourself and yourself alone one question…Does this path
> have a heart? If it does, the path is good; if it doesn't, it is of no use. Both paths
> lead nowhere; but one has a heart and the other doesn't (Casteneda, 1968; King,
> 1996).

The individuals who shared in this study entered the professoriate through achievement of advanced degrees, seizing opportunities within the academy, and finding a place to do what they love. All expressed that they have found a sense of belonging within the professoriate and that in some sense it is what they were born to do or to repeat Ellen, "you have found your niche." The path to the professoriate appears to be a matter of the heart.

Conclusions

This research study has been conducted during the bi-centennial of the Lewis and Clark Expedition into the Louisiana Territory. The journal of 1804 records,

> 4th of Novr. a french man by name Chabonah, who speaks the Big Belley
> language visit us, he wished to hire & informed us his 2 Squars were Snake

Indians, we engau him to go with us and take one of his wives to interpret the

Snake language . . .(Lewis, Clark, & Corp of Discovery, 2006a).

In his May 16, 1805 journal entry Lewis wrote, "The Indian woman to whom I ascribe

equal fortitude and resolution, with any person on board . . . caught and preserved most of

the light articles which were washed overboard (Lewis & Clark, 2003).

The Lewis and Clark expedition is one of the great stories of American history.

Everyone knows the two captains who explored the Missouri River to its head waters.

The better informed know that the woman on the dollar coin with a child wrapped on her

back is the Snake woman who helped the Corp of Discovery navigate the Missouri

Valley and negotiate passage with the natives of the territory (Lewis et al., 2003). In his

May 20, 1805 entry a few days later, Lewis names a tributary in the woman's honor, "...

this stream we called Sah-ca-ga-we-a or bird woman's River, after our interpreter the

Snake woman (Lewis, Clark, & Corp of Discovery, 2006b)."

Lewis mistook the husband in his first account as the person he needed to hire in

order to help the corp succeed. He only recorded Sacagawea by name after discovering

her value to the expedition. Like Sacagawea, the first-generation college student may not

know a Navigator when he or she sees one, but high-achieving, first-generation college

students appear to be able to utilize the capacities of the advisers, counselors, instructors,

mentors, role models, and professors who navigate them to success in higher education.

In the beginning the working title for this study was the "Path to the

Professoriate." The researcher should confess that there was an assumption that the move

into the professoriate would be some momentous event in the life of these high-

achieving, first-generation college students. In retrospect, the event is not the job at the

end, but there are numerous events through the life of the student that moved the participants toward the professoriate. The reality that emerged from the data is that the significance is in the path. There are difficulties in access, persistence, and attainment that must be overcome along the way for every student. The journey of these high-achieving, first-generation college students yielded two core categories: the Seeker and the Navigator.

The high-achieving, first-generation college student is the first person out of her or his family to go to college. This means that they leave the family they know and try to seek a place within the higher education community (Nuñez et al., 1998). This internal drive causes one to push out from the known to attain a place in an unexplored territory. This seeker quality may be the reason for many successes by high-achieving, first-generation college students, but not all. The second category that fills the gaps in the theory and provides the necessary logic is the presence of Navigators along the Seekers path through the education process. These Seekers overcame many obstacles on their own abilities, diligence, and passion for the task. However, each of the participants reported at least one person, who served as a guide to navigate the first-generation college student from the outside to the inside, or open the path of opportunity. The Navigator is a mentor who assists the seeker in development and/or achievement. He or she assists the student as a teacher, role model, sponsor, adviser, and navigator to facilitate development or empowerment (Lauland, 1998; Little, 1990; Stanley et al., 1992).

The interaction of the coding categories that emerged during the constant comparison of the interview narratives provided an explanation of the phenomenon. The

Parental influences and pre-college experiences contribute to the institutional selection of the high-achieving, first-generation college students (Seekers). Seeker is a core category that emerged in the axial coding process and explains the relationships of the codes in pre-college, access, persistence, and attainment. Navigators were chosen as a second core category because of the reoccurrence of their presence in the story told by each Seeker. These dual coding categories further explained the interaction of the constructed categories represented by Persistence factors, Attainment qualities, Educational attainment, and Career choice.

The purpose of this study is to explain the success of high-achieving, first-generation college students in higher education. The general areas of study focus on: parental educational attainment, personal educational attainment, institutional selection, educational influences, and paths into the professoriate. The theory emerged from the interviews conducted with high-achieving, first-generation college students.

The core category that emerged in the analysis was that high-achieving, first-generation college students possess an internal drive or seeker characteristic that moves them beyond their known circumstances to pursue success in higher education. This initiates the access and a level of persistence that is not found among other first-generation college students. Persistence and advanced degree achievement are further enhanced by the presence of attainment qualities such as eagerness to advance, passion, endurance or persistence, risk taking, and value for education. The second core category is the ability of these high-achieving, first-generation college students to gain Navigators who develop, help, guide, and in some cases mentor these higher education seekers to

success. The range of assistance by these Navigators has as much variety as the term mentor has meanings in the English language.

Recommendations for Future Study

The findings of this study are not exhaustive in the area of high-achieving, first-generation college students. It is acknowledged that further study in this area would advance the understanding of this phenomenon. The interview sample is limited to the professoriate and generalization to the greater first-generation college student population should not be presumed. There are some findings that may be determined to be restricted to high-achieving academics. The opinion of the researcher is that these persons are remarkable in their capacity to persevere, analyze situations, and solve problems. These unique qualities limit the circle of individuals who can be a part of the journey these high-achieving, first-generation college students have taken. Further study should be undertaken in the following:

1. There should be further investigation of strategies to increase access for first-generation college students to higher education.

2. Are there factors that affect persistence of first-generation college students through institutions and interventions that can boost retention of this population?

3. The relationship of institutional selection, transfer patterns, and degree attainment for first-generation college students, who have lower persistence in higher education.

4. How does the institutional culture of the college affect access, persistence, and attainment?

5. Research on the presence of the attainment qualities within other first-generation college student sub-groups and how they are evidenced.

6. The phenomenon of navigators, who develop and empower students, should be investigated using other sub-groups inside and outside the first-generation college student population.

7. How does college going by siblings affect first-generation college students?

8. Do other successful students or persons exhibit the internal drive (seeker category) discovered among the participants of this study?

9. The constant comparative methodology should be expanded to a larger and more diverse population of high-achievers to further test the validity of the theory that emerged from this study.

10. A larger population within the professoriate could be included to determine the reliability of the findings.

The conclusion of these recommendations is not evidence of a lack of possibilities, but only a lack of imagination on the part of the researcher. This investigator defers to those seekers, who will follow, and their navigators, who will guide them through transitions, investigations, and achievements.

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Appendix A

Introductory Email

From: Timothy Eaton
Date: Upon Approval
To: OU-NC Faculty
Subject: Research on the American professoriate

Dear Colleague:

      I am investigating higher education success in the American university professoriate. This survey is an integral part of my doctoral dissertation work in the area of Adult and Higher Education. The study will help in understanding the paths taken by individuals who enter the university professoriate, especially in the area of educational attainment.

      In addition, individuals who complete question 20 will be eligible in the drawing for free airfare and hotel costs for two to Orlando, Florida or an equivalently priced location of your choice. The trip will be arranged through M.R. Enterprise Travel of OKC (405-946-1616). There will be some restrictions that apply.

      Your participation in this project is strictly voluntary. Refusal to participate will involve no penalty. You may withdraw at any time or omit any question you do not wish to answer. In order to participate you will need to access the online version of this survey at http://www.hc.edu/survey and your response will be considered as consent.

The University of Oklahoma, Norman Campus
Consent to Participate in a Research Project

Path to the Professoriate

I would like to investigate higher education success in the American university professoriate. This survey is an integral part of my doctoral dissertation work in the area of Adult and Higher Education. The study will help in understanding the paths taken by individuals who enter the university professoriate, especially in the area of educational attainment.

In addition, individuals who complete question 20 will be eligible in the drawing for free airfare and hotel costs for two to Orlando, Florida or an equivalently priced location of your choice. The trip will be arranged through M.R. Enterprise Travel of OKC (405-946-1616). There will be some restrictions that apply.

If you decide to participate in this project, you will be asked to participate in up to twenty (20) survey questions. In addition, each participant will be asked to respond by providing contact information (phone or email and an interview name). This information will allow you to be contacted for a possible interview at your convenience and to participate in a drawing for a prize that will be awarded after the 15-20 individual interviews have been completed.

I see no foreseeable risks of participation in this project for you. Your participation could help educators in the future. You may assist in helping future first-generation college students gain educational success.

Your participation in this project is strictly voluntary. Refusal to participate will involve no penalty. You may withdraw at any time or omit any question you do not wish to answer. All information for this project will be kept in a locked file cabinet by the principal investigator, and will remain confidential within the limits of the law. You will not be harassed and your information will not be sold or released to any third party or selling list.

If you have any questions about this project, please contact me at (405) 912-9456.

Timothy W. Eaton
Doctoral Student, Adult and Higher Education

Consent Statement
I agree to take part in this research project. I understand that I am free to stop at any time. I give my permission to Timothy Eaton to print and use my responses to the survey questions in his dissertation research (see online option below).

_____   _____
Signature of Participant   Date

_____   _____
Printed Name of Participant   Investigator Signature

Online Option: If you prefer your may complete an online version of this survey at www.hc.edu/~survey and your response will be considered as consent.

Paper Option: If you prefer to complete a paper copy of this survey print the PDF version and return it to: Hillsdale College, Executive Office - Research, P.O. Box 7208, Moore, OK, 73153 or FAX to 405-912-9050.

Path to the Professoriate

Faculty Questionnaire: Thank you for responding. All answers are voluntary and you may skip a question or stop at any point in this survey. If you prefer this questionnaire can be completed online at www.hc.edu/~survey or you may mark and write-in your answers on this form.

1. What is your highest degree earned? _____

2. In what institution did you earn your highest degree?

    _____

3. In what type of institution did you begin your collegiate career?

    A.   Public comprehensive university (doctorate granting)
    B.   Private comprehensive university (doctorate granting)
    C.   Public 4-year college or regional university
    D.   Private 4-year college or regional university
    E.   2-year community or junior college

4. When you began college what level of higher education had your mother attained?

    A.   Did not attend college
    B.   Attended college without completing a bachelor degree
    C.   Completed a bachelor degree
    D.   Attended graduate or professional school
    E.   Completed a master's degree (e.g., M.A. or M.S.)
    F.   Completed a professional degree (e.g., M.D., J.D., M.Div., etc.)
    G.   Completed a doctors degree (e.g., Ph.D., Ed.D., D.M.A., etc.)

5. When you began college what level of higher education had your father attained?

    A.   Did not attend college
    B.   Attended college without completing a bachelor degree
    C.   Completed a bachelor degree
    D.   Attended graduate or professional school
    E.   Completed a master's degree (e.g., M.A. or M.S.)
    F.   Completed a professional degree (e.g., M.D., J.D., M.Div., etc.)
    G.   Completed a doctors degree (e.g., Ph.D., Ed.D., D.M.A., etc.)

6. In what type of institution did you earn your first baccalaureate degree?

    A.   Public comprehensive university (doctorate granting)
    B.   Private comprehensive university (doctorate granting)
    C.   Public 4-year college or regional university
    D.   Private 4-year college or regional university

7. Did you receive a baccalaureate degree from your first institution?   Yes or No

8. How many institutions did you attend en route to your first baccalaureate degree? _____

9. Did you earn an associates degree or other sub-baccalaureate degree? Yes or No

10. How many hours of work (outside your studies) did you average each week during your undergraduate studies? _____

11. Did you transfer in order to attain your first baccalaureate degree? Yes or No

12. What was your major area of study in your first baccalaureate degree?

   _____

13. How many hours of work (outside your studies) did you average each week during your graduate studies? _____

14. How many years elapsed between earning your baccalaureate degree and earning your highest degree? _____

15. Who was the person in your family with the most influence on your graduate educational attainment? (designate the individual using their family relationship to you)

   A.   Father
   B.   Mother
   C.   Spouse
   D.   Grandmother
   E.   Grandfather
   F.   Sibling
   G.   Other _____

16. Who was the person outside your family with the most influence on your graduate educational attainment? (designate the individual's relationship to you)

   A.   Friend
   B.   High School Teacher
   C.   College (undergraduate) Instructor
   D.   Graduate School Instructor
   E.   Other: _____

17. Prior to becoming a part of a university faculty list your principle occupation?

   A.   Student
   B.   Other: _____

18. Gender? _____ Female _____ Male

19. In what year were you born? 19_____

20. If you would be willing to provide further information or wish to be included in the free trip drawing for free airfare and hotel costs for two to Orlando, Florida or an equivalently priced location of your choice.

   Your responses to this survey will not be linked to your name and will only be reported as aggregate data. By providing the following information you may be contacted by the investigator for a possible interview, but there is no requirement for any continued participation.

   Name:_____

   Phone: (_____)_____ or Email:_____

First-generation College Students
Interview Protocols

The interview protocol for the interviews is gathered from the literature review with particular focus on high achieving first-generation college students. Additional questions will be used within the interviews to gain understanding of each participants story and significant questions will be added to subsequent interviews.

Demographic/background information
1. Birth year?
2. Where were you born?
3. Describe your family when you were a child?
4. What was your father's educational attainment level when you began college?
5. What was your mother's educational attainment level when you began college?
6. What were your sibling's educational attainment levels when you began college?

People of Influence
1. Who was the person or persons outside of your family who influenced you the most in your educational attainment? (Undergraduate and Graduate)
2. Who was the person or persons inside of your family who influenced you the most in your educational attainment? (Undergraduate and Graduate)

Community characteristics
1. Describe your community and its impact on you growing up.
2. What influence did your community have in your educational attainment?

School/College characteristics
1. Describe your school experience prior to college and how you believe it led you to the decision to go to college?
2. Where did you go to College?
3. What were your obstacles in college?
4. How did you overcome and persist in college and graduate school?
5. Describe your degrees and why you chose to pursue each?

Path to the Professoriate
1. Describe your journey into the professoriate.
2. When and how did you make the decision to be a university professor?

Reflections of high achieving first-generation college students
1. Why do you think you were successful in high educational attainment, when so many first-generation college students are not?
2. Share your best advice for first-generation college students?

Appendix C

Self-administered Questionnaire Methodology

In order to identify first-generation college students among the faculty an E-mail survey will be conducted. The E-mail will link participants to a website with the introductory letter/consent form and self-administered questionnaire. Individual participants can choose to complete the survey online or print out a PDF version that can be mailed or Faxed to the researcher (see Appendix A).

Self-administered Questionnaire

Introduction

The basic need in the research process is to identify first-generation college students among the university faculty, who can yield information about the factors in their success in educationalacces s, persistence, and attainment. The individual's choice of faculty employment is important to this study because it provides accessible subjects who have earned a doctorate in their teaching field.

Design

The survey instrument will be a self-administered questionnaire (SAQs) designed following the procedures outlined in *Mail and internet surveys: The tailored design method* (Dillman, 2000). The invitation to participate with a hyperlink to the questionnaire website will be distributed to the individual faculty by their campus E-mail. The faculty from the departmental listings will receive an initial E-mail and non-responders will be sent at least two reminders. The most powerful determinant of response rates is the number of attempts to contact the sample subjects. The literature on surveys reports that at least three contacts will gain a response rate of over 50%. "While

the technology for E-mail is vastly different from established mail surveying methods, the communication itself is similar to SAQs delivered by postal mail" (Schaifer & Dillman, 1998).

The advantages of the survey is that information can be gathered without undo influence from the researcher, it is completed at the subjects convenience, and the standardized wording of the questions provide higher reliability than data generated by interviews. The main disadvantages are its inflexibility, lack of opportunity to observe respondents, and the rate of return (Yount, 1999). The response rate is typically low for mail questionnaires, but an internet option can strengthen the response level (Ary, Jacobs, & Razavieh, 2002).

Sample

In order to identify participants for interview an E-mail self-administered questionnaire will be sent to the faculty of the University of Oklahoma. These E-mail addresses are available in the Telephone Directory of the University of Oklahoma Norman Campus (2003b). This is a purposive sample defined as: "A nonprobability sampling technique in which subjects judged to be representative of the population are included in the sample" (Ary et al., 2002). The University of Oklahoma website reports 1,202 full-time and 233 part-time faculty (2004a) While the vast majority of university faculty are not first-generation college students a survey focused on the educational attainment of faculty and that of their parents will help to identify first-generation college students from among the faculty. The researcher will select first-generation college students from among the respondents and arrange interviews by E-mail or phone. The

researcher anticipates that a sufficient sample of faculty can be identified from this larger population of faculty.

Timeline

The entire research proposal will need to be approved by the institutional research department of the University of Oklahoma. An E-mail will be sent to the faculty via the internet. The E-mail sequence will be as follows:

1. An E-mail announcement that includes the web link will be distributed to faculty in the departmental listings for the University of Oklahoma Norman Campus.

2. Approximately two weeks later an E-mail reminder with an embedded hyperlink will be sent via E-mail.

3. Approximately two weeks later an E-mail reminder with an embedded hyperlink will be sent via E-mail.

Those who choose to participate after receiving the E-mail can access the internet link and either complete the survey online or print out a PDF version which can be returned by FAX or U.S. Mail.

Variables

The variables examined will bring focus to the areas of: parental educational attainment, personal educational attainment, institutional selection, educational influences, selected demographic characteristics, and paths into the professoriate. A response to the last question will allow the researcher to contact first-generation college students among the faculty for possible interview appointments.

The self-administered questionnaire (SAQs) is designed to place the questions of greatest interest to the researcher near the front of the instrument (Dillman, 2000).

Question 1: "What is your highest degree earned?" The response is open ended allowing the participant to complete the highest degree earned without the necessity of reading a long list of options. The variable will be measured as an ordinal variable categorized in ascending order from masters to first-professional to the doctoral degree. The degrees reported by faculty will be described using frequencies and other appropriate statistics. The variable will relate to the personal educational attainment of the faculty member and is the outcome (dependent) variable for the study. The variable name 'top degree' and its scale will be measured as follows:

Faculty member with a doctorate (terminal degree) = 3

Faculty member with a First-professional degree = 2

Faculty member with a masters degree = 1

Question 2: "In what institution did you earn your highest degree?" The response is open to allow the faculty member to provide the name. The variable will be matched to the Carnegie institutional listings and transformed into ordinal categories to be analyzed in relation to institutional selection and called 'top place.' The rank order for this variable, as well as others using institutional rankings, are applied from top to bottom as follows:

Doctoral/Research Universities, Extensive = 5

Doctoral/Research Universities, Intensive = 4

Private 4-year college or regional university = 3

Public 4-year college or regional university = 2

Question 3: "In what type of institution did you begin your collegiate career?" The variable 'first college' will be measured as an ordinal category to be analyzed in

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relation to institutional selection. The rank order for this ordinal variable will be as follows:

Private Comprehensive University = 5

Public Comprehensive University = 4

Private 4-year college or regional university = 3

Public 4-year college or regional university = 2

2-year community or junior college = 1

Question 4: "When you began college what level of higher education had your mother attained?" The variable 'mom ed' will be measured as an ordinal category to be analyzed in relation to parental educational attainment. The rank order for this variable will be is as follows:

Completed a doctors degree (e.g., Ph.D., Ed.D., D.M.A., etc.) = 7

Completed a professional degree (e.g., M.D., J.D., M.Div., etc.) = 6

Completed a master's degree (e.g., M.A. or M.S.) = 5

Attended graduate or professional school = 4

Completed a bachelor degree = 3

Attended college without completing a bachelor degree = 2

Did not attend college = 1

Question 5: "When you began college what level of higher education had your father attained?" The variable 'dad ed' will be measured as an ordinal category to be analyzed in relation to parental educational attainment. The rank order for this variable will be as follows:

Completed a doctors degree (e.g., Ph.D., Ed.D., D.M.A., etc.) = 7

Completed a professional degree (e.g., M.D., J.D., M.Div., etc.) = 6

Completed a master's degree (e.g., M.A. or M.S.) = 5

Attended graduate or professional school = 4

Completed a bachelor degree = 3

Attended college without completing a bachelor degree = 2

Did not attend college = 1

Question 6: "In what type of institution did you earn your first baccalaureate degree?" The variable 'bac place' will be measured as an ordinal category to be analyzed in relation to institutional selection. The rank order for this variable will be is as follows:

Private Comprehensive University = 5

Public Comprehensive University = 4

Private 4-year college or regional university = 3

Public 4-year college or regional university = 2

Question 7: "Did you receive a baccalaureate degree from your first institution?" This variable ' bac place' will be measured as a nominal variable relating to institutional selection. A response of "Yes" = 2 and "No" = 1.

Question 8: "How many institutions did you attend en route to your first baccalaureate degree?" This interval variable labeled 'number' will be measured on a scale. It will be limited by the highest response from among the respondents and will be analyzed in the area of paths into the professoriate.

Question 9: "Did you earn an associates degree or other sub-baccalaureate degree?" This variable 'assoc' will be measured as a nominal variable relating to the institutional selection. A response of "Yes" = 1 and "No" = 2.

Question 10: "How many hours of work (outside your studies) did you average each week during your undergraduate studies?" This interval variable 'col work' will be measured on a scale from 1-40 and will be analyzed in the area educational influences.

Question 11: "Did you transfer in order to attain your first baccalaureate degree?" This variable 'transfer' will be measured as a nominal variable relating to the paths into the professoriate. A response of "Yes" = 1 and "No" = 2.

Question 12: "What was your major area of study in your first baccalaureate degree?" This variable 'major' will be measured as a nominal variable relating to the paths into the professoriate. The responses will be categorized for descriptive purposes using frequencies and other appropriate statistics to represent the variable.

Question 13: "How many hours of work (outside your studies) did you average each week during your graduate studies?" This interval variable 'grad work' will be measured on a scale from 1-40 and will be analyzed in the area educational influences.

Question 14: "How many years elapsed between earning your baccalaureate degree and earning your highest degree?" This interval variable 'time' will be measured on a scale. It will only be limited by the highest response from among the respondents and will be analyzed in the area of paths into the professoriate.

Question 15: "Who was the person in your family with the most influence on your graduate educational attainment?" (designate the individual using their family relationship to you). This variable 'family' is nominal and will be included in the area of educational influences. The responses will be categorized for descriptive purposes using frequencies and other appropriate statistics to represent the variable.

Question 16: "Who was the person outside your family with the most influence on your graduate educational attainment? (designate the individual's relationship to you)." This variable 'mentors' is nominal and will be included in the area of educational influences. The responses will be categorized for descriptive purposes using frequencies and other appropriate statistics to represent the variable.

Question 17: "Prior to becoming a part of a university faculty list your principle occupation?" This variable 'job' is nominal and will be included in the area of paths into the professoriate. The responses will be categorized for descriptive purposes using frequencies and other appropriate statistics to represent the variable.

Question 18: "Gender?" This variable 'gender' is nominal and will be included in the area of selected demographic characteristics. The responses will be categorized for descriptive purposes using frequencies and other appropriate statistics to represent the variable.

Question 19: "In what year were you born?" This variable 'year' is nominal and will be included in the area of selected demographic characteristics. The responses will be categorized for descriptive purposes using frequencies and other appropriate statistics to represent the variable.

Question 20: "If you would be willing to provide further information or wish to be included in the free trip drawing, please provide the following information: Name, Phone, and/or E-mail." This variable allows some respondents to enter into phase two of the study and participate in the interview process. Also, everyone who completes this question is eligible for an opportunity to be selected through a random drawing to receive the free get away vacation for two.

Path to the Professoriate

Faculty Questionnaire: Thank you for responding. All answers are voluntary and you may skip a question or stop at any point in this survey. If you prefer this questionnaire can be completed online at www.hc.edu/~survey or you may mark and write-in your answers on this form.

1. What is your highest degree earned? _____

2. In what institution did you earn your highest degree?
   _____

3. In what type of institution did you begin your collegiate career?

   A.   Public comprehensive university (doctorate granting)
   B.   Private comprehensive university (doctorate granting)
   C.   Public 4-year college or regional university
   D.   Private 4-year college or regional university
   E.   2-year community or junior college

4. When you began college what level of higher education had your mother attained?

   A.   Did not attend college
   B.   Attended college without completing a bachelor degree
   C.   Completed a bachelor degree
   D.   Attended graduate or professional school
   E.   Completed a master's degree (e.g., M.A. or M.S.)
   F.   Completed a professional degree (e.g., M.D., J.D., M.Div., etc.)
   G.   Completed a doctors degree (e.g., Ph.D., Ed.D., D.M.A., etc.)

5. When you began college what level of higher education had your father attained?

   A.   Did not attend college
   B.   Attended college without completing a bachelor degree
   C.   Completed a bachelor degree
   D.   Attended graduate or professional school
   E.   Completed a master's degree (e.g., M.A. or M.S.)
   F.   Completed a professional degree (e.g., M.D., J.D., M.Div., etc.)
   G.   Completed a doctors degree (e.g., Ph.D., Ed.D., D.M.A., etc.)

6. In what type of institution did you earn your first baccalaureate degree?

   A.   Public comprehensive university (doctorate granting)
   B.   Private comprehensive university (doctorate granting)
   C.   Public 4-year college or regional university
   D.   Private 4-year college or regional university

7. Did you receive a baccalaureate degree from your first institution?   Yes or No

8. How many institutions did you attend en route to your first baccalaureate degree? _____

9. Did you earn an associates degree or other sub-baccalaureate degree? Yes or No

10. How many hours of work (outside your studies) did you average each week during your undergraduate studies? _____

11. Did you transfer in order to attain your first baccalaureate degree? Yes or No

12. What was your major area of study in your first baccalaureate degree?

_____

13. How many hours of work (outside your studies) did you average each week during your graduate studies? _____

14. How many years elapsed between earning your baccalaureate degree and earning your highest degree? _____

15. Who was the person in your family with the most influence on your graduate educational attainment? (designate the individual using their family relationship to you)

    A.   Father
    B.   Mother
    C.   Spouse
    D.   Grandmother
    E.   Grandfather
    F.   Sibling
    G.   Other _____

16. Who was the person outside your family with the most influence on your graduate educational attainment? (designate the individual's relationship to you)

    A.   Friend
    B.   High School Teacher
    C.   College (undergraduate) Instructor
    D.   Graduate School Instructor
    E.   Other: _____

17. Prior to becoming a part of a university faculty list your principle occupation?

    A.   Student
    B.   Other: _____

18. Gender? _____ Female _____Male

19. In what year were you born? 19____

20. If you would be willing to provide further information or wish to be included in the free trip drawing for free airfare and hotel costs for two to Orlando, Florida or its equivalent to a location of your choice, please provide the following information:

Name:_____

Phone: (____)_____ or Email:_____

Procedures

The pattern of responses for both the paper and internet versions of the questionnaire will be tabulated. While this is not the purpose of this research project the results may be provided in Appendix D and may be referred to for comparative purposes. The questionnaire responses will be tabulated by using SPSS. The open-ended answers will be complied using Microsoft Access database and converted into an appropriate form.

Analysis

Appropriate descriptive statistics and statistical procedures will be used to analyze the questionnaire responses. The institutions identified as awarding the highest degree earned by the faculty participant will be analyzed according to the Carnegie institutional categories. The appropriate procedures will be used to analyze the relationship of the variables to educational success. The analysis is available for comparative purposes in Appendix D.

Appendix D

Internet Survey Results

The internet survey was hyperlinked through an introductory email (Appendix A), that linked to a consent to participate in the investigation of higher education success in the American university professoriate, and then linked to the Faculty Questionnaire. There were a total of 97 successful completions out of 104 attempts. The summary of the information gathered follows:

1. What is your highest degree earned?

- Doctorate (terminal degree) = 76

- First-professional degree = 3

- Masters degree = 18

2. In what institution did you earn your highest degree?

- Doctoral/Research Universities, Extensive = 87

- Doctoral/Research Universities, Intensive = 8

- Private 4-year college or regional university = 1

- Public 4-year college or regional university = 1

3. In what type of institution did you earn your first baccalaureate?

- Private Comprehensive University = 12

- Public Comprehensive University = 60

- Private 4-year college or regional university = 17

- Public 4-year college or regional university = 8

4. In what type of institution did you begin your collegiate career?

- Private Comprehensive University = 10

- Public Comprehensive University = 55

- Private 4-year college or regional university = 14

- Public 4-year college or regional university = 8

- 2-year community or junior college = 10

5. When you began college what level of higher education had your mother attained?

- Completed a doctors degree (e.g., Ph.D., Ed.D., D.M.A., etc.) = 3

- Completed a professional degree (e.g., M.D., J.D., M.Div., etc.) = 0

- Completed a master's degree (e.g., M.A. or M.S.) = 13

- Attended graduate or professional school = 2

- Completed a bachelor degree = 12

- Attended college without completing a bachelor degree = 25

- Did not attend college = 41

6. When you began college what level of higher education had yourfa ther attained?

- Completed a doctors degree (e.g., Ph.D., Ed.D., D.M.A., etc.) = 8

- Completed a professional degree (e.g., M.D., J.D., M.Div., etc.) = 6

- Completed a master's degree (e.g., M.A. or M.S.) = 22

- Attended graduate or professional school = 3

- Completed a bachelor degree = 14

- Attended college without completing a bachelor degree = 11

- Did not attend college = 31

7. Did you receive a baccalaureate degree from your first institution?

- Yes = 73

- No = 24

8. How many institutions did you attend en route to your first baccalaureate degree?

- One = 67

- Two = 22

- Three = 8

9. Did you earn an associates degree or other sub-baccalaureate degree?

- Yes = 10

- No = 87

10. How many hours of work (outside your studies) did you average each week during your undergraduate studies? An average of 14.02 work hours was reported.

11. Did you transfer in order to attain your first baccalaureate degree?

- Yes = 24

- No = 73

12. What was your major area of study in your first baccalaureate degree? The number of responses is followed by the designated major(s) for that count:

11   Science

10   Education, English, and History

6   Fine Arts (Art, Drama, and Music), Math, and Political Science

5   Psychology

4   Business/accounting, Journalism, and Computer Science

3   Engineering, Humanities, and Physical Education

13. How many hours of work (outside your studies) did you average each week during your graduate studies? An average of 20.42 work hours was reported. The most common response of 20 work hours weekly was given 29 times.

14. How many years elapsed between earning your baccalaureate degree and earning your highest degree? An average of 21.94 years elapsed between earning the bachelor and terminal degree.

15. Who was the person in your family with the most influence on your graduate educational attainment? The number of responses is followed by the designated person(s) for that count:

29 Father

28 Mother

23 Spouse

6 None

2 Children, Grandparents, and Siblings

5 Other family members

16. Who was the person outside your family with the most influence on your graduate educational attainment? The number of responses is followed by the designated person(s) for that count:

32 Graduate Professor

30 Undergraduate Instructor

12 Friend

7 Boss

2 Mentor

17. Prior to becoming a part of a university faculty list your principle occupation. The number of responses and the occupation(s) for that count:

42   Student

8   High School Teacher

7   Business/Management

5   Elementary Teacher

4   Postdoctoral Researcher

3   Higher Education Administrator, Librarian, and Public School Administrator

18. Gender?

- Female = 49

- Male = 46

- Not Reported = 2

19. In what year were you born? The average age reported by the respondents was 47 years.

Appendix E

Open Coding Data Slices

Each interview is first analyzed and examined in light of the research questions from Chapter One of this study. The questions follow in sequence and are italicized with the appropriate excerpts from the narrative in regular type below the research question. The in vivo codes or data slices are marked for future reference with the first letter of the participant's assigned name, followed by the research question being addressed, and the number of the observation or code in the sequence. Each of the identifiers is separated by a period (e.g., A.1.1. for the participant-Allen, Research question number, and observation, code, or data slice one). The observations of the researcher will appear within brackets; this will allow references to the literature to be inserted using the standard parenthetical citations. The open coding for the participant narratives is as follows:

Allen Open coding

1.   *What role does parental educational attainment play in the educational success of high achieving first-generation college students?*

A.1.1. "My father and mother never went beyond high school graduation"

A.1.2. "I think that there was always the assumption of college within my family and in school" [college expectation parallels with eager to advance (London, 1992), impetus of parent, generally a mother, behind their children's striving (Gándara, 1982), and highly supportive mothers with high educational standards (Gándara, 1995)].

2.   What is the personal educational attainment of high achieving first-generation college students?

A.2.1. *"Ph.D. in Science Education from the University of Oklahoma"*

3.   How does institutional selection affect high achieving first-generation college students' degree attainment?

A.3.1. "I enrolled in the University of Oklahoma"

A.3.2. "the spark for education occurred in college"

A.3.3. "I think I was comfortable with methods of science education and the faculty" [in-class experiences (Pascarella & Others, 1995) and student-faculty interactions (Astin, 1993)]

4.   Are there educational influences for high achieving first-generation college students that they perceive as having contributed toward their educational success?

A.4.1. The negative influences:

A.4.1.1. "My Dad died at 43 years old when I was a 16 year old high school student" [crisis event may reflect the extreme circumstance of less involvement with peers and teachers (Terenzini, Nora, Pascarella, Springer, & Yeager, 1995)]

A.4.1.2. "We moved around frequently … so I never went to the same school more than two years at a time." [accumulation of negative factors (Barahona, 1990)]

A.4.1.3. "we had zero family money" [fgc have lower parental income (Barahona, 1990; Billson & Terry, 1982), lack of parental support (Núñez & Cuccaro-Alamin, 1998p), and fgc tend to have lower incomes than the general population (Terenzini, Springer, Yeager, Pascarella, & Nora, 1996)]

A.4.1.4. "I was unprepared during high school, the result being that I could only stay three semesters before I had to quit." [low academic preparation (Pascarella et al., 1995) and fgc less likely to return (Riehl, 1994)]

A.4.1.5. "The last obstacle, looking back, was my emotional state over my father's death." [crisis event]

A.4.1.6. "undetermined goals" [first-generation college students earned college degrees without a formal plan or strategy (Rodríguez S., 2001)]

A.4.2. Positive influences:

A.4.2.1. "the person who had the most influence on my educational attainment was my spouse" [emotional support of their families (Gándara, 1982)]

A.4.2.2. "I got a scholarship because of father's death and some rehabilitation assistance due to a knee injury" [these are a mixed bag, but the resulting opportunity for education is positive = resources to realize the goal of higher education (Gándara, 1995)]

A.4.2.3. "my future wife helped me learn how to study" [emotional support of their families (Gándara, 1982)]

A.4.2.4. "I learned study strategies for courses and for professors" [academic success and sense of belonging (Gándara, 1995)]

A.4.2.5. "A class in science was a turning point for me. I applied my skills to an area of interest and I succeeded dramatically" [academic success and sense of belonging (Gándara, 1995)]

A.4.2.6. "During those days I learned how to get by on nothing. When I got

married I moved up to poverty." [emotional support of their families (Gándara,

1982)]

A.4.2.7. "discovered my gifts" [academic success (Barahona, 1990; Gándara,

1995)]

A.4.2.8. "I met my mentor, who would become my major professor"

[student/faculty interaction (Astin, 1993) and mentor (Little, 1990)]

A.4.2.9. "I finished the Master of Science Education degree" [attainment and

academic success]

A.4.2.10. "I was comfortable with methods of science education and the faculty"

[student/faculty interaction (Astin, 1993)]

A.4.2.11. "encouragement of my partner … My marriage gave me support" [This

would not be the first time that a good woman helped a man advance in life.]

A.4.2.12. "There was something internal that made me feel like a seeker and

explorer" [internal drive is referenced as: seeker = interest in attaining (London,

1992), explorer = risk taker (Rodriguez, 2001), there does seem to be something

pushing Allen through his graduate studies and job advances]

A.4.2.13. "it would please my parents" [eager to advance = interest in attaining

(London, 1992) and pleasing parents]

A.4.3. Advice to first-generation college students: "success in college

A.4.3.1. is not about money and

A.4.3.2. its not about the intelligence factor [assumption, but not the rule – I am

proof]

A.4.3.3. it is a desire to complete [explorer]

A.4.3.4. it is a passion or a personal calling [risk taker]

5.   What paths did first-generation college students follow or take into the

professoriate?

A.5.1. "after the Ph.D. I changed my career goals, I began to evolve – branching out into

curriculum development, I moved into administration, and started doing workshops and

in service programs."

A.5.2. "The journey to become a professor took five years."

A.5.3. "I was offered an appointment as the science coordinator in the school district. I

was not ready to leave because I had a good job and was able to teach as an adjunct."

[Part-time position was extra income, but promotions and income were in the common

school system]

A.5.4. "Then after four years I did not receive a faculty appointment to teach part-time."

[change point]

A.5.5. "I started attending class as an observer and decided to pursue a faculty position."

A.5.6. "The offer came from an out of state institution." [first full time faculty position]

A.5.7. "I took the job and four years later I came back to the university."

A.5.8. "It was just the logical next step." [personal reflection, the right choice for me]

Bea Open Coding

1. What role does parental educational attainment play in the educational success of

   high achieving first-generation college students?

B.1.1. My father was deceased when I was very young, and had no college. [crisis]

B.1.2. Single mother and 6 girls … high school graduate.

2. What is the personal educational attainment of high achieving first-generation college students?

B.2.1. Ph.D. in Educational Psychology

3. How does institutional selection affect high achieving first-generation college students' degree attainment?

B.3.1. I started out at … community college [Over half of students enrolled at community colleges are first-generation college students (Núñez & Cuccaro-Alamin, 1998o) and 10% of Doctorate recipients start in a 2-year college (Hoffer et al., 2003)]

B.3.2. None of my older sisters had attended college before I went to community college. [low-income backgrounds and are the first in their families to even consider higher education (Rendon, Romero, & Nora, 2005; Astin, 1993) lack siblings in college (Barahona, 1990)]

4. Are there educational influences for high achieving first-generation college students that they perceive as having contributed toward their educational success?

B.4.1. The negative influences:

B.4.1.1. My father was deceased when I was very young [A.4.1.3. Allen was 16 when his father died]

B.4.1.2. Single mother and 6 girls [A.4.1.2. Allen had a single mom with 4 children]

B.4.1.3 No one would help me … I could not find the College of Education. [consider the institution to be a non-welcoming environment (Pascarella et al., 1995)]

B.4.1.4 low socioeconomic urban area [low family income hinders persistence (Núñez & Cuccaro-Alamin, 1998n) and A.4.1.3. Allen, 'zero family money' (Barahona, 1990; Billson et al., 1982; Terenzini et al., 1996)]

B.4.1.5. I was working and took five classes the first year. All five instructors said that I should not be there. It was the beginning of integration and these nice Christian people – white – said, "You need to go somewhere else, for your own good." I was unwelcome and they demonstrated it in terms of grades. [first-generation college students were more likely to perceive teachers as unconcerned, report instances of overt discrimination, or to consider the institution to be a non-welcoming environment (Pascarella et al., 1995) and separation from the culture of origin (Striplin, 1999)]

B.4.1.6. After two semesters I got discouraged and said I would never go back to school again. I was working 40 hours a week at Western Electric it was hard work and I had to study late at night. [more work commitments (Núñez & Cuccaro-Alamin, 1998m) and separation from the culture of origin (Striplin, 1999)]

B.4.1.7. The obstacles were: a 40 hour job, family, husband, and no advisement. [Full-time employment, as well as part-time employment off campus are considered to negatively influence re-enrollment (Astin, 1993; Núñez & Cuccaro-Alamin, 1998l), emotional support of family (Gándara, 1982), and no formal plan or strategy (Rodríguez S., 2001) parallels Allen's lack of goals at A.4.1.6.]

B.4.1.8. The hardest challenge to overcome was to just keep doing it. I kept making the choice to keep on going. [persistence and interest in attaining (London, 1992)]

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B.4.2. The positive influences:

B.4.2.1. English composition teacher [in-class experiences (Pascarella et al., 1995) and student-faculty interactions (Astin, 1993)]

B.4.2.2 HEW (U.S. Department of Health, Education, and Welfare) scholarship for Masters [A.4.2.2. and Resources for college (Gándara, 1982)]

B.4.2.3. I was sitting on a bench crying when the Special Assistant to the President found me [without a plan or strategy (Rodríguez S., 2001)]

B.4.2.4. My husband gave up a financial promotion and personal time, plus he was my cheerleader. [A.4.2.1. Allen's spouse and emotional support of families (Gándara, 1982)]

B.4.2.5. Grandmother kept us while Mom worked [models of hard work (Gándara, 1995)]

B.4.2.6. Role models were female [contrast literature: "they have no familial role models, mentors, or sponsors to help them along and must depend on teachers, guidance counselors, and other school personnel" (2003) and culture of possibility (Gándara, 1995)]

B.4.2.7. I said I wanted to be a child psychologist [culture of possibility (Gándara, 1995)]

B.4.2.8 I would miss words and questions just so I would not be the one out front. Some of my teachers figured it out and asked, "Why are you jeopardizing your future"? [student-faculty interactions (Astin, 1993)]

B.4.2.9. I did not mean it when I said I would never go back. I started commuting to the Historically Black College [Cultural barriers coupled with low

socioeconomic status increase the difficulty for the assimilation of racial and ethnic minorities into higher education" (Rendón, 1994), internal drive (London, 1992) and social integration (Billson et al., 1982)]

B.4.2.10 At first, I commuted with my sister and later with my husband [A.4.2.11. Allen, "encouragement of my partner" and emotional support of their families (Gándara, 1982)]

B.4.3. Advice to first-generation college students:

B.4.3.1. Education has to be valued – it's key.

B.4.3.2. Hidden determination [internal motivation A.4.3.3.]

B.4.3.3. a positive attitude to keep going [(A.4.3.4. passion and calling) a sense of his own identity and a sense of belonging within the college (Rodríguez S., 2001)]

B.4.3.4. Persistence - day to day.

5. *What paths did first-generation college students follow or take into the professoriate?*

B.5.1 I was working and enrolling continuously; I finished coursework and spent six years working on the dissertation all the time working at the University.

B.5.2. Throughout my graduate work most of the time I was teaching, mentoring, pushing and shoving students on.

B.5.3. All I felt was relief that it was done. You get to a place that you don't consider procedures you just want to get done.

B.5.4. After graduation Bea returned to her university position.

Open Coding

1. *What role does parental educational attainment play in the educational success of high achieving first-generation college students?*

C.1.1. Dad completed five years in the one-room school house

C.1.2. Mom was a high school graduate

C.1.3. Dad said a number of times, "I want my children to get more education than I was able to get." [college expectations (London, 1992)]

C.1.4. Mom had been an excellent student and loved to read [impetus of parent, generally a mother, behind their children's striving (Gándara, 1982), and highly supportive mothers with high educational standards (Gándara, 1995)].

C.1.5. he knew I had learned to work and was submissive to my parents [models of hard work (Gándara, 1995) and Carl sees submission to appropriate authority as a good character quality, submission to authority may be associated with the powerful feelings he has for his parents as role models or the military influence]

2. *What is the personal educational attainment of high achieving first-generation college students?*

C.2.1. I was the first to go [to college]

C.2.2. Ph.D. in Educational Administration

3. *How does institutional selection affect high achieving first-generation college students' degree attainment?*

C.3.1. Bob Jones University [first-generation college students make up 8% of private 4-yr. institution enrollment (Nunez & Cuccaro-Alamin, 1998)]

C.3.2. It was the school that our pastor's son was attending when he spoke to me 6 years earlier.

4. *Are there educational influences for high achieving first-generation college students that they perceive as having contributed toward their educational success?*

C.4.1. The negative influences:

C.4.1.1. No financial assistance [Lower personal income (Terenzini et al., 1996)]

C.4.2. The positive influences:

C.4.2.1. underlying reason is the model of parents that stuck with it when life got difficult. [emotional support of parents (Gándara, 1982), models of hard work (Gándara, 1995), and role models]

C.4.2.2. Dad said a number of times, "I want my children to get more education than I was able to get." [pleasing parents (London, 1992)]

C.4.2.3. Pastor's son said, ". . . you ought to consider college to prepare for your future." [role model]

C.4.2.4. Community of the Navy convinced me that I was desperately ignorant and must pursue a college education [internal drive (London, 1992) and role models and submission to authority]

C.4.2.5. I was an 8th grade student . . . teacher asked me to teach the students a course on natural science [academic success and sense of belonging (Gándara, 1995)]

C.4.2.6. I was good in math [academic success and sense of belonging (Gándara, 1995)]

C.4.2.7. secret desire to teach math in junior college [interest in attaining (London, 1992)]

C.4.2.8. I wanted to succeed in my profession [interest in attaining (London, 1992)]

C.4.2.9. I was convinced I needed a higher level of professional training [interest in attaining (London, 1992)]

C.4.3. Advice to first-generation college students:

C.4.3.1. learn industry and economy [models of hard work (Gándara, 1995)]

C.4.3.2. set your academic goals high

C.4.3.3. suffer now, do without, for the sake of the future [interest in attaining (London, 1992)]

C.4.3.4. self-gratification is a quick and sure way to destruction [models of hard work (Gándara, 1995), this axiom may be part religious and part work ethic]

5. *What paths did first-generation college students follow or take into the professoriate?*

C.5.1. Masters and School administrator

C.5.2. Faculty

C.5.3. Ph.D.

C.5.4. Higher education administrator

Dana Open Coding

Open Coding

1. *What role does parental educational attainment play in the educational success of high achieving first-generation college students?*

D.1.1. Dad finished eighth grade

D.1.2. Mom completed the ninth grade

2. *What is the personal educational attainment of high achieving first-generation college students?*

D.2.1. I was the first to go to college and graduate [interest in attaining (London, 1992)]

D.2.2. J.D. from University of Oklahoma Law School

3. *How does institutional selection affect high achieving first-generation college students' degree attainment?*

D.3.1. University of Oklahoma [first-generation college students make up 20% of public

4-yr. institution enrollment (Núñez & Cuccaro-Alamin, 1998k)]

D.3.2. came . . . for my degree and stayed [sense of belonging (Gándara, 1995)]

4. *Are there educational influences for high achieving first-generation college students that they perceive as having contributed toward their educational success?*

D.4.1. The negative influences:

D.4.1.1. The culture shock of leaving a town of less than 600 people and coming

to the university was the worst. [consider the institution to be a non-welcoming

environment (Pascarella et al., 1995) and separation from the culture of origin

(Rendón, 1994; Striplin, 1999)]

D.4.1.2. My family wrote me letters, they did not have a phone. My parents only

got a phone last year. My brother lived in Tulsa and tried to call me once a month.

[fgc have lower parental income (Barahona, 1990; Billson et al., 1982), lack of

parental support (Núñez & Cuccaro-Alamin, 1998j), and fgc tend to have lower

incomes than the general population (Terenzini et al., 1996)]

D.4.1.3. I traveled by bus back and forth in the early 1980's, until I bought a car. [low personal income (Terenzini et al., 1996)]

D.4.1.4. I did not want to stay there. I was willing to do what it took to go. [eager to advance (London, 1992)]

D.4.1.5. I was lucky I went to college, otherwise I would have been expected to get married and I didn't want to marry anyone there. [eager to advance (London, 1992)]

D.4.1.6. I was motivated to get out and my grades were my ticket out. [academic success (Gándara, 1982; Gándara, 1995) and eager to advance (London, 1992)]

D.4.1.7. I did not have friends to depend on; I didn't know anyone when I came here. [consider the institution to be a non-welcoming environment (Pascarella et al., 1995)]

D.4.1.8. The money was a problem I guess [Lower personal income (Terenzini et al., 1996; Rendón, Romero, & Nora, 2005)]

D.4.1.9. My husband was not too excited about me going to Law School; we had a baby so I put it off for five years. [more work and family commitments (Núñez & Cuccaro-Alamin, 1998i)]

D.4.1.10. The time in Law School was stressful, by then we had a second child [more work and family commitments (Núñez & Cuccaro-Alamin, 1998g)]

D.4.1.11. There was a five year gap (the job market would have been better if I had gone straight through), three years in Law and 18 months before going back for the M.L.I.S.

D.4.2. The positive influences:

D.4.2.1. My grandmother was sick when I was small, so to keep me quiet they taught me how to read. I could read before I started school. [academic success]

D.4.2.2. I determined at a very young age to be an attorney. [internal drive and eager to advance (London, 1992)]

D.4.2.3. I made very good grades [academic success and sense of belonging (Gándara, 1995) and a sense of own identity and a sense of belonging within the college (Rodríguez S., 2001)]

D.4.2.4. my Mom persuaded my Dad to let me enter Speech in High School and go to the tournaments [emotional support of their families (Gándara, 1982) opportunity for academic preparation (Gándara, 1995)]

D.4.2.5. My strongest category was Extemporaneous Speaking. I placed in the tournaments and went to State in Ladies Extemporaneous Speech. [academic success and sense of belonging (Gándara, 1995) and eager to advance (London, 1992)]

D.4.2.6. got lots of personal attention from the teacher [academic success and sense of belonging (Gándara, 1995)]

D.4.2.7. The real influence that my community had on my educational attainment was that I did not want to stay there. [interest in attaining (London, 1992) and]

D.4.2.8. I read a book about Abraham Lincoln. My parents were back to nature people. I related to Lincoln [culture of possibility (Gándara, 1995)]

D.4.2.9. I came to The University of Oklahoma for my undergraduate degree and stayed [academic success and sense of belonging (Gándara, 1995)]

D.4.2.10. Then I decided it was time to go to Law School, so I quit my job and

started full-time. My husband was supportive. [internal drive and eager to

advance (London, 1992)]

D.4.2.11. I got financial aid and a $500 renewable scholarship to come. After the

first year I won other scholarships and I worked 16 hours a week. [financial

resources (Astin, 1993)]

D.4.2.12. Since my job in the library was connected to the university, especially

in Library School. . [financial resources (Astin, 1993)]

D.4.3. Advice to first-generation college students:

D.4.3.1. It was an internal motivation. [internal drive and eager to advance

(London, 1992)]

D.4.3.2. Have a plan and personal goals! [personal characteristics of persistence,

ability, goals and interpersonal skills (Gándara, 1995)]

D.4.3.3. If you're not sure what you're doing it is very easy to drop out [interest in

attaining (London, 1992)]

5. What paths did first-generation college students follow or take into the professoriate?

D.5.1. When I graduated … the job market was bad for lawyers.

D.5.2. One of the supervisors told me that another position would be coming open soon

and that I would have a real good chance of getting it. They offered me a temporary

position while I was waiting. It took about nine months. This is a tenure track position so

my 40 hours is considered my teaching, then I must publish and do service on library or

university committees. The percentages are 70% work, 20% publication, and 10%

service.

D.5.3. I felt like at this time it was best for my family for me to have a stable position. The Law market is not stable. Until tenure this could be unstable too. Six years of peace that blows up.

Ellen Open Coding

Open Coding

1. *What role does parental educational attainment play in the educational success of high achieving first-generation college students?*

E.1.1. Both of my parents graduated from high school

E.1.2. My Mom helped me go to the community college, [impetus of parents (Núñez & Cuccaro-Alamin, 1998r)]

E.1.3. that's all we could afford. [lower parental income (Barahona, 1990)]

2. *What is the personal educational attainment of high achieving first-generation college students?*

E.2.1. I got the Ph.D. and then did two post-doc studies.

3. *How does institutional selection affect high achieving first-generation college students' degree attainment?*

E.3.1. My Mom helped me go to the community college, that's all we could afford. [51% of first-generation college students begin at the 2-year college (Núñez & Cuccaro-Alamin, 1998a; Striplin, 1999) and lower family income (Terenzini et al., 1995)]

E.3.2. The only thing that made it difficult was ignorance; my Mom helped me get through the applications. [impetus of parents (Núñez & Cuccaro-Alamin, 1998b)]

E.3.3.   While I was at the community college one of the teachers helped me and told me

about Wells College. She helped me get into a 4-year college. [student-faculty interaction

(Astin, 1993)]

E.3.4.   After I graduated with my bachelor's degree I went to work at the University of

Pennsylvania as a research assistant for two years. [ability (Gándara, 1995)]

E.3.5.   My supervisor was going to introduce me to my major professor, but my

professor took another position so I was on my own. [personal willingness to take risks

(Rodríguez S., 2001)]

E.3.6.   The Ph.D. was my goal and I got in the program at Florida. [goals (Gándara,

1995)]

4.   *Are there educational influences for high achieving first-generation college students*

   that they perceive as having contributed toward their educational success?

4.1.   The negative influences:

   E.4.1.1. I think coming out of high school I did not know what I wanted to do.

   [without formal plans or strategy (Rodríguez S., 2001)]

   E.4.1.2. money, mostly from ignorance [lower parental income (Barahona, 1990)]

   E.4.1.3. they made fun of me reading books [less encouragement from family and

   friends (Gándara & López, 1998) and do not appreciate changes in the student

   (Hsiao, 1992)]

4.2.   The positive influences:

   E.4.2.1. At Wells College I was taking Physiological Psychology. I was really

   interested. [in-class experiences (Pascarella et al., 1995)]

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E.4.2.2. The Ph.D. was my goal and I got in the program at Florida. [interest in attaining (London, 1992)]

E.4.2.3. At Wells I did not have that pressure, it was a women's college. At Wells College there was little pressure for social life. I did not imagine there was an option. [less involved in academic and social activities is considered a negative persistence factor (Grayson, 1995), Ellen's report goes against the norm]

E.4.2.4. I loved learning I could not imagine quitting, that is probably why I went into research. [goals (Gándara, 1995)]

E.4.2.5. I did not go for a masters degree, I thought it was a waste of two years. [goals (Gándara, 1995)]

E.4.2.6. The main reason I was successful in education was the love of learning. I always did well, I never found learning difficult. [personal characteristics of persistence, ability, goals and interpersonal skills (Gándara, 1995)]

E.4.2.7. I could not imagine not finishing. [eager to advance (London, 1992)]

1.3.   Advice to first-generation college students:

E.4.3.1. Don't waste tuition by partying. Focus on your studies and party after you're done. [personal characteristics of persistence, ability, goals and interpersonal skills (Gándara, 1995)]

E.4.3.2. When you are paying to learn, work hard, the rewards come later. [personal characteristics of persistence, ability, goals and interpersonal skills (Gándara, 1995)]

E.4.3.3. Listen to what your gut says about what you want to do, don't let other

people tell you. [personal characteristics of persistence, ability, goals and

interpersonal skills (Gándara, 1995)]

2. *What paths did first-generation college students follow or take into the*

professoriate?

E.5.1 The choice was either academia or industry – more freedom in academia. At that

point I could not conceive of any other route. Research is part of you, if you have found

your niche. [seeker, interest in attaining (London, 1992)]

Frank Open Coding

Open Coding

1. *What role does parental educational attainment play in the educational success of*

high achieving first-generation college students?

F.1.1. Dad and Mom were high school graduates.

F.1.2. My parents always told me, "You need to go to college." [impetus of parents

(Núñez & Cuccaro-Alamin, 1998e)]

F.1.3. I have one older brother. We went to college together even though I was younger.

2. *What is the personal educational attainment of high achieving first-generation*

college students?

F.2.1. I got a BS, Masters, and Ph.D. allin accounting

3. *How does institutional selection affect high achieving first-generation college*

students' degree attainment?

F.3.1. I went to SWOSU on a tennis scholarship. [20% of first-generation college

students begin at a 4-yr. public institution (Núñez & Cuccaro-Alamin, 1998c) and

resources to realize the goal of higher education (Gándara, 1995)]

4.   Are there educational influences for high achieving first-generation college

students that they perceive as having contributed toward their educational

success?

4.1.   The negative influences:

F.4.1.1. My parents were divorced without much money– working poor [lower

family income (Terenzini et al., 1995)]

F.4.1.2. it [college] didn't seem to be important to very many people in my high

school. Well you look around and figure no one is going to help you out, so <u>you

have to help yourself</u> [personal willingness to take risks (Rodríguez S., 2001)]

F.4.1.3. The biggest obstacle was money. I had to work. I got the maximum in

Pell Grants, but I still had to work. [lower personal income (Terenzini et al., 1996)

and heavier job loads (Billson et al., 1982)]

4.2.   The positive influences:

F.4.2.1. My High School Counselor more than anyone else. She was big on

education. A friend who did a lot for me, even helped with money. She went

beyond the call [mentor (Little, 1990)]

F.4.2.2. I had a positive high school experience. I had lots of friends and

graduated as the class valedictorian [personal characteristics of persistence,

ability, goals, and interpersonal skills (Gándara, 1995)]

F.4.2.3. I think being in athletics helped me be more disciplined and have success in school. [personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995), this is the opposite of the information on major of first-generation college students (Riehl, 1994)]

F.4.2.4. you have to help yourself [Explorer, risk taker (Rodríguez S., 2001)]

F.4.2.5. In graduate school my professors helped me [student/faculty interactions (Astin, 1993) and some level of mentorship (Little, 1990)]

F.4.2.6. I don't think I would have made it without my wife [emotional support of their families (Gándara, 1982)]

F.4.2.7. By graduate school I was married. My wife worked and largely supported me. I was a TA at OSU and got some loans [resources to realize the goal of higher education (Gándara, 1995)]

F.4.2.8. I got the masters in accounting and then decided to stay for a Ph.D. in accounting [personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

1.3   Advice to first-generation college students:

F.4.3.1. My parents were hard workers; I respect that [work ethic].

I had ability, God given, but that work ethic got me through. [parents were models of hard work (Gándara, 1995)]

F.4.3.2. There is a pride in doing your best. I tell my students, "When you do something you are only a failure if you do not do it to the best of your ability." [personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

F.4.3.3. If you have the potential[personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

F.4.3.4. then work and [hard work = persistence, personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]]

F.4.3.5. time management will get you through. [discipline/persistence, personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

5.   *What paths did first-generation college students follow or take into the professoriate?*

F.5.1. I went straight through school and then took a position. I like research and this gives me that opportunity.

F.5.2. I think when I was about half way through my master's degree is when I made the decision to become a professor. I looked at the salary and it would support a family. The lifestyle is conducive to a good family environment.

F.5.3. Once I got the Ph.D. I was over qualified for the practice of accounting. People who get to this point just continue on into the faculty.

Gregory Open Coding

Open Coding

1.   *What role does parental educational attainment play in the educational success of high achieving first-generation college students?*

G.1.1. My father was a bus driver and my Mom stayed at home [parents models of hard work (Gándara, 1995)]

G.1.2. My father went to the fourth grade in school. My mother finished the eighth grade in school

G.1.3. I was the only child who was able to enter into the university [academic success (Barahona, 1990), as opposed to lower academic preparation (Terenzini et al., 1995)]

2. *What is the personal educational attainment of high achieving first-generation college students?*

G.2.1. My bachelors degree in Greece was in Chemical Engineering.

G.2.2. In America I got the Master of Science in Chemical Engineering from SUNY and then I went on to get the Ph.D. in Chemical and Biological Engineering. This was a new area of study that was opening up at that time and I wanted to be a part of this new discipline.

3. *How does institutional selection affect high achieving first-generation college students' degree attainment?*

G.3.1. I was one of the few in my school to get into college; it was me and one other girl [academic success (Barahona, 1990), as opposed to lower academic preparation or non-collegiate curriculum (Terenzini et al., 1995)]

G.3.2. I went to Aristotle University for five years and then went into the army for two years. After that I had no clear direction on what I wanted to do [20% of first-generation college students begin at a 4-yr. public institution (Núñez & Cuccaro-Alamin, 1998d)]

4. *Are there educational influences for high achieving first-generation college students that they perceive as having contributed toward their educational success?*

4.1. The negative influences:

G.4.1.1. I was from a poor family, so there was no advantage there [lower family income (Barahona, 1990; Riehl, 1994; Terenzini et al., 1995)]

G.4.1.2. My Mom was more interested in when I was going to get married [lack parental support (Núñez & Cuccaro-Alamin, 1998q)]

G.4.1.3. In the agricultural areas kids would kill themselves studying for the entrance test to college, so they could get out of the area. [interest in attaining (London, 1992)]

G.4.1.4. There is not much opportunity to get out of the low socioeconomic communities. [accumulation of negative factors (Barahona, 1990)]

G.4.1.5. I did well, but I was not challenged like kids from more affluent neighborhoods and the private high schools. The student to teacher ratios in areas like mine were high. [Negative school experience (Barahona, 1990)]

G.4.1.6. One story that might show more is from when I was in the sixth grade. We took a test for admission to the U.S. school in the region. I was one of only three students in the whole city selected to attend, but Dad said, "You do not belong with those rich people; they will be a bad influence." [lack of support (Barahona, 1990)] lower family income (Riehl, 2003)]

G.4.1.7. The social problems were minor to me, because I appreciated the education and it became all that was important. [personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995) and seek a place (London, 1992) plus separation from the culture of origin (Rendón, 1994; Striplin, 1999)]

4.2.   The positive influences:

G.4.2.1. I have cousins and an aunt who are medical doctors. I chose engineering. There was social pressure on poor children to improve their social status and to move to the middle class through education. [culture of possibilities (Gándara, 1995)]

G.4.2.2. I served two years in the army and then decided to go to graduate school. I missed college; I could not get enough of school. [Explorer, risk taker (Rodríguez S., 2001)]

G.4.2.3. My Mom was very happy that I did so well in school and encouraged me to keep going. I think after college my parents kind of lost track of what I was doing. [family and friends do not appreciate changes in the student (Hsiao, 1992)]

G.4.2.4. I grew up in the poor section of a cityof about one million people, like Oklahoma City. I was one of the few in my school to get into college; it was me and one other girl. [personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

G.4.2.5. The U.S. was taking foreigners. I had contact with a professor who introduced me to other professors. He encouraged me to apply for Graduate School in Buffalo, NY. [student/faculty interactions (Astin, 1993) and mentoring (Little, 1990; Stanley & Clinton, 1992)]

G.4.2.6. I got right into my classes and at that moment I knew this was what I wanted to do. [in-class experiences (Pascarella et al., 1995; Pascarella, Pierson, Wolniak, & Terenzini, 2004)]

G.4.2.7. The older more successful graduate students were very helpful to me. They kept showing me how to do things and encouraging me to keep going. [collaborative mentors (Philip & Hendry, 2000) and peer mentors with shared emotional ties (Bennetts, 2001)]

G.4.2.8. I did have talent and determination. The social problems were minor to me, because I appreciated the education and it became all that was important. [interest in attaining (London, 1992)]

4.3   Advice to first-generation college students:

G.4.3.1. My best advice for first-generation college students would first be to seek the advice of people who you know care about students. [find a mentor (Yau, 1995)]

G.4.3.2. You need to remain hungry for learning and strive to be the best, be ambitious. [interest in attaining (London, 1992)]

5.   *What paths did first-generation college students follow or take into the professoriate?*

G.5.1. There were two major things in my journey to the professoriate: First, I had done an internship with a company. I liked my time there and thought it was nice, but the company was not loyal to employees. I saw real good engineers laid off in down sizing. [24.2% of doctorate recipients take their first job in industry or self-employment (Hoffer et al., 2003)]

G.5.2. Second, I enjoyed the university freedom in research and wanted to continue there.

G.5.3. I was offered Post-doctoral fellowships from two universities. They came to me; I visited both, and did two and a half years at the one I chose. I felt like I had to do this

because I was not from a prestigious university. I got a good education at SUNY,

Buffalo, but it does not have the reputation of a Princeton or Harvard. I needed to add

strength to my resume.

Hope Open Coding

1.   What role does parental educational attainment play in the educational success of

high achieving first-generation college students?

H.1.1. My Dad spent five years in a one room school house in Michigan.

H.1.2. Mom went through the seventh grade in Michigan, also in a one room school

house with five students.

H.1.3. I was the only person in my extended family to go to college out of high school.

2.   What is the personal educational attainment of high achieving first-generation

college students?

H.2.1. I finished my bachelors in 2 ½ years and [resources to realize the goal of higher

education (Gándara, 1995)]

H.2.2. then went on for 1 ½ years to get my Master of Arts when I was 21 years old.

[resources to realize the goal of higher education (Gándara, 1995)]

3.   How does institutional selection affect high achieving first-generation college

students' degree attainment?

H.3.1. I went to the University of the Pacific a small institution that was great for me.

H.3.2. There were good role models among both the students and the faculty. [in-class

experiences (Pascarella et al., 1995) and student-faculty interactions (Astin, 1993)]

H.3.3. Then I returned for the Ph.D., at the University of Iowa in Educational Technology, it was good timing. I was hired and started at the University the August after graduation. [Allen, "the next logical step"]

4.   Are there educational influences for high achieving first-generation college students that they perceive as having contributed toward their educational success?

4.1.   The negative influences:

H.4.1.1. My parents were negative examples. They were constrained in employment due to their educational attainment. Their life circumstances were like an individual message to me. [lower parental income (Barahona, 1990; Terenzini et al., 1996)]

H.4.1.2. No One! [helped me in graduate school] By the time I got into Graduate school I thought I was not going to stop.

H.4.1.3. Our parents moved around a lot. There was violence in the part of LA we lived in and we were kind of driven out. Then later we returned to inner city for the jobs my Mom could get. . [lower parental income (Barahona, 1990; Terenzini et al., 1996)]

H.4.1.4. My school experience was a roller coaster, we moved six times by the second grade. [accumulation of negative factors (Barahona, 1990)]

H.4.1.5. I was in the vocational track, not college. I did high school in three years. But even though I graduated a year early I could not afford to go to college. [Negative school experience and the accumulation of negative factors (Barahona, 1990)]

H.4.1.6. My age [obstacle], when I was teaching during my masters' studies, some of my students were older than me. [Explorer, risk taker (Rodríguez S., 2001)]

H.4.1.7. I had to figure out how to manage money, because I had never had any. [Lower personal income (Terenzini et al., 1996)]

H.4.1.8. I applied to the University of Oregon and got accepted with a teaching position. It was an intimidating time. One I was married and pregnant. Two I was dissatisfied with English and comparative literature, so I took a year off. At the deadline to return I was pregnant with my second child. I took 20 years out and raised four children. [accumulation of negative factors (Barahona, 1990)]

4.2.   The positive influences:

H.4.2.1. One High School counselor was insistent with me, "You have potential, where are you going to college?" I said, "We cannot afford for me to go; only the smart kids can go." Then she sat me down and showed me the file documents and test scores. It was probably some violation for me to see all that stuff. She was the first voice that said, "College is not out of reach for you." [mentor (Little, 1990) and culture of possibilities (Gándara, 1995)]

H.4.2.2. The community did influence me in my educational attainment. There was a lot of reason to want to get out, [accumulation of negative factors (Barahona, 1990)]

H.4.2.3. but the staff in our school was wonderful toward me. They all seemed to want me to succeed. [academic success and sense of belonging (Gándara, 1995)]

H.4.2.4. My older brother taught me how to read before I went to school and I have been reading ever since, [academic success and sense of belonging (Gándara, 1995)]

H.4.2.5. but all the moving crippled my ability to perform in class. I could not figure out the goal. [accumulation of negative factors (Barahona, 1990) and Low academic preparation (Pascarella et al., 1995)]

H.4.2.6. Then I went to a smaller school outside LA. The second grade teacher took interest in me. At the end of the year I got the award for the best progress. [academic success and sense of belonging (Gándara, 1995)]

H.4.2.7. We were there a while, then in the fifth grade we moved back into LA and stayed through high school. I had the opportunity to make and keep friends; I did not get to do much of that early on. [personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

H.4.2.8. In high school I was in music, band, and drama. [personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

H.4.2.9. My high school adviser made me take the SAT and I did very well. Finally, in what should have been my senior year the college offers started flooding in. They did not know that I had already graduated, but that I had the scores they wanted. I took a free ride to a small private university. [resources to realize the goal of higher education (Gándara, 1995) and mentor (Little, 1990; Stanley et al., 1992)]

H.4.2.10. I was so hungry for education. I was an avid reader as a child and I think it laid the foundation for college. It helped me succeed in college, [academic success and sense of belonging (Gándara, 1995)]

H.4.2.11. There was this art class. I did not like the studio time, it bored me and I started doing other things. The teacher talked to me after class and said, "You're really bright, but you're not doing the work." I was flunking. I only valued what was relevant to me. She said that if I would work really hard I might be able to pass the class. I worked my self to death and pulled a 'B.' I am prouder of that grade than all my A's in my undergrad. I still have the project that I put together for that class, I have told the story to my kids. After that experience I just started going to school, no breaks, I enrolled in every term straight through the summers. [academic success, sense of belonging, and culture of possibilities (Gándara, 1995) and the instructor acted in the role of a mentor (Little, 1990; Stanley et al., 1992)]

H.4.2.12. By the time my scholarships were done I had a master's degree. [resources to realize the goal of higher education (Gándara, 1995)]

H.4.2.13. I got two degrees at the University of the Pacific. First, I earned a B.A. in English with emphasis in Literary Criticism. I had a minor in foreign language and I wound up teaching French and English while I got my masters. Then I earned an M.A. in English with emphasis in Literary Criticism. [resources to realize the goal of higher education (Gándara, 1995)]

4.3   Advice to first-generation college students:

H.4.3.1. I wanted it so badly. [personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

H.4.3.2. I think the combination of good and bad role models. [mentor (Little, 1990; Stanley et al., 1992) and accumulation of negative factors (Barahona, 1990)]

H.4.3.3. I chose reading instead of travel or taking vacations. Education was the only thing that ever satisfied my hunger to know. [culture of possibilities (Gándara, 1995)]

H.4.3.4. I had to keep going, my research is about motivation. What helps some students go on, when others do not? [seeker/risk taker (Gándara, 1995; Rodríguez S., 2001)]

H.4.3.5. In order to navigate your way you have to have strategies for staying. [opposite of the norm = personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

H.4.3.6. Know why you are there, what will satisfy you. [personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

H.4.3.7. Find a navigator and [Mentor (Bennetts, 2001; Little, 1990; Philip et al., 2000; Stanley et al., 1992) a descriptive name for the mentoring role that is understandable, 'navagator']

H.4.3.8. finish college without knowing why or what, just finish. [have a goal = personal characteristics of persistence, ability, goals, and interpersonal skills (Gándara, 1995)]

5. *What paths did first-generation college students follow or take into the professoriate?*

H.5.1. I worked as an adjunct instructor at a regional university for a number of years, went to graduate school and was hired right after my Ph.D.

H.5.2. I wanted to be a professor for a long time. I never lost the dream.

H.5.3. I went through a divorce and became the bread winner.

H.5.4. I had an epiphany during orientation of new professors at my university. One of the new professors came up after my session and asked, "Do you have a Ph.D. in Instructional Design?" I had fallen in love and now I knew the name.

H.5.5. I started looking for Instructional Design programs with a fellowship and teaching position for living expenses. When I found the one at the University of Iowa I packed up my family and went to Iowa.

Isaac Open Coding

Open Coding

1. *What role does parental educational attainment play in the educational success of high achieving first-generation college students?*

I.1.1.   My father went to the eighth grade

I.1.2.   my mother went through the tenth.

I.1.3.   I remember going to my Dad and trying to get him to help me with my 6th, 7th grade math. He tried to help me and couldn't so he said, "I can't, that's beyond me, I'm

just a farmer. I don't know, I can't help you." [Low academic preparation (Pascarella et al., 1995)]

I.1.4.   My Dad had an 8th grade education. Probably that phrase "that's beyond me, I'm just a farmer" while I knew I'd gone beyond my Dad I never had a lot of confidence academically and expected myself to perform at the C level. If I got a C, well that's pretty good at least I did not fail the course. In my family that was really decent.

I.1.5.   We grew up in a Mennonite community [Cultural barriers increase the difficulty for the assimilation of racial and ethnic minorities into higher education (Rendón, 1994) and social integration (Billson et al., 1982)]

I.1.6.   I was the last of a family of six boys and a girl. There were twin boys just older than me, we all worked together to make the farm go. All of us finished high school and everyone took at least one semester of college. We all went to Bible college our first year or first semester.[impetus of parents (Gándara, 1982) and college expectation (London, 1992)]

2.   *What is the personal educational attainment of high achieving first-generation college students?*

I.2.1.   At Emporia State University I earned both a B.S. in Business and an M.B.A.

I.2.2.   at Texas A&M, the Ph.D. in Strategic Planning.

3.   *How does institutional selection affect high achieving first-generation college students' degree attainment?*

I.3.1.   I had a brother who finished a Masters degree and he is the only sibling who finished. No one else even got a bachelors degree. I think everyone else just had no more

than one year of college. I went to Bible College and was a freshman in 1970 [Impetus of parents (Gándara, 1982; Gándara, 1995)]

I.3.2.   at Urbana I actually met a lot of Christians from secular campuses and I saw the vitality of their faith. I liked what I saw and so I transferred when I got back home to a state university that had an Intervarsity chapter, Emporia State. [internal drive is referenced as: seeker = interest in attaining (London, 1992), explorer = risk taker (Rodriguez, 2001)]

4.   *Are there educational influences for high achieving first-generation college students that they perceive as having contributed toward their educational success?*

4.1.   The negative influences:

I.4.1.1. I had back problems that became evident during high school and did not think that I could make it in farming, as it turns out I could have.[accumulation of negative factors (Barahona, 1990)]

I.4.1.2. I enjoyed school a lot, but it was a struggle for me academically. I got through by cramming four years into five, but I made it. When I finished my bachelor's degree I figured I'd never darken the door of a classroom again. [Low academic preparation (Pascarella et al., 1995)]

I.4.1.3. The construction industry was not going to hold me the rest of my life. I'm a curious person an active learner and I got bored with construction. I knew 95% of what there was in construction and got bored. [eager to advance (London, 1992)]

I.4.1.4. I had graduated college, Intervarsity staff for six years, and had my own business. We were at a family gathering and toward the end when people were

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leaving I said by the way, I'm going back to get a masters degree. One of my brothers got up to leave and as he went out the door said, "You better decide what you want to do when you grow up." [lack of support (Barahona, 1990) and cultural difference on the value of a college degree (Núñez & Cuccaro-Alamin, 1998f)]

I.4.1.5. I was out of school 12 years between my bachelors and masters. When I finished my bachelors I figured I would never darken the door of a classroom again, I thought I was done. I figured I was lucky to get to that point, only one other person in my family had. [lower degree aspirations (Terenzini et al., 1995)]

I.4.1.6. What was their attitude about me finishing college? I think it was kind of a non-event. They did not throw a big party for me, like wow you made it through something that most of us have not. They came to my graduation, but you know it was kind of a non-event. [lack of support (Barahona, 1990)]

I.4.1.7. In my own community career wise you did one of two things. You either went into full-time Christian work or you farmed and supported those who went into full-time Christian work. [separation from the culture of origin (Striplin, 1999)]

I.4.1.8. So when I graduated from Emporia I joined the Intervarsity Staff raised support and my family was very supportive of that. Maybe that was kind of the significant event or achievement for them. [separation from the culture of origin (Striplin, 1999)]

I.4.1.9. With my background I thought that if you did not work from sunup to sundown doing hard physical labor you had not worked. I did not figure that out

until I was completely burned out. [models of hard work (Gándara, 1995), Isaac

has followed his role models to the extreme and is now burned out]

4.2.   The positive influences:

I.4.2.1. I liked what I saw and so I transferred when I got back home to a state

university that had an Intervarsity chapter, Emporia State. It was one of the best

things that ever happened to me spiritually. [sense of belonging (Gándara, 1995)]

I.4.2.2. I took part in that chapter and soon started taking part in leadership kinds

of things. I worked my way through school in the dorms as a Resident Assistant.

[resources for college (Gándara, 1982)]

I.4.2.3. there was an Intervarsity staff worker and also a Baptist pastor. I met with

the pastor every week in sort of a discipleship relationship. He was very

influential and affected my whole life, predominately spiritual. But I remember

him working with me on study skills as well and I went from earning a few B's,

mostly C's and a few D's to earning mostly A's and a few B's my last two years

of college. He simply gave me some tools to become more disciplined in my

study habits. So I finished college on a strong note and he was influential in that

regard too. [Navigator-mentor (Bennetts, 2001; Lauland, 1998; Stanley et al.,

1992)]

I.4.2.4. I had a friend who was in the construction industry and he said, "I've got

more than I know what to do with." I worked with him for a year and after that I

went out on my own, started my own construction company. I did that and got

into counseling. I did about a year and a half of counseling, one of the best things

I ever did. The physical work was therapeutic for me, but after about five years I

started getting restless with construction. As I healed emotionally I figured some things out. [Navigator-mentor (Bennetts, 2001; Lauland, 1998; Stanley et al., 1992)]

I.4.2.5. My wife and I would sit on the front porch planning what else we wanted to do. One thing would seem interesting for a month or so and then we would move to something else. [emotional support and culture of possibility (Gándara, 1995)]

I.4.2.6. Some new people moved in next door and they were teaching at a local university. [Navigator/role model/mentor (Little, 1990; Roberts, 2000)]

I.4.2.7. we went and visited some old friends. He was back at Emporia State teaching and working on a Ph.D. I started looking into teaching business on the college level and what it would take. [risk taker (Rodríguez S., 2001)]

I.4.2.8. I like students and this could be my way back, but then I thought do I have to get a Ph.D. to do this? I'll never make it. I discovered that business schools were disparate for teachers and that there were not enough doctorates to go around. Many regional universities were using business people with only a masters. [risk taker (Rodríguez S., 2001)]

I.4.2.9. I thought maybe if I'm lucky, if I really work hard at it, maybe I can put a master's degree together. [Eager to advance (London, 1992)]

I.4.2.10. I took the GRE and went back to Emporia State for my MBA. [risk taker (Rodríguez S., 2001)]

I.4.2.11. I was self conscious walking back onto the campus after 12 years, but it only took a few days to shed that feeling. Soon I decided that I really like this and

school seemed to be radically different from what it had been twelve years earlier. I just loved it. [sense of belonging (Gándara, 1995)]

I.4.2.12. My friend, Scott, from college (we were in Intervarsity together) was back teaching. I actually stayed at his home one night a week and he was a major mentor to me during this time. [Navigator.mentor (Bennetts, 2001; Little, 1990; Roberts, 2000; Stanley et al., 1992)]

I.4.2.13. All of a sudden I was pulling good grades. [academic success and a sense of belonging (Gándara, 1995)]

I.4.2.14. I started to talk with him some about this Ph.D. thing. Scott encouraged me more and pretty soon I decided that if I don't try this I will always wonder if I could have made it. [Navigator.mentor (Bennetts, 2001; Little, 1990; Roberts, 2000; Stanley et al., 1992) and risk taker (Rodríguez S., 2001)]

I.4.2.15. I really had doubts whether I could make it or not. I decided to apply to some different schools. So we pulled out the maps and started looking. We applied and got accepted to Texas A&M for some reason or another. [risk taker (Rodríguez S., 2001) and seeker (London, 1992)]

I.4.2.16. When I told my Mom that I was going back to get my Ph.D. she was shocked. She said, "Oh my, you mean there's that much more they can teach you." I was determined and that did not derail me. [lack of support (Barahona, 1990) and cultural difference on the value of a college degree (Núñez & Cuccaro-Alamin, 1998h)]

I.4.2.17 I had a strong work ethic. In farming you work everyday no matter what the weather or season. I never felt disadvantaged because I had to work. [Models of hard work (Gándara, 1995)]

4.3. Advice to first-generation college students:

I.4.3.1. I'm not an advocate that a person can do anything.

I.4.3.2. I was pursuing things that I was passionate about.

I.4.3.3. Find something that you want to do and complete things.

I.4.3.4. Find out how you are put together.

I.4.3.5. We do not know ourselves well as undergraduates. Press your own boundaries and develop yourself as a person. . . . We probably are like a sailboat; we turn to catch the wind.

I.4.3.6. The bachelor degree just provides a foundation.

5. *What paths did first-generation college students follow or take into the professoriate?*

Path to the Professoriate

I.5.1. The decision to be a university professor was made at the same time I decided to pursue a masters degree.

I.5.2. I went to the University of Houston after finishing at Texas A&M. I got my first pay check on my 40th birthday.

I.5.3. It was a tenure track position, but in the sixth year I started looking around just in case things did not go as planned. I got tenure at Houston, but I also got an offer from this university. So we decided to move.

Appendix F - Coding Summaries

KEY: Negative (N), *Neutral (X)*, and **Positive (P)**

Open Coding Categories	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*#*
					Interview Participants					
Academic success			P	P	P	P	P	P		6
Changes unappreciated					N					1
College expectation	P	P	P		P	P			P	6
Culture of possibility		P		P				P		3
Eager to advance	P	P	P	P		P	P	P	P	8
Educational Attainment	X	X	X	X	X	X	X	X	X	9
Emotional support	P	P	P			P	P		P	6
Father's education	N	N	N	N	N	N	N	N	N	9
Going to college	X	X	X	X	X	X	X	X	X	9
In-class experiences	P	P			P	P		P		5
Institution selected	X	X	X	X	X	X	X	X	X	9
Low academic prep.	N							N	N	3
Low personal income	N	N	N	N		N	N	N	N	8
Lower parental income	N	N	N	N	N	N	N	N	N	9
Lower persistence	N	N								2
Models of hard work		P				P	P	P	P	5
Mother's education	N	N	N	N	N	N	N	N	N	9
Navigator (at least 20 identified) CORE	P 1	P 3	P 5	P 1	P 1	P 3	P 2	P 2	P 2	9
Negatives circumstances	N	N		N		N	N	N		6
Passion	P				P			P	P	4
Persistence			P	P	P	P	P	P		6
Resources to realize the goal of Higher Education	P	M Ed		P		P	P	P	Trn RA	5
Risk Taker	P	P	P	P	P	P	P	P	P	9
Seeker -CORE	P	P	P	P	P	P	P	P	P	9
Sense of belonging				P	P	P		P	P	5
Separation from culture of origin		N		N		N			N	4
Student/Faculty Interaction	P	P			P	P	P	P	P	7
Value education		P	P	P			P	P	P	6
Without Strategy	N	N					N	N	N	5
Work and Family Commitments		N		N				N		3
TOTAL COUNT (30 possible)	**21**	**23**	**16**	**20**	**16**	**21**	**21**	**25**	**21**	**20.3**
NEGATIVE COUNT=11	8	9	4	7	4	5	7	8	7	6.5
POSITIVE COUNT=16	**10**	**11**	**9**	**10**	**9**	**13**	**11**	**14**	**11**	**10.8**
NEUTRAL COUNT=3	3	3	3	3	3	3	3	3	3	3

Axial Coding Clusters	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*#*
				Interview Participants (Neg./Pos.)						
1-SEEKER	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**9**
2-NAVIGATORS	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**9**
(at least 20 identified)	**1**	**3**	**5**	**1**	**1**	**3**	**2**	**2**	**2**	
	N	P	N	N	N	-	N	-	-	
3-PARENT EDUC. ATTAINMENT	**2/1**	**2/3**	**2/1**	**2/1**	**2/1**	**2/2**	**2/1**	**2/2**	**2/2**	
Father's education	N	N	N	N	N	N	N	N	N	9
Mother's education	N	N	N	N	N	N	N	N	N	9
College expectation	**P**	**P**	**P**		**P**	**P**			**P**	**6**
Culture of possibility		**P**		**P**				**P**		**3**
Models of hard work		**P**				**P**	**P**	**P**	**P**	**5**
	N	N	N	N	-	N	N	N	N	
4-PRE-COL. EXP	**4/0**	**3/0**	**2/1**	**3/1**	**1/1**	**3/1**	**3/1**	**4/1**	**2/0**	
Academic success			**P**	**P**	**P**	**P**	**P**	**P**		**6**
Low academic prep.	N							N	N	3
Low personal income	N	N	N	N		N	N	N	N	8
Lower parental income	N	N	N	N	N	N	N	N	N	9
Negatives circumstances	N	N		N		N	N	N		6
5-INST. SELECTED	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**9**
Going to college	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*9*
Institution selected	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*9*
SUB-TOTALS:										
NEGATIVE CLUSTERS	2	1	2	2	1	1	2	1	1	
POSITIVE CLUSTERS	**2**	**3**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	
NEUTRAL CLUSTERS	1	1	1	1	2	2	1	2	2	

Axial Coding *Clusters (continued)*	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*#*
	N	**N**	**N**	**N**	**P**	**P**	**N**	**N**	**P**	
6-PERSISTENCE	**5/4**	**7/3**	**2/1**	**5/2**	**2/3**	**3/5**	**5/3**	**5/4**	**3/4**	
Emotional support	**P**	**P**	**P**			**P**	**P**		**P**	**6**
In-class experiences	**P**	**P**			**P**	**P**		**P**		**5**
Sense of belonging				**P**	**P**	**P**		**P**	**P**	**5**
Student/Faculty Interaction	**P**	**P**			**P**	**P**	**P**	**P**	**P**	**7**
Resources to realize the goal of Higher Education	**P**	**M Ed**		**P**		**P**	**P**	**P**	**Trn RA**	**5**
Low personal income	N	N	N	N		N	N	N	N	8
Lower parental income	N	N	N	N	N	N	N	N	N	9
Lower persistence	N	N								2
Negatives circumstances	N	N		N		N	N	N		6
Separation from culture of origin (changes unappreciated)		N		N	N		N		N	5
Without Strategy	N	N					N	N	N	5
Work and Family Commitments		N		N				N		3
	P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	
7-ATTAIN. QUALITY	**3**	**3**	**4**	**4**	**3**	**3**	**4**	**5**	**4**	
Eager to advance	**P**	**P**	**P**	**P**		**P**	**P**	**P**	**P**	**8**
Passion	**P**				**P**			**P**	**P**	**4**
Persistence			**P**	**P**	**P**	**P**	**P**	**P**		**6**
Risk Taker	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**9**
Value education		**P**	**P**	**P**			**P**	**P**	**P**	**6**
8-EDUC.ATION ATTAINMENT (Doc.)	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*9*
9-PROFESSOR	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*9*
TOTALS:										
NEGATIVE CLUSTERS	3	2	3	3	1	1	3	2	1	2.2
POSITIVE CLUSTERS	**3**	**4**	**3**	**3**	**4**	**4**	**3**	**3**	**4**	**3.4**
NEUTRAL CLUSTERS	3	3	3	3	4	4	3	4	4	3.4

Interview Participants (Neg./Pos.)