

University of Nevada, Reno

Mentoring and Mental Models:
Outreach to First-Generation, Low-Income Students

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy
in Educational Leadership

by

Matthew J. Smith

Dr. Patricia K. Miltenberger, Dissertation Advisor

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THE GRADUATE SCHOOL

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MATTHEW J. SMITH

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Patricia Miltenberger, Ed.D., Advisor

Janet Usinger, Ph.D., Committee Member

Rita Laden, Ed.D., Committee Member

Diane Barone, Ed.D., Committee Member

Shannon Ellis, Ph.D., Graduate School Representative

Marsha H. Read, Ph. D., Dean, Graduate School

December, 2012

Abstract

This qualitative single-case study examined mental models of mentoring held by both program initiators and mentors associated with a specific educational outreach initiative, the Dean's Future Scholars (DFS) program. DFS students were first-generation and low-income (FGLI). Mentoring was the primary service provided to precollege DFS students, and other services included summer academic programs, tutoring, college knowledge, courses for college credit, and internship placement. In-depth interviews were conducted with three program initiators, and nine program mentors. This study examined the development and implementation of the mentoring aspect of the program, from its creation in the year 2000, through the retirement in 2012 of the second DFS program director. This study focused on mental models of both initiators and mentors to inform mentoring practices of outreach programs for FGLI students. Social capital was selected as the theoretical framework, and a constructivist grounded theory approach was utilized for data coding and analysis. Three major themes were constructed from the participant interviews. From the initiators, the key theme of "Trusting the people" was developed. Through the mentor interviews, both "DFS changed my life", and "I want to help others" were key themes built from the data. Two key findings were gleaned from the interview data of both initiators and mentors: (a) commitment to a shared vision was central to the development of DFS; and (b) the shared vision was realized through practices that built social capital for DFS students.

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CHAPTER I: INTRODUCTION

Both first-generation (FG) and low-income (LI) students attend college at lower rates than their peers whose parents attended college, or those from middle- and upper-income groups (Aronson, 2008). Students frequently fit into both categories, and have been referenced in the literature as one population: first-generation and low-income (FGLI) (Ishiyama, 2007). First-generation students are those “whose parents have not attended college and/or have not earned a college degree” (Engle, Bermeo, & O'Brien, 2006, p. 13). Low-income students are those who are economically disadvantaged, often referred to as having a low socioeconomic status (SES); Perna (2002) defined SES as “a composite measure that reflects parents’ level of educational attainment, parents’ occupational status, and family income” (p. 65). Although the federal government has focused financial aid programs toward low-income populations for decades (Baum, 1987; Tierney & Venegas, 2009), the playing field is not yet level for the neediest aspiring college students, many of whom cannot, or believe they cannot, afford to attend college (Jarsky, McDonough, & Núñez, 2009).

During the 1980s the federal government began shifting the focus of financial aid from low-income to middle-income students, and thus from grants to loans (St. John & Parsons, 2004). This shift has been disproportionately detrimental to low-income students, as it has negatively affected access to grants, “the kind of aid most likely to ensure lower-income students’ access, choice, and persistence” (St. John & Parsons, 2004, p. 53). Nationwide, “our lowest-performing affluent students go to college at a higher rate than the highest performing youth from the least-advantaged families” (Carnevale & Strohl, 2010, p. 157). First-generation and low-income students are far less

likely to attend college than their more affluent peers, particularly at four-year institutions (Engle, Bermeo, & O'Brien, 2006). As noted by Gofen (2009) and reported in the U.S. Department of Education's *The Condition of Education* (2010), FGLI students are less likely to enroll in and succeed in college than their middle- to upper-income and continuing-generation peers.

A myriad of outreach programs across the country have been developed to provide services for potential college students, particularly those who are FGLI. These programs range from federally-funded initiatives to statewide, campus, or locally-based models (Fenske, Geranios, Keller, & Moore, 1997; Orr, Alcantara, Frazier, Kalinka, & Kaplan, 2007; Perna, 2002). Such outreach programs commonly provide a range of academic and non-academic services, including but not limited to: tutoring, academic enrichment courses, college and financial aid knowledge, academic advising, college entrance exam preparation, campus visits, job placement, cultural activities, leadership training, and mentoring (Perna, 2002).

Among the many components of outreach programs designed to assist students considered at risk for ending their education during, or after, high school, mentoring initiatives have proliferated, often with the intention of improving academic achievement (Gándara & Mejorado, 2005). A mentoring policy brief from the Center for Higher Education Policy and Analysis (2005) challenged this common assumption by indicating that the link between mentoring and academic achievement is weak within the research literature, although mentoring programs can “certainly improve college-going knowledge and aspirations” (p. 17). However, other researchers have found clear links between

mentoring and academic achievement, as measured by increased grade point average (GPA) (Campbell & Campbell, 1997; Crisp & Cruz, 2009).

Other findings from research on youth mentoring initiatives are mixed as well. Sipe's (1999) synthesis of the existing mentoring research literature illustrated that most studies of mentoring programs yielding significant positive outcomes focused on one-to-one mentoring. In contrast, Smith (2009) argued that a network mentoring model was more effective at promoting social and cultural capital than one-to-one mentoring; Smith's (2009) study utilized in-depth interviews with student mentees as well as university faculty members and administrators who served as academic mentors at a single institution. Further, the multiple roles a mentor is expected to fill may themselves be at odds:

The literature suggests that the most effective mentors are those who are prepared to be a friend to the student, rather than a surrogate parent. However, when the goal of the program is to promote college going, the assumption is that the mentor will also provide monitoring and guidance related to schooling and college. These two roles may be in conflict. (Gándara & Mejiroado, 2005, p. 100)

Further, Wheeler, Keller, and Dubois (2010) aggregated the results of three large-scale random assignment studies of school-based mentoring programs using meta-analytical techniques. The three studies were program evaluations of Big Brothers Big Sisters of America, Communities In Schools of San Antonio, and the U.S. Department of Education Student Mentoring Program. Wheeler et al. found that when aggregating results across the studies using meta-analysis, "School-based mentoring can be modestly effective for improving selected outcomes (i.e., support from non-familial adults, peer

support, perceptions of scholastic efficacy, school-related misconduct, absenteeism, and truancy). Program effects are not apparent, however, for academic achievement or other outcomes” (p. 1). The subtitle of the authors’ report echoed the results in the research literature on other mentoring efforts: “Review of Three Recent Randomized Trials of School-Based Mentoring: Making Sense of Mixed Findings” (Wheeler et al., 2010).

Statement of the Problem

The research related to mentoring is overwhelmingly focused on outcomes for students. There is little study of the perceptions of the individuals charged with influencing student mentees: the mentors. Indeed, as Crisp and Cruz (2009) noted in their critical review of the empirical mentoring literature between 1990 and 2007, “Two of the 42 reviewed studies were novel in attempting to understand mentoring through the lens of the mentor” (p. 530). Further, although many outreach programs have been designed to include a mentoring component, it is uncertain whether or not program initiators (the administrators and staff members who shaped the direction, policies, and activities of the program) and program mentors share the same understanding of the mentoring process. Mental models, as defined by Senge (2006), are the “deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action” (p. 8). Mental models are one component of how mentors understand their role in mentees’ lives. This study focused on mentors’ and initiators’ mental models to inform mentoring practices of outreach programs for FGLI students.

Background of the Study

The Dean's Future Scholars (DFS) program has served hundreds of middle school, high school, and college students since its founding in the year 2000. At the time of this study, more than 400 students were directly involved in the program. The DFS students were FGLI, and the majority identified as Hispanic. The term Hispanic was used throughout this study because the participants all identified as Hispanic rather than using another identifier such as Latino/a. The program provided a variety of services, in addition to mentoring, including academic support, college admissions and financial aid information, college courses for credit, and paid internships.

Prior to developing the research proposal for this study, transcripts from the unpublished DFS mentor study were reviewed (Miltenberger, Smith, & Serra, 2009). Although no effort was made to predetermine themes for this study, two themes were constructed from the review of these transcripts. These two themes were incorporated into the research proposal and IRB protocol for this study, and were included in the interview protocols for both the initiators and the mentors: (a) the importance of relationship building among all parties involved in mentoring (mentors, mentees, and initiators); and (b) the unintended consequence of influencing mentors to become educators or join a helping profession. Extant texts were also reviewed as part of the development of the research proposal, including DFS annual reports, documents from the personal archives of the Dean who created the program, and local news media reports.

Study Design and Research Questions

This qualitative single-case study examined mental models of mentoring held by both program initiators and mentors associated with DFS. The purpose of this study was to explore the relationships between the mental models related to self-reported mentoring

practices held by the initiators of DFS and the mentors who carried out the mentoring aspect of the program. This study examined the development and implementation of the mentoring aspect of the DFS program from its creation in the year 2000 through 2012, the year the second program director retired. Specifically, this study compared the intended purposes of the mentoring component upon its creation, and the understanding of mentoring by the mentors who implemented this aspect of DFS during this 12-year period.

In-depth interviews were conducted with participants including program initiators as well as DFS mentors. Extant texts related to the mentoring component of DFS were also reviewed. Charmaz's (2009) constructivist grounded theory techniques were utilized for data coding and analysis. The study addressed four main research questions related to mental models and mentoring:

1. What mental models do the mentors hold about the role of mentoring in the lives of their mentees?
2. How do the mentors' mental models influence their mentoring strategies?
3. What mental models do the program initiators hold about the mentors' role with the mentees and mentoring strategies?
4. What is the relationship between the mental models of the mentors and program initiators?

Importance of the Study

The study was intended to contribute knowledge and theory related to mental models and mentoring, a category of the literature for which there is a paucity of research. The study focused on the perspective of the mentor, rather than the mentee.

This perspective is novel, as Crisp and Cruz (2009) noted in their critical review of the mentoring literature. In particular, the results of the study are relevant to educational administrators who design and implement outreach and intervention programs for first-generation and low-income students. The results of this study: (a) can directly influence mentoring practices in the field; (b) can be utilized to create or improve feedback loops between program initiators or supervisors and staff members; and (c) can inform selection, training, or assessment processes for mentors.

Definition of Terms

Access can be defined in four distinct ways, according to Adelman (2007): threshold, recurrent, convenient, and distributional. For the purpose of this study, the focus remained solely on threshold access, defined as “walking through the door” and generating a transcript record (Adelman, 2007, p. 49).

Constructivism is “a social scientific perspective that addresses how realities are made. This perspective assumes that people, including researchers, construct the realities in which they participate” (Charmaz, 2007, p. 607).

Constructivist grounded theory is an approach which “places priority on the phenomena of study and sees both data and analysis as created from shared experiences and relationships with participants” (Charmaz, 2006, p. 130). Further, the grounded theory generated by data analysis relies upon the perspective of the researcher, and cannot exist outside of this perspective (Charmaz, 2006).

Continuing-generation students are “those with at least one parent who had some type or quantity of postsecondary education” (Somers, Woodhouse, & Cofer, 2000, as cited in Lohfink & Paulsen, 2005, p. 410).

First-generation students are those “whose parents have not attended college and/or have not earned a college degree” (Engle, Bermeo, & O'Brien, 2006, p. 13). Individuals who are both potential first-generation (FG) and low-income (LI) students have also been referenced as FGLI in the research literature (Ishiyama, 2007).

Low-income students are those who have a low socioeconomic status (SES). Perna (2002) defined SES as “a composite measure that reflects parents’ level of educational attainment, parents’ occupational status, and family income” (p. 65). Few studies within the research literature on low-income students include clear definition of what SES level establishes a student or family as low-income. For the purpose of this study, low-income students in the DFS program were defined as those who met the Washoe County School District standards for receiving free and reduced-price meals through the National School Breakfast and National School Lunch programs (WCSD, 2010c).

Mental models are the “deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action” (Senge, 2006, p. 8).

Mentors provide advising, coaching, and nurturing focused on building a relationship to enhance a mentee’s personal and academic or professional growth and development (Adams, 1998).

Program initiators were the administrators and staff members that created or shaped the direction, policies, and activities of the DFS program.

Social capital is "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of

mutual acquaintance or recognition" (Bourdieu, 1985, p. 248). Stanton-Salazar (2004) defined social capital, as related to working-class minority students, in more concrete terms as, "those 'connections' to individuals and to networks that can provide access to resources and forms of support that facilitate the accomplishment of goals" (p. 18).

Title I is a section of the Elementary and Secondary Education Act of 1965 that includes "a set of programs administered by the United States Department of Education to distribute funding to schools and school districts with a high percentage of students from low-income families" (WCSD, 2012).

Limitations

The unique history and circumstances surrounding the evolution of a specific program posed a challenge to the generalizability of the results to other campuses or outreach programs (Yin, 2009). The research participants could also be considered a sample of convenience (Creswell, 2009). In addition, the DFS students (mentees) were recommended for selection into the program by their sixth-grade teachers, counselors, or principals based on their "academic ability and potential for success in college" (DFS, n.d., para. 3), and there was no data to explain why the students were selected. Thus, it is possible that the students were already on track for greater achievement than their peers, regardless of their experiences in the DFS mentoring program, implying the chance for selection bias of the mentees (Bamberger, Rugh, Church, & Fort, 2004). Mentors and mentees may have had different experiences within the program had the selection process been further defined for the teachers, counselors, and principals.

There may be a difference in the richness of the data collected between telephone interviews (audio only) and interviews conducted via videoconference, which included

both audio and video. The researcher was a former employee of the institution where the program under study was located, and had a background in working with FGLI students. As Charmaz (2006) described, the researcher constructs interpretations of the data. Finally, as Senge (2006) explained, it is difficult to describe our own mental models, and many people are unaware of their existence. Therefore, participants were not asked about their thought processes directly, but were asked about their experiences as participants in the mentoring aspect of DFS between the years 2000 and 2012.

Researcher Background

As a researcher, I drew on my experiences growing up in an urban environment, as an urban high school teacher, and as a student affairs practitioner. I identify as a White male, and I completed both my bachelor's and master's degrees at a Historically Black University (HBCU). Attending an HBCU was an immersive experience, especially given my sudden status as an ethnic minority at the institution. I also taught and directly assisted FGLI students as they learned to navigate pathways into and through higher education. My college access philosophy is aligned with the American College Personnel Association's (ACPA) social justice commitment to diversity, multicultural competence, and human dignity (ACPA, 2010). I am an ardent advocate of access to higher education, particularly for underserved populations, and believe that postsecondary institutions must intentionally and actively serve these vulnerable students through outreach, recruitment, and retention practices that are grounded in research.

CHAPTER II: REVIEW OF THE LITERATURE

This chapter is a review of the research literature related to first-generation and low-income (FGLI) students, and their connections to postsecondary education. The first section is focused on college access and enrollment research. The second section of the chapter summarizes the development of outreach and early intervention programs nationally, and includes discussions of outreach and early intervention research, and the assessment and effectiveness of such programs. The third section provides an overview of the research on mentoring and FGLI students. The final section is focused on describing the theoretical framework for the study, social capital, and its application to the educational experiences of FGLI students. The chapter concludes with a summary of this literature review.

College Access and Enrollment

Within the literature on college access, the role of the family has been researched extensively (Bateman & Spruill, 1996; Boatwright, 1992; Ceja, 2006; Hamrick & Stage, 2003; Rosas & Hamrick, 2002). Tierney (2002) noted in his review of the precollege preparation literature related to parents and families that few assumptions influencing educational policy have changed as dramatically in the past century as those surrounding the role of the family in a child's education. Parents were once viewed as a potentially harmful influence in students' academic preparation, then irrelevant, and now parents and siblings are acknowledged as central to a child's learning by both researchers and policy-makers alike. Tierney also described the omission of family involvement activities in precollege outreach programs (or inclusion of only a cursory family component) as a significant mistake often made by program administrators, to the detriment of students:

The research seems to suggest quite strongly that next to academic skill development, familial involvement in learning is paramount. If a program is only

able to concentrate on one, two, or three activities, then it is reasonable to make family-based concerns one of those activities. (p. 603)

Sokatch (2006) analyzed data from the National Education Longitudinal Study (NELS:88-94) for two samples of 1992 high-school graduates who completed all three waves of the survey; the groups were compared to determine what impact peer influence had on the decision to enroll in postsecondary education. The study sample was comprised of 481 low-income (bottom two SES quartiles) Black and Hispanic students who attended public, urban high schools; the comparison group was a random sample of 481 students drawn from the entire NELS cohort. Sokatch controlled for “more traditional vectors of independent variables (socioeconomic and demographic variables, family influences, academic achievement, access to financial aid information, and school composition)” (p. 131). Sokatch also applied sequential multivariate logistic regression to the data. The results suggested that friends’ plans were the best predictor of four-year college enrollment for low SES urban high school students, and moreover, “these peer variables are stronger predictors of 4-year college-going behavior for this group than they are for a comparison sample of all U.S. high school graduates” (p. 128).

Research conducted by Perna, Rowan-Kenyon, Thomas, Bell, Anderson, and Li (2008b) on pre-college student decision-making focused on the effects of limited access to college counseling for high school students. Perna et al. conducted descriptive case studies of 15 high schools in five different states. California, Florida, Georgia, Maryland, and Pennsylvania were “purposively selected... because of their variation on a number of demographic, economic, political, and educational characteristics” (p. 136), and each state was viewed as one unit of analysis. The high schools functioned as the embedded

unit of analysis within the case studies. Three schools in the same metropolitan area were selected to represent varied achievement and socioeconomic profiles: each group of three included one high school with an above-average achievement and SES population, a school with an average population, and one school with both a below-average achievement and low-SES population.

Multiple data sources were included in the data collection, including the demographic and academic profiles of the schools, reviews of applicable federal, state and local policies, as well as individual and focus group interviews involving “[b]etween 20 and 58 students, teachers, counselors, and parents at each school... for a total of 596 participants” (p. 139). Perna et al. constructed data collection protocols and codes based on a conceptual framework which assumed that student enrollment decisions were “shaped by four nested contextual layers: the student and family context; the school and community context; the higher education context; and the broader social, economic, and policy context” (Perna & Thomas, 2006, as cited in Perna et al., 2008b, p. 135). The multiple data sources used by Perna et al. supported construct validity, and multiple reviewers evaluated the coding and categorization of data to achieve “inter-rater reliability” (p. 140).

All 15 of the schools profiled in the study had a student to counselor ratio above the 100:1 standard recommended by the American School Counselor Association, and while the school with the lowest ratio had 185 students per counselor, the school with the highest ratio, the low-resource school in Florida, had more than 500 students per counselor (Perna et al, 2008b). Although Perna et al. noted that the ratios appeared unrelated to student body characteristics, such high ratios can cause significant

challenges: counselors divided their time between many different priorities of the school, and often college-eligible students were not supported due to the counselors' focus on under-performing students, particularly in schools without a strong college-going culture. The authors' findings also suggested that "students who do not proactively seek contact with counselors and/or attend a high school where college enrollment is not the norm are less likely to receive sufficient college counseling" (p. 154). In short, the students who were most in need of pre-college guidance, who attended schools without a college-going culture, were the least likely to receive such assistance.

Perna and Titus (2004) examined state policies, particularly those related to financial aid, institutional appropriations, tuition, and K-12 funding, and their effect on college enrollment distributions by institutional type among students from different socioeconomic backgrounds. The sample of 10,148 students who earned a high school diploma or GED in May or June of 1992 was selected using the NELS: 92/94 database, and state-level indicators were gathered from IPEDS, the *Digest of Education Statistics*, *State Comparisons of Education Statistics*, the National Association of State Scholarships and Grant Programs, and the Current Population Survey. Perna and Titus' statistical methods included:

cross tabulations and analysis of variance, to examine differences among students by SES in terms of the student- and state-level predictors in the model. Hierarchical linear modeling (HLM) is used to examine the relationship between state contextual characteristics and the dependent variable: type of institution initially attended. (p. 511)

Perna and Titus stated that enrollment disparities are implicit within SES: low-SES students were less likely than their middle- and upper-income peers to enroll in any type of postsecondary institution, and those low-SES students who did enroll were more likely than their higher income peers to enroll in an in-state, two-year institution. The authors also noted that students in the lowest quartile of SES were more likely to enroll in an in-state private four-year institution than an in-state public four-year institution, suggesting that “private four-year colleges and universities are more effective than public four-year colleges and universities at targeting need-based institutional and campus-based federal financial aid resources” (p. 521). In addition, the authors’ findings illustrated that state K-12 policies related to academic preparation may have created unintended barriers to college access. Perna and Titus recommended that K-12 academic standards be aligned with the academic expectations of colleges and universities, and thus, “the results of this study support the merits of a K-16 approach” (p. 520). The K-12 state-level academic preparation indicators were drawn from the NCES *Comparisons of Education Statistics: 1969-70 to 1996-1997* report, and included public funding for instruction, mathematics graduation requirements, percentage of teachers with advance degrees, student teacher ratios, student to counselor ratios, and average teacher salaries.

While a senior researcher for the U.S. Department of Education, Adelman (2007) challenged the notion of a college access problem in America, based on his extensive analysis of the National Education Longitudinal Study (NELS: 88/2000) data. NELS: 88/2000 “followed a national sample of over 12,000 students (representing a weighted 2.9 million students) from the time they were in the eighth grade in 1988 to roughly age 26 or 27 in December 2000” (p. 1). Adelman provided four distinct definitions of access,

threshold, recurrent, convenient, and distributional. The access definition utilized for this dissertation is threshold access, defined as “walking through the door” and generating a transcript record (p. 49). Students with recurrent access began a degree program, left school, and returned at some point; these students may or may not have earned a credential. Students with convenient access began or returned to postsecondary education at a time and location of their preference. Students with distributional access attended, for the first time, the institution of their choice, “or the type of institution that somebody said [they] were qualified for and should attend” (Adelman, 2007, p. 48).

Adelman (2007) noted that although the word access has been ascribed magical, totemic powers in the discourse of higher education, it is only one of three major milestones for students pursuing postsecondary education; the other two milestones are “establishing sufficient credits to lead toward a credential (sometimes called ‘participation’ or ‘persistence’) and completion of that credential (sometimes called ‘success’), both of which require significantly more commitment than ‘walking through the door’” (p. 48).

Moreover, Adelman (2007) reported notable statistics linking income and academics: 67 percent of on-time low-income high school graduates were unable to read at the level of simple inference, and 71 percent did not reach algebra two. For low-income high school graduates, their academic opportunities and preparation left them unprepared for college-level work. The author also identified income-based disparities in threshold access:

The more significant disparity in the walking-through-the-door rates among traditional age students is between on-time high-school graduates from the top

third of the family-income range (91 percent of whom entered postsecondary education) and those from the bottom third of family income (69 percent of whom entered the postsecondary world). (Adelman, 2007, p. 50)

Although Adelman agreed that the maximum Pell Grant award was “ridiculously low” (p. 50), he also maintained that providing need-based financial aid is less of a challenge than the daunting task of staffing low-income schools with the qualified teachers who deliver challenging curricula to the students most in need of academic opportunities.

Tierney and Venegas (2009) constructed a new college access model (theoretical framework) based on cultural influences rather than the traditionally utilized rational choice theory. The researchers outlined a cultural ecological model for financial aid decision-making, which considers educational, familial, community, and out of class environments and their interplay in affecting precollege student decision-making. The authors noted a key difference between their model and a rational choice perspective:

Instead of assuming financial aid is foundational, a cultural model argues that individuals, especially adolescents, experience multiple inputs when thinking about a... topic. Simple explanations of causality, by and large, do not exist in a cultural framework. Low-income youth have multiple messages that they receive about college, even if those inputs are nonexistent or negative. (p. 383)

In addition, Tierney and Venegas included a review of the literature related to financial aid and college access, and explored state-funded financial aid programs in three states: California, Kansas, and Nevada. Specifically, the following passage refers to the frequently changing academic requirements to earn the merit-based Millennium Scholarship in Nevada:

Accessing accurate information about current [Millenium Scholarship] requirements is difficult. Only a visit to the state treasurer's website or a well-trained school counselor can give the most up-to-date results. For students and parents who do not have access to the Internet or do not read English, understanding this information poses a challenge. Even for those who do have Internet access and read English, difficulties may be encountered when planning and targeting a particular offer of aid because the requirements shift on a yearly basis. (p. 378)

The authors noted that many FGLI students never have the opportunity to decide whether to attend college or not, as they have passively opted out by being academically under-prepared. Tierney and Venegas also suggested "that financial aid's immediate relationship to academic preparation is not obvious in the minds of those who need aid the most" (p. 380).

Outreach and Early Intervention

Fenske, Geranios, Keller, and Moore (1997) incorporated a wide variety of services into their definition of early intervention (EI) programs. These programs were funded and operated by federal, state, and local education agencies as well as community organizations and private entities. EI programs provided "information and support services for elementary, middle, and secondary students at risk of dropping out" (p. iii). Services often included, but were not limited to, mentoring, tutoring, financial assistance, and information "to help low-income and minority students obtain high school diplomas and seek admission to college" (p. iii). Fenske et al. further distinguished between the broad category of early intervention, and the subset of outreach initiatives:

Academic outreach programs are differentiated from early intervention programs in that academic outreach programs are operated by academic institutions (although the source of funds and sponsor of the programs might be outside the institution). (pp. iii-iv)

Precollege outreach programs engaged students in a variety of ways: certain programs focused on subject interest areas or specifically targeted demographic groups such as women or low academic achievers (Chaney, Lewis, & Farris, 1995). However, the literature that informed this study was limited to selected initiatives that served low-income, and / or potential first-generation college students, and also met Gulatt's (2003) definition of student-centered college access and enrichment programs:

College access and enrichment programs are defined as student-centered – those programs operated by universities and colleges, federal or state agencies, or nonprofit organizations that target primarily individual students rather than classrooms or schools . . . [they] provide supplemental academic assistance and/or enrichment activities primarily to middle and high school students. While these services may take place within a school setting or during the school day, their function is not to impact a school's existing curriculum or teaching practices, but rather to supplement and extend students' . . . curricular and extracurricular experiences. (p. 58)

Historical Context. The first federally-funded early intervention program, Upward Bound, was a product of President Lyndon Johnson's War on Poverty; although the creation of Upward Bound is often associated with the 1965 Higher Education Act (HEA), it was actually established through the Education Opportunity Act of 1964

(McElroy & Armesto, 1998). The Talent Search program was created through the HEA (Wolanin, 1996). The first reauthorization of the HEA in 1968 created the third of what later became known as the 'TRIO' educational opportunity programs, Student Support Services (originally known as Special Services for Disadvantaged Students) (U.S. Department of Education, 2011a). As Wolanin noted, all three of the original TRIO programs (Upward Bound, Talent Search, and Student Support Services) were created to serve low-income students, but the 1980 reauthorization of the HEA extended eligibility to first-generation students as well. Amendments to the HEA in 1972 added the fourth program to the TRIO group, the Educational Opportunity Centers (U.S. Department of Education, 2011a). As Fenske et al. described, the TRIO programs were designed to create a pipeline into and through college for disadvantaged students:

Initially, promising students are identified (Talent Search), then prepared for the rigors of college-level academic work (Upward Bound), offered information on academic and financial aid opportunities (Educational Opportunity Centers), and finally, as college students, offered tutoring and support (Student Support Services). (p. 43)

As Eaton (1997) stated, there was a historic national commitment to improving access to higher education in America between 1965 and 1990. Eaton's description of the evolution of access policy during this period covered five distinct stages. Initially, through the creation of the TRIO programs, the goal was to eliminate financial barriers to higher education for academically able students. As community colleges expanded dramatically during the 1960s and early 1970s, the shift away from academic preparedness as a prerequisite for admission was accompanied by the second stage of

access policy evolution: a commitment to access meant assisting students with inadequate academic preparation, as well as those with financial difficulties.

The 1970s were associated with intense interest in increasing access to higher education for women and minorities, which Eaton (1997) described as the third stage of access evolution: “Institutions focused on modifying their admissions practices and policies and their financial assistance programs... to increase the number of women and minorities they enrolled” (p. 238). As more minorities and women entered higher education, it became increasingly clear in the early 1980s that students were educationally segregated, or confined to specific sectors and institutional types by race, gender, or socioeconomic status. The fourth stage of access evolution was focused on increasing the number of women and people of color at elite institution. By the end of the 1980s, yet another shift in public policy marked the fifth and final stage of access evolution during this period, according to Eaton. A lack of motivation was one more barrier for higher education to help students overcome:

Access, as responsible public policy, came to mean an obligation for intervening in a potential student’s life well before he or she attempts college work. Access policy had come to mean that higher education had responsibility for getting students onto college campuses, as well as assisting them once they were there.
(Eaton, 1997, p. 239)

Similarly, Fenske et al. (1997) noted “the number and diversity of programs providing services and resources to encourage low-income/minority youth to finish high school and enter college have been burgeoning since the early 1980s” (p. iii). This philosophy of supplementing precollege educational preparation with programs and services designed

to increase students' likelihood of attending and succeeding in college is at the heart of the policy and program research summarized in the following section.

Outreach and Early Intervention Research. Several studies have examined national survey or case study data collected from administrators and stakeholders of programs serving low-income and / or potential first-generation students. Richardson and Skinner (1990) reported the results of *Organizational Influences on Baccalaureate Achievement by Minorities: Ten Case Studies*, which focused on precisely the institutions Fenske, et al. later highlighted: urban, public universities with increasing enrollments of students from ethnic minority populations. Ten urban, public institutions were included in the study based on their institutional records of minority participation, minority graduation rates that were higher than peer institutions, and their willingness to participate in an undisguised case study (each institution's name was identified in the report). The research team utilized common research protocols while facilitating site visits at each campus, and interviews were conducted with a wide variety of institutional employees, ranging from the president to faculty members to student support staff. In addition, interviews were conducted with representatives from state governing boards, members of local school systems and community organizations "that possessed a direct and obvious relationship to student attendance and persistence at the case-study institutions" (Richardson & Skinner, 1990, p. 488), as well as 108 Black, Hispanic, and American Indian alumni of the ten institutions.

Based on their triangulation and analysis of the extensive case study data, Richardson and Skinner (1990) developed a model to describe "the process of institutional adaptation to resolve quality/diversity tensions" (p. 489). The authors'

proposed model included accountability measures aligned with state priorities that linked institutional progress on outcomes (e.g., improved participation and graduation rates among minority populations) with specific incentives and penalties. The model also incorporated monitoring systems to ensure recognition of progress, and to keep issues related to diverse student populations on institutional agendas. Richardson and Skinner argued against use of one-size-fits-all approaches for addressing outcomes related to diverse populations, and emphasized instead the need to tailor institutional practices to the specific mission and context of the campus:

Our model suggests that it is not the implementation of a particular program or policy that leads to success but rather the coordination of a wide variety of institutionally appropriate strategies distinguished by a simultaneous focus on achievement and diversity and by sensitivity to the unintended consequences of initiatives designed to enhance quality. (pp. 507-508)

Stout (1990), a senior contributing researcher on the *Ten Case Studies* project (described above) outlined four assumptions inherent to urban universities' adoption of early intervention strategies for precollegiate students of color: (a) the pool of traditional-aged Caucasian youth was shrinking; (b) enrollment trends projected that many urban institutions would have majority minority student populations; (c) increasing numbers of talented minority students were dropping out of high school; and (d) the notion that urban public schools "cannot, alone, identify and prepare urban minority youth for college in any genuinely substantial numbers" (p. 29). The *Ten Case Studies* project was one of the earliest studies of outreach initiatives funded by institutions, rather than the federal

government, and Stout reported findings relative to institutional perspectives on minority students:

1. Minority achievement is viewed as a preparation problem rather than a racial problem.
2. Campus environment is recognized as a critical factor in student...success.
3. Small numbers of minority faculty members and limited involvement in equal opportunity strategies by all faculty members are recognized as problems needing urgent attention.
4. There is visible evidence of administrative commitment.
5. Strategies for promoting the success of minority students (in predominantly white institutions), or for promoting the success of all students (in multicultural institutions), were comprehensive and systematic rather than fragmented.
6. The most progress has occurred in universities where institutional commitment and good educational practices are enhanced by a favorable state policy environment. (pp. 27-28)

Chaney, Lewis, and Farris (1995) were commissioned by the U.S. Department of Education to administer and report on the Survey on Precollegiate Programs for Disadvantaged Students at Higher Education Institutions. The researchers collected data during the fall 1994 semester, based on results reported by program administrators for the 1993-1994 academic year. The researchers obtained descriptive information from “programs at higher education institutions that are designed to increase the access of educationally or economically disadvantaged elementary and secondary students to higher education” (p. iii), and to compare the characteristics of Upward Bound (UB)

programs with non-UB programs. Potential respondents were randomly selected from a stratified sample drawn from the Postsecondary Education Quick Information System (PEQIS) database maintained by the NCES. A total of 1,615 respondents completed the survey, and completed surveys were collected from programs in all 50 states, the District of Columbia, and Puerto Rico. Chaney et al. also weighted the data sample to estimate the number of students served by similar programs nationwide, including both 2-year and 4-year schools, and collected data only from the outreach program with the largest budget at each institution.

Chaney et al. (1995) estimated, after weighting the data to extrapolate nationally, that 317,400 precollege students were served by the largest programs on each campus. “Of the students in the largest programs, 68 percent were from low-income families, 59 percent were female, 39 percent were black, and 29 percent were Hispanic (p. iii). The authors also noted significant differences between UB programs and other programs for disadvantaged precollege students. In comparing UB programs to non-UB programs, respondents from UB were:

more likely to rank the following services as being among their three most important: accelerated courses below the college level (35 percent versus 10 percent), other supplemental courses (44 percent versus 28 percent), and information about admissions and/or financial aid (56 percent versus 27 percent). (p. v)

Chaney et al. (1995) also noted that 78 percent of the program administrators surveyed listed increased likelihood of college attendance as one of their top three program goals for the students served. Upward Bound programs also tended to be more time-intensive

than other profiled programs: UB students spent an average of 433 hours per year accessing program services or activities, while students in non-UB programs averaged only 166 hours (Chaney et al.,1995).

Laguardia (1998) created a structured survey instrument and collected data from key stakeholders of school-college partnerships serving disadvantaged minority students to determine organizational characteristics within four categories: structure, funding, achievement of goals, and what data the partnerships collected. For inclusion in the study each partnership must have endured for five or more years, have objectives related to improved academic performance and college enrollment for minority and disadvantaged students, and involve several levels of educational institutions, to include at least one school district, one community or junior college, and one four-year college or university. Laguardia identified 21 such partnerships based on the review of five national partnership directories and multiple databases, and 16 of those partnerships were still active at the time of his study. Three representatives from each partnership were sent the 12-item survey, respectively representing the director or coordinator of the program, a K-12 stakeholder, and a higher education representative; of the 48 potential participants, 40 completed the surveys. The 40 respondents were asked about topics including organizational structure and leadership, how they defined and monitored program goals, perceived success in goal achievement, and what data were collected about the programs. Laguardia conducted tests of consistency within groups (multiple respondents per program) to determine agreement among stakeholders of each program, and means and frequencies were calculated for each survey item for all respondents.

The results of Laguardia's (1998) study suggested that most partnerships were established "in large part as a result of institutional initiative to increase the number of minority and disadvantaged students who will be successful in postsecondary education" (p. 178) and greater than 80 percent of the participants "indicated that their partnership defined and monitored their goals" (p. 177). Most participants also indicated that the partnerships studied "receive substantial funding" (p. 178). This finding, although inconsistent with typical outreach programs nationally (Fenske et al., 1997), is consistent with participants' responses demonstrating "significant executive support" for the programs (Laguardia, 1998, p. 178). Also, the survey results illustrated that the "leadership of one individual and collaboration between institutions were found to be the most influential factors in the formation of partnerships" (Laguardia, 1998, p. 178).

Laguardia's (1998) study did not provide meaningful empirical measurement or qualitative data associated with program success. Participants had the opportunity to respond to questions on a Likert-like scale focused on the success of various outcomes, and reliability of said outcomes as indicators of program success, but there was no explanation of how the respondents measured the success of the partnership on indicators such as improved academic preparation or promotion of institutional change. Further, Laguardia noted in his review of the literature that several elements must be in place to ensure a successful school-college partnership: "institutional commitment at the executive level... the existence of a formal written agreement; and the participation of executive leadership in the form of a partnership director and adequate financial support" (p. 177).

Perna (2002) conducted a descriptive analysis of data from the National Survey of Outreach Programs (NSOP), which was conducted by the College Board during the 1999-2000 academic year. The NSOP was built upon Chaney et al.'s (1995) NCES report on programs for disadvantaged precollege students, and expanded on its predecessor "by including more than just the largest program at each college or university, collecting data from entities other than colleges and universities, and collecting information describing program organization and services" (Perna, 2002, p. 67). The goal of Perna's analysis of the NSOP was to identify the characteristics of precollege programs serving marginalized populations, and to compare those characteristics to what was known about college access from the research literature at the time. Although the NSOP was focused solely on outreach programs, Perna utilized the three-stage approach to college enrollment (predisposition, search, and choice) proposed by Hossler and Gallagher (1987) as the primary theoretical framework to inform her analysis. Perna received usable responses from 1,110 programs in all 50 states, as well as Puerto Rico, Guam, and Micronesia, and the survey was "designed as a closed response instrument with eight sections: general information, program goals and services, program operation, program staffing, student characteristics, operating budget, program needs, and program outcomes" (p. 67).

The survey results included demographic information, and Perna (2002) noted that roughly three-fourths of respondents reported targeting low-income students, two-thirds targeted first-generation students, and two-thirds targeted students from minority ethnic groups; these categories were not mutually exclusive, as more than three-fourths of programs that served minority ethnic groups also focused on first-generation students.

Based on her review of the literature, Perna identified five “critical components” (p. 77) closely related to college enrollment, and noted that only one fourth of programs serving low-income, first-generation, and minority ethnic groups had all five of these critical elements in place:

Goal of college attendance (to facilitate predisposition), college tours, visits, or fairs (to facilitate search), goal of promoting rigorous course-taking (to facilitate predisposition and choice), parental involvement component (to facilitate predisposition and choice), and beginning by the 8th grade (to facilitate predisposition and choice via curricular planning). (p. 77)

Further, only 6% of such programs could be described as ideal, according to Perna; ideal programs implemented 11 of the most important elements derived from the college access literature (although the author acknowledged that further empirical testing was required to determine the relative importance of each component). In addition to Perna’s five critical components, the other six elements for ideal programs were: promoting college awareness, honing academic skills, increasing parent college awareness, providing assistance to parents with financial aid documents, training students for the SAT or ACT examinations, and providing tuition reimbursement or scholarships to program participants.

Although the NSOP data was collected more than a decade ago, there were ongoing efforts to provide updated information on outreach programs nationwide. The Educational Policy Institute collected data for the National Survey of College Outreach Programs (NSCOP) from more than 350 organizations or institutions, using the same instrument from the College Board’s NSOP in the year 2000 (EPI, 2012). Although the

stated goal of the NSCOP survey administrators was to conclude administration of the survey by the end of calendar year 2011, as of October 16, 2012, no release date for the NSCOP data and accompanying report had been posted (EPI, 2012).

Fenske et al. (1997) also asserted that early intervention programs vary greatly in scope and typically lack coordination with one another, and noted the lack of a uniform national clearinghouse to organize or track local, state, and federal early intervention programs. However, since Fenske et al.'s work was published, a national database has been established: "the National College Access Network (NCAN) and the Pathways to College Network (PCN) [collaborated] to expand, manage, and promote the National College Access Program Directory, a searchable online set of profiles of college access programs" (NCAN, 2011, para. 1).

More than a decade after Fenske, et al. (1997) reported on the lack of coordination between outreach and early intervention programs, little appears to have changed: Perna et al. (2008a) stated that the wide variation in program types across the five selected states suggests "that college-enrollment programs lack philosophical coherence, systematic and intentional policy development, and program clarity and distinctiveness" (p. 263). Perna et al. studied 103 state and federally funded college access programs across five states (California, Florida, Georgia, Maryland, and Pennsylvania) and created a typology which classified programs based on seven distinct variables: "purpose, components, participation requirements, funding level, implementation history, and alignment with enrollment literature" (p. 252).

Engle, Bermeo, and O'Brien (2006) conducted focus groups with 135 recent alumni of pre-college programs (Upward Bound and Talent Search) that served low-

income and / or potential first-generation students in Texas. The participants were enrolled in two- or four-year postsecondary institutions, and were interviewed in focus groups of 10 to 15 in one of six large cities across the state. The content of the focus groups centered on the impact of participation in pre-college programs on students' college aspirations, academic preparation, college knowledge, and transition into college. Student participants' responses to focus group questions helped Engle et al. identify three crucial steps that were the most helpful for them as they moved through the educational pipeline from high school to college:

1. Raising aspirations for college.
2. Navigating the college admissions process.
3. Easing the initial transition to college.

Overall, first-generation students say it is the relationships and trust they developed with pre-college program staff that allowed them to be receptive to the messages and services that these programs have to offer. (p. 5)

The three crucial steps described above by Engle et al. aligned with the three major categories of outreach programs, as described by Orr, Alcantara, Frazier, Kalinka, and Kaplan (2007) in *Boosters, Brokers, and Bridges: Real-world Ideas for College Access Problems*. The Lumina Foundation's McCabe fund provided financial resources and support to precollege outreach programs, and classified such initiatives into one of three broad categories: boosters, brokers, or bridges (Orr et al., 2007). Booster programs encourage college aspirations, broker programs provide (or help students access) services related to college matriculation, and bridges provide a link between secondary and postsecondary institutions, often in the form of summer academic programs.

Jarsky, McDonough, and Núñez (2009) conducted a case study of the Creating a College Culture project, a partnership focused on increasing college-going rates and academic achievement through collaboration between the Los Angeles Unified School District (LAUSD), the University of California, Los Angeles (UCLA) and the Achievement Council, a public interest organization. The cluster of ethnically diverse participating schools included eighteen elementary schools, five middle schools, and two high schools; 25,000 students were served, more than 50 percent who qualified as low-income. The project team identified nine key research-based college preparatory characteristics to be put in place at each school, and the LAUSD funded a new college coach position at each of the middle and high schools to focus on fostering these key characteristics.

Jarsky et al. (2009) interviewed six college coaches (three middle school and three high school) and four principals (two middle school and two high school) after the first year of the program's implementation, and the interviews "addressed a range of topics from respondents' perceptions of and experiences with the project to their understandings of the goals of the work... (as well as) the project structure and execution" (p. 362). Iterative grounded theory was used to analyze data from interviews, field notes from project meetings, and other materials related to the partnership.

Participants identified many challenges to promoting college-going cultures within the schools, including administrators who focused on other organizational priorities such as dropout prevention or did not support the goals of the project, teachers who did not believe that "the college message was worthwhile for their students" (Jarsky et al., 2009, p. 364), and skepticism from a variety of stakeholders about yet another

reform program that was not likely to be sustained. Although Jarsky et al. were unable to collect data on cultural change and academic outcomes after only one year of program implementation, the participants who believed they had made progress in shifting school cultures reported the necessity of clearly defined stakeholder roles and expectations, supportive administrators who were committed to obtaining the buy-in of faculty members, and including program components to foster family involvement.

The researchers also noted that Hispanic and African-American students often attended schools without a college-going culture, and their chances of attending college may have been further reduced by a school's lack of counseling resources (Jarsky et al., 2009). One college coach used the following analogy in describing attempts to create a college-going culture in urban middle and high schools in Los Angeles, within a system that had a high dropout rate, and did not consistently prepare students for postsecondary education. Her metaphor illustrated the potentially overwhelming challenges facing outreach programs tasked with preparing students left behind by the public K-12 system:

There's this guy and he's standing at the bottom of the waterfall. He's catching all these babies [that are] falling over the waterfall. And, everyone's going, "Yay! He said he was gonna save them." And... he keeps doing it, and he keeps doing it, he keeps saving these babies that are falling over the waterfall. And then finally somebody says, "Well, why don't we go up on top of the waterfall and see who's throwing the kids down there'... later it hits me like 'Oh yeah! Why don't we figure out the cause of this?'" (Jarsky et al, 2009, p. 363)

Assessment and Effectiveness. Within the research literature on precollege outreach to disadvantaged students, the only point around which consensus had been built

was that there was little consensus about which interventions and outreach program designs were most effective at promoting college access. Stout (1990) concluded that a critical issue within "the small scope of intervention efforts seems to be one of identifying what to do... well-meaning university officials are hard-pressed to know where and how to intervene and how to pay for the interventions once identified" (p. 30). Fenske et al. (1997) lamented the many challenges facing program evaluators who are trying to determine what impact, if any, interventions had on a student's decision to attend college. Given the students' widely varied and frequently troubled backgrounds, controlling for external factors was daunting: "Assessing the extent and influence of a student's environment on his or her educational development is at best an estimation" (Fenske et al., 1997, p. 76). Laguardia's (1998) instrument allowed program administrators to rate their own effectiveness, but did not include any methodology for quantifying or objectively evaluating such claims.

As Tierney and Hagedorn (2002) noted, "we have neither a good sense of which programs are effective, nor have we identified the characteristics of successful programs. Thus in our present state of knowledge we are unable to replicate success nor eliminate ineffective programs" (p. 2). In specific reference to the connection of families to their students' involvement in outreach programs, Tierney (2002) stated "my concern is that without evaluative frameworks for specific programs, time and resources are being spent on activities that might not be as important as family participation" (p. 603). Even Perna (2002), who confidently asserted the justifications in the literature for designing outreach programs around the 'critical five' and 'ideal 11' components, acknowledged the need for additional research to determine the relative importance of each component. Orr, et al.

(2007) described three common barriers to program evaluation, including a lack of staff members with expertise in record-keeping, lack of evaluation resources, and challenges inherent within following up with program alumni to track their educational outcomes. Further, Orr, et al. emphasized the paucity of evaluative data among college access programs: "Such work would be strengthened even more by evaluation research to gauge the college-going success of students served and thereby compare the effectiveness of... such programs" (p. 51).

Mentoring and FGLI Students

Bright-eyed Athene, assuming Mentor's form and voice once more, called Telemachus out of the palace to her side. 'Telemachus,' she said, 'your well-greaved companions are sitting at their oars, waiting for your word to start. Come; we do not want to delay the journey'. (Homer, n.d./2003, p. 25)

The origins of the word mentor have been traced to Greek mythology (Crisp & Cruz, 2009). Perhaps the best-known mentor in all of literature, Homer's character Mentor played a pivotal role in guiding Telemachus, son of Odysseus, in the epic poem *The Odyssey*. Mentor was one of Odysseus' oldest and most trusted friends, and provided Telemachus with the motivation and resources necessary to embark upon a journey to find his long-lost father. Throughout *The Odyssey*, as in the scene above, the goddess Pallas Athene often assumed the guise of Mentor, assured Telemachus that he had support, and encouraged him to take positive action towards his goals.

Among the many components of outreach programs designed to assist young people in their development, mentoring initiatives have proliferated. More than 5,000 mentoring programs serve over three million youth across America (DuBois, Portillo,

Rhodes, Silverthorn, & Valentine, 2011). There was little agreement on the definition of mentoring, however. Crisp and Cruz' (2009) critical literature review of mentoring research between 1990 and 2007 noted more than 50 definitions of mentoring within business, psychological, and educational research publications. Crisp and Cruz built their review on a previous mentoring literature review by Jacobi (1991). Crisp and Cruz stated that despite the variety of mentoring definitions, Jacobi noted three areas of agreement between mentoring researchers, which have been largely reinforced by the research since 1991:

First, researchers have concurred that mentoring relationships are focused on the growth and accomplishment of an individual and include several forms of assistance... Second, there is general consensus that a mentoring experience may include broad forms of support including assistance with professional and career development... role modeling... and psychological support... Third, there continues to be agreement within the literature that mentoring relationships are personal and reciprocal. (Crisp & Cruz, 2009, p. 528)

Notably, Crisp and Cruz found little agreement within the research literature regarding the specific activities that should be included for students within these broad forms of support.

Mentoring initiatives have often been created with the goal of improving academic achievement (Gándara & Mejorado, 2005), although the research findings linking such achievement to mentoring have been mixed. Campbell and Campbell (1997) used an experimental design to study a mentoring program at a large West coast university that paired faculty members with undergraduate students from minority ethnic

groups. Students who participated in mentoring were significantly more likely to persist, and had significantly higher GPAs than their counterparts who did not participate in mentoring (Campbell & Campbell, 1997).

Wheeler, Keller, and Dubois (2010) aggregated the results of three large-scale random assignment studies of school-based mentoring programs using meta-analytical techniques; the three studies were program evaluations of Big Brothers Big Sisters of America, Communities In Schools of San Antonio, and the U.S. Department of Education's Student Mentoring Program. Wheeler et al. found that when aggregating results across the studies using meta-analysis, "School-based mentoring can be modestly effective for improving selected outcomes (i.e., support from non-familial adults, peer support, perceptions of scholastic efficacy, school-related misconduct, absenteeism, and truancy). Program effects are not apparent, however, for academic achievement or other outcomes" (p. 1). Because (school-based) programs were linked to the academic calendar, the mentoring relationships that were established also tended to be less enduring than those forged through community-based programs (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011).

In a precollege mentoring policy brief, the Center for Higher Education Policy and Analysis (CHEPA, 2005) indicated that the link between mentoring and academic achievement was weak within the research literature, although mentoring programs can "certainly improve college-going knowledge and aspirations" (p. 17). There was acknowledgement within the CHEPA brief that certain programs had been linked to academic achievement, as measured through increased grade point average, but the assumption that all mentoring programs promote such achievement was false (CHEPA, 2005). Other findings from research on youth mentoring initiatives were mixed as well.

In Sipe's (1999) synthesis of the existing mentoring research literature, she illustrated that most studies of mentoring programs yielding significant positive outcomes focused on one-to-one mentoring. In contrast, Smith (2009) stated that a network mentoring model was more effective at promoting social and cultural capital than one-to-one mentoring. Smith's study utilized in-depth interviews with student mentees as well as university faculty members and administrators who served as academic mentors at a single institution. In addition, the multiple roles a mentor is expected to fill may themselves be at odds:

The literature suggests that the most effective mentors are those who are prepared to be a friend to the student, rather than a surrogate parent. However, when the goal of the program is to promote college going, the assumption is that the mentor will also provide monitoring and guidance related to schooling and college. These two roles may be in conflict. (Gándara & Mejorado, 2005, p. 100)

Theoretical Framework

Stake (1995) noted that case study research is an effective method for examining educational programs, and that the method "is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (p. xi). Patton (2002) described a well-constructed case study as both holistic and sensitive to context. Yin (2009) argued that unlike other qualitative research methods, a complete case study design must incorporate theory from the beginning. This is accomplished either through the development of a theory of the case being studied which will guide the overall design of the study, or through the use of "existing works (which) may provide a rich theoretical framework for designing a specific case study"

(Yin, 2009, p. 36). Anfara and Mertz (2006) illustrated usage of the theoretical framework, and noted its ability to “(1) focus a study, (2) reveal and conceal meaning and understanding, (3) situate the research in a scholarly conversation and provide a vernacular, and (4) reveal its strengths and weaknesses” (p. 192).

The theoretical framework that informed this study was social capital. Pierre Bourdieu (1985) defined social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (p. 248). Bourdieu's conceptual analysis articulated social capital as composed of two distinct elements: “first, the social relationship itself that allows individuals to claim access to resources possessed by their associates, and second, the amount and quality of those resources” (Portes, 1998, pp. 3-4). Dika and Singh (2002) credited Bourdieu as well as James Coleman, an American sociologist and educational theorist, with the development of social capital theory. Dika and Singh argued that the two principal uses of the theory in the research literature were due largely to the influence of Bourdieu and Coleman. Bourdieu's work led to a focus on access to institutional resources, and Coleman's work shifted the literature towards deeper examination of norms and social control (Dika & Singh, 2002). Stanton-Salazar (2004) defined social capital, as related to low-income minority students, in more concrete terms as: “those ‘connections’ to individuals and to networks that can provide access to resources and forms of support that facilitate the accomplishment of goals” (p. 18).

Perhaps the most well-known social capital researcher is Robert Putnam, author of the best-selling book *Bowling Alone: The Collapse and Revival of American*

Community (2000). Putnam created the Social Capital Index, a quantitative composite measure encompassing various factors linked to social capital, which included educational correlations related to student achievement data:

The Social Capital Index is highly correlated with student scores on standardized tests taken in elementary school, junior high, and high school, as well as with the rate at which students stay in school... in fact, our analysis shows that for some outcomes - particularly SAT scores - the impact of race, poverty, and adult educational levels is only indirect. These factors seem to influence the level of social capital in a state, and social capital - not poverty or demographic characteristics per se - drives test scores. (pp. 299-300)

The two Dakota states ranked highest on the Social Capital Index, and Putnam reported that Nevada ranked lowest on the Index.

Although the use of social capital as a research lens has become commonplace in education research, as in many other disciplines, Stanton-Salazar (2004) shared Portes' (1998) concern that the broad application of the concept to myriad fields and contexts can lead to improper application or loss of meaning. College enrollment researchers now include factors apart from the traditional economic model in their analyses, including social capital (Perna & Titus, 2004). Perna and Titus described this recent shift in their analysis of NELS data to examine differences in college choice by SES:

Some researchers (e.g., Perna, 2000; Perna & Titus, 2002) expanded traditional economic approaches to college enrollment to include measures of social and cultural capital as proxies for differences in expectations, preferences, and tastes for investing in higher education. Edward St. John and Michael Paulsen (2001)

argued that measures of social and cultural capital should be integrated into traditional economic approaches to account for the influence of non-monetary factors on college enrollment. (p. 506)

Social capital theory was also employed to illustrate disparities in educational achievement and attainment between different demographic groups, as in Ream and Stanton-Salazar's (2007) study of the impact of student mobility (changing schools for reasons other than promotion) on U.S. Hispanics:

Social capital among working-class youth (i.e., access, *via* social exchange, to middle-class educational resources) is never the norm. When it does occur, however, is usually requires extraordinary interventions within the household, the school, and the community. For disadvantaged youth, the existence of structural conditions that simultaneously operate to undermine resources and support is the norm. (p. 70)

In addition, in their book on school desegregation and racial achievement, Caldas and Bankston (2005) noted that many scholars believe that the heart of the black-white achievement gap may not be diminishing black social capital, "but that black social capital is in fact the answer to diminishing the gap" (p. 195).

Yonezawa, Jones, and Mehan (2002), in their study of the University of California at San Diego's precollege outreach efforts to ethnic minority students, noted the distinction between providing technical resources (e.g. tutoring or mentoring), and increasing access to social and cultural capital: "It is not getting university students to tutor underrepresented students that is singularly important, but the possibility that the relationship will provide. . . access to college students' cultural beliefs, orientations, and

norms about learning, life, and college" (p. 150). Such connections may also contribute to a student's integration within a campus community (Tinto, 1993). Tinto's theory of academic and social integration, which is also known as the theory of student departure, is comprised of three phases: (a) separation from the past, (b) transition, in which the individual begins to interact with new setting and people, and (c) incorporation in which the individual adopts the norms and expectations of the new group. Similarly, Astin's (1985) seminal theory of involvement can be summarized simply: "students learn by becoming involved" (p. 133). Pascarella and Terenzini (2005) related two of Astin's postulates to social capital:

Involvement requires the investment of psychological and physical energy in 'objects' of one sort or another (such as tasks, people, or activities), whether specific or general.... [and] the amount of learning or development is directly proportional to the quality and quantity of involvement. (p. 53)

Pascarella and Terenzini's extensive analysis of the existing literature on student success suggested "that the level of student involvement and integration in any of the components of an institution's academic and social systems can be a critical factor in students' persistence decisions" (p. 426).

As Stanton-Salazar (2004) stated, social capital theory offers a "powerful lens" (p. 18) through which to examine the educational experiences of marginalized students. Too often these students are expected to overcome institutional barriers when they may already be operating at a disadvantage within the system, and do not have the necessary resources to thrive (Jones, Yonezawa, Ballesteros, & Mehan, 2002). Social capital, or its

lack, is therefore a critical element for outreach programs to consider in addressing college access for first-generation, low-income students.

Summary

This chapter summarized research related to precollege outreach, early intervention, and mentoring programs that address college access for first-generation, and/or low-income (FGLI) students. Beginning with the federal TRIO programs in the 1960s, initiatives across the country have provided a wide variety of programs and services to aid these students in accessing postsecondary education, which often include mentoring. Assessment of such efforts has been minimal, and there is little consistency or coordination among outreach programs. Given its salience to the demographic groups served by these initiatives, social capital theory functions well as a theoretical framework for future research on precollege outreach and mentoring.

CHAPTER III: METHODOLOGY

This chapter provides descriptions of: the research design, the case under study, the theoretical framework, participants, data sources, data collection methods, data analysis procedures, and limitations. The research consisted of a case study of mental models of the mentoring component of the Dean's Future Scholars (DFS) program held by program initiators and mentors. The four research questions that guided this study were:

1. What mental models do the mentors hold about the role of mentoring in the lives of their mentees?
2. How do the mentors' mental models influence their mentoring strategies?
3. What mental models do the program initiators hold about the mentors' role with the mentees and mentoring strategies?
4. What is the relationship between the mental models of the mentors and program initiators?

Research Design

The research study was a single case study design utilizing interviews and related documents and studies. Stake (2005) encouraged case study researchers to ask, "Which issues seek out compelling uniqueness?" (p. 448). Stake defined an intrinsic case study as one undertaken not for its illustration of a problem or because it is representative of other cases, but because of an intrinsic interest in the case itself. Yin (2009) suggested using a single-case design for a unique case. In the case of DFS, the singular, unique case was the mentoring component of the program. The research questions explored the relationship between the mental models of the mentors and program initiators. Those

who designed and administered the DFS mentoring program were categorized as initiators, and those who provided direct services were categorized as mentors.

The Case

The case study focused on the mentoring component of the DFS program. In 2000, DFS was created by the Dean of the College of Education (COE) at the University of Nevada, Reno (UNR). Nevada's DFS program was based on an existing program of the same name at Texas Tech University. Its original purpose was to recruit students from first-generation, low-income (FGLI) backgrounds to become teachers through the UNR COE, to reflect the increasing diversity of the students served by K-12 schools in Nevada (personal communication, P. Miltenberger, July 1, 2010). The DFS program served FGLI middle school, high school, and traditional college-aged students from Reno and Sparks, Nevada. The twelve-year span from the founding of the program through the retirement of the program's second director was the timeframe explored. Yin (2009) recommended the selection of a meaningful time boundary for the case study.

The majority of program participants were selected to become DFS students while in the sixth grade by teachers, counselors, or administrators at one of seven Title I elementary schools within the Washoe County School District (WCSD) (Grayshield, 2006). Title I of the Elementary and Secondary Education Act of 1965 provides federal funding for schools and local education agencies in low-income communities (U.S. Department of Education, 2011). Selection criteria changed over time as the program evolved. Grayshield noted that students were selected "based on socioeconomic status as well as having good grades, leadership skills, and a desire to go to college" (p. 30). As of 2010, the following five criteria were used for admission to DFS:

- Student identified in sixth grade
- Student came from a low income family
- Neither parent had attained a college degree
- Demonstrated academic potential
- Good citizenship, active participation (DFS, 2010)

There were some exceptions to the criteria listed above. Some students joined the program in later grades because a family member or friend was already involved with DFS. School counselors or administrators familiar with the program approached the director to request that a student other than a sixth grader receive services from the program, often because the student moved to a school served by DFS after sixth grade.

The majority of program participants self-identified as Hispanic (personal communication, P. Miltenberger, July 1, 2010). DFS students continued in the program through their senior year of high school, and some were subsequently selected to be employed by DFS as mentors after they enrolled at UNR as freshmen. Potential mentors were identified as those who demonstrated empathy, and seemed likely to build helping relationships with mentees; this element was noted by Tom, the second DFS director, in his interview.

The DFS program consisted of five primary elements: (a) weekly or biweekly mentoring for DFS students; (b) summer programs (including math classes and tutoring, cultural events, and a retreat at Lake Tahoe); (c) information on how to prepare for, gain access to, and pay for college; (d) college credit classes; and (e) job placement in various offices across the UNR campus for junior and senior high school students. Each May, a new cohort of fifty sixth-graders (rising seventh-graders) was admitted to the DFS

program to begin their first summer program. During the fall of their seventh grade year, students became integrated into the mentoring component; the program was designed to provide mentoring from seventh grade through high school graduation, and into college.

For the DFS students in the class of 2010 (cohort five), 91 percent graduated from high school, and 87 percent of the cohort enrolled in college (Garcia, 2012). In contrast, the WCSD Data Profile prepared by the Education Alliance of Washoe County (EAWC) indicated that the district-wide adjusted cohort graduation rate stood at 63% for the class of 2010, the class with the most recently available data (EAWC, 2010).

The DFS mentoring component was described in an annual report submitted to the academic leadership of the University:

UNR graduate and undergraduate student employees mentor/tutor DFS students each week at their middle or high school. Mentoring consists of setting goals, choosing a rigorous academic course load, and offering assistance with academic needs as necessary to support the academic success of each student. Most of the mentors are former DFS participants who provide positive role models and are examples that hard work, planning, and persistence pays off for low-income students. (Sparkman, 2010, p. 1)

Most mentoring programs depended on adult volunteers or peer mentors, and struggled to maintain consistent connections with students (Gándara & Mejorado, 2005). As Mejorado (2000, as cited in Gándara & Mejorado, 2005) noted, fewer than one third of mentoring relationships lasted beyond one year. The DFS mentoring component is uncommon in that its mentors are paid staff members, relationships are maintained with mentees over many years, and most of the program's mentors are former DFS mentees.

The DFS mentoring component has been perceived by educators at the secondary and post-secondary levels to be highly successful, and for this reason the mentoring component was considered the case for this study.

Theoretical Frameworks

In addition to the theoretical framework of social capital, as described in chapter two, the study was viewed through a constructivist grounded theory lens. Bryant and Charmaz (2007) defined constructivism as:

a social scientific perspective that addresses how realities are made. This perspective assumes that people, including researchers, construct the realities in which they participate. Constructivist inquiry starts with the experience and asks how members construct it. To the best of their ability, constructivists enter the phenomenon, gain multiple views of it, and locate it in its web of connections and constraints. Constructivists acknowledge that their interpretation of the studied phenomenon is itself a construction. (p. 607)

Charmaz (2006) noted that a constructivist grounded theory approach “places priority on the phenomena of study and sees both data and analysis as created from shared experiences and relationships with participants” (p. 130). Further, the theory generated by analysis of the data relies upon the perspective of the researcher, and cannot exist outside of this perspective (Charmaz, 2006).

The third lens utilized in constructing the study was that of mental models. Senge (2006) described mental models as the “deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action” (p. 8). Senge noted that mental models have great power in affecting our actions,

in part because they affect our perspective: “Two people with different mental models can observe the same event and describe it differently, because they’ve looked at different details and made different interpretations” (p. 164). Mental models are particularly influential within organizations, and can have powerful positive effects when they are held up to scrutiny for the purpose of learning, or powerful negative effects when mental models that are disconnected from reality become entrenched within the organization (Senge, 2006). This study explored the mental models of the research participants related to the mentoring component of DFS. Stake (2010) further linked constructivism and mental models, writing:

In qualitative research, many of us take a constructivist view that there is no true meaning of an event; there is only the event as experienced or interpreted by people. People will interpret the event differently, and often multiple interpretations provide a depth of understanding that the most authoritative or popular interpretation does not. (p. 66)

Participants

Participants from two key groups were interviewed to provide a depth of understanding and to enhance the credibility of the study: “to enhance credibility, you choose interviewees who are knowledgeable, whose combined views present a balanced perspective, and who can help you test your emerging theory” (Rubin & Rubin, 2005, p. 64). A total of twelve participants were interviewed for this case study, and they are referenced by pseudonyms throughout this dissertation. Data from interviews with three program initiators and nine program mentors were analyzed. Initiators included professional or former graduate student employees of the College of Education (COE)

who created or directed the DFS program. Of the three initiators interviewed, two were males, and one was female. Two of the initiators identified as Caucasian, and one identified as Native American. One initiator held a Ph.D. in educational leadership, one held a Ph.D. in counseling and educational psychology, and another initiator held two Master's degrees, one in counseling and one in educational leadership. The initiator group included: the former Dean of the College of Education who created DFS using a model from the institution where he previously worked; the first director of the program, who led the program as a graduate assistant in the College of Education; and the second director of the program, who was a retired counselor from the public school district where the program was located.

A list of current and former DFS mentors was obtained from the DFS program director. The list included both former DFS students who completed the program and became mentors, as well as individuals who had no prior involvement in DFS and were recruited by program initiators to serve as mentors. Many of these non-DFS students were enrolled in graduate programs in the COE. The 35 potential participants were contacted via both email and telephone in numerical order. Twelve mentors agreed to participate. However, data from three of the mentors interviewed were later excluded from the study because they had not served as mentors for a minimum of two years. As a result, data from nine mentors were analyzed.

Mentors included both former DFS students who completed the program and became mentors, as well as individuals who had no prior involvement in DFS and were recruited by program initiators. Of the nine mentors whose data were included in the study, five were females and four were males, and their ages ranged from 21 to 38. Three

mentors identified as Hispanic, three mentors identified as Asian, one mentor identified as a Pacific Islander, another mentor identified as multi-racial (African American and Caucasian), and one mentor identified as Caucasian. Four of the mentors interviewed were undergraduate students, four were graduate students (three Master's students and one doctoral student), and one mentor had completed a Master's degree and was a working professional at the time of the study. The four undergraduates were majoring in elementary education, criminal justice, mathematics, and information systems. All four graduate students were majoring in educational leadership, and the working professional held a Master's degree in educational leadership.

Five of the mentors had been recruited as sixth graders and completed the entire DFS program as middle and high school students prior to becoming mentors in college. Of these, one was a member of the first cohort (2000), three were members of the second cohort (2001), and one was a member of the fourth cohort (2003). Two of the mentors interviewed joined the DFS program during their junior year of high school. Two mentors were recruited from outside the program: one initially served as a math tutor for DFS students before later becoming a mentor, and another was recruited to manage accounting for DFS and was subsequently offered a mentoring position.

Data Sources

Three data sources were included in this study. In-depth, intensive interviews were conducted with the key DFS stakeholders described above: three program initiators and nine mentors. A review of transcripts from an unpublished study of DFS mentors (Miltenberger, Smith, & Serra, 2009) informed the development of the research questions and interview protocols. In addition, six types of extant texts associated with the

evolution of the DFS program were reviewed. Charmaz (2006) defined extant texts as “varied documents that the researcher had no hand in shaping” (p. 35), and noted that such texts are treated as data although they are often produced for non-research purposes. The documents reviewed for this study included: (a) narratives within five grant applications, (b) six annual program reports, (c) email correspondence to and from the Dean regarding DFS, (d) DFS marketing materials, (e) periodical articles about the DFS program, and (f) presentations to stakeholders outside the university.

Data Collection

A research protocol was submitted to, and approved by, the University of Nevada, Reno Institutional Review Board (IRB). Each participant was interviewed individually via Skype computer software, either through a Voice Over Internet Protocol (VOIP) call, or through an online videoconference. Two participants were interviewed via online videoconference; however, technical challenges with the software contributed to multiple videoconference disconnections. The remaining participants were interviewed via VOIP calls for this reason. An audio recording of each interview was made using WireTap software. Each participant was interviewed once at a pre-arranged time. Interview questions were semi-structured, as recommended by Patton (2002). All interviews were informed by Dyson and Genishi’s (2005) assertion that “even the most formal interviews – scheduled in advance and with some guiding questions – are conversational and narrative in style” (p. 76).

The program initiators were identified through consultation with the DFS program’s faculty advisor, who had been involved with the program since its creation in the year 2000. The three initiators identified were contacted via email. All three initiators

indicated an interest in participating, and all three completed an interview. The three program initiators were asked about: (a) the purpose of including a mentoring component within DFS, (b) their role in the design of the mentoring component, (c) their understanding of the influence of mentoring on mentors and mentees, and (d) their perception of whether the mentoring component should be changed. The initiator interview protocol is in Appendix A.

A list of 35 current and former DFS mentors along with their contact information was obtained from the DFS program director. The mentors were contacted via email, and 12 responded to indicate their interest. Seven interviews were scheduled through email correspondence, and five mentors received follow-up phone calls to schedule an interview with the researcher at a mutually agreeable time. Nine of these interviews were included in the study (see Participants, above). The mentors were asked about: (a) their understanding of the purpose of the mentoring component, (b) their relationships with mentees and other mentors, (c) the influence of the mentoring component on mentees and mentors, and (d) their perception of whether the mentoring component should be changed. These topics were chosen to help unpack the mental models of the initiators and mentors that directly related to the research questions. The interview protocol for mentors is in Appendix B.

The interviews were conducted over a period of five weeks. The shortest interview lasted 35 minutes, and the longest interview lasted 79 minutes; the average interview duration was 53 minutes. Each participant's interview was transcribed verbatim into an individual Excel spreadsheet. The three initiators were interviewed first, and their interviews were transcribed and reviewed before the mentor interviews were conducted.

The initial analysis of the initiators' interview data informed some prompts within the mentor interviews. The extant texts were obtained on loan from the personal archive of the Dean who created the DFS program. The researcher requested these documents from the Dean prior to the development of the study's research proposal.

Data Analysis

Yin (2009) posed multiple strategies for analyzing case study evidence, and stated, "the first and most preferred strategy is to follow the theoretical propositions that led to your case study" (p. 130). The research questions for the study were informed by these theoretical propositions, but as Charmaz (2006) asserted, "we do not force preconceived ideas and theories directly upon our data. Rather, we follow leads that we *define* in the data, or design another way of collecting data to pursue our initial interests" (p. 17). Stake (2010) categorized "data that immediately, by themselves, seem relevant (as) 'interpretive data,' and those that become relevant only when mixed in with lots of other data are 'aggregative data'" (p. 91). Data coding was informed by Stake's perspective, as well as Dyson and Genishi's (2005) recommendations to follow informed hunches, to remain focused on the developing narrative even as the data set is reduced, and "to probe beyond the behavioral descriptions, considering the social meaning or importance of what's happening" (p. 85).

Data analysis was further informed by Charmaz's (2006) strategies for constructivist grounded theory coding. Charmaz outlined three primary stages of the coding process: initial, focused, and theoretical coding. Initial coding includes reading for conceptual understanding and to identify initial themes, followed by line-by-line coding to more fully flesh out themes and to compare data (Charmaz, 2006). Focused coding

entails “using the most significant and / or frequent earlier codes to sift through large amounts of data” (p. 57). Theoretical coding defines relationships between the themes generated by focused coding, and “aid[s] in making [the] analysis coherent and comprehensible” (Charmaz, 2006, p. 63).

The transcripts were initially reviewed in the order in which the interviews were conducted. Each interview was read once in its entirety for conceptual understanding without recording any memos. During the second reading of each interview, participant-specific memos were written to code examples from the data to potential themes. Following the second reading, the process became more fluid, and interview transcripts were reviewed based on potential thematic codes rather than the order of the interviews or demographic considerations. After identifying specific quotes that potentially supported a constructed theme, the quotes were sorted into separate spreadsheets for further comparison and review. Given the shared experiences within groups, initiator responses were compared with other initiators, and the mentors’ responses with other mentors, rather than constructing themes for all participants at once. Preliminary themes were developed after the focused coding stage, and these themes were honed into theoretical constructs through additional examination of the data and comparison of mental models both within participant groups and between participant groups. As Stake (2005) stated, triangulation of descriptions and interpretations was not a step within the analysis, but a continuous process throughout.

Summary

This chapter described the methodology of the research study. A single case study design was employed to study the mentoring component of the Dean’s Future Scholars,

an educational outreach initiative for FGLI students. The case was viewed through three theoretical framework lenses: social capital, constructivist grounded theory, and mental models. The participants included three program initiators, and nine program mentors. Three data sources were analyzed using Charmaz' (2006) constructivist grounded theory coding techniques: transcripts of existing mentor interview data, intensive interview data collected for this study, and extant texts related to the program's development. The results of the study are described in chapter four.

CHAPTER IV: RESULTS

In this chapter, the results of the case study are presented. The first section includes a narrative of the development of DFS from the perspective of the program initiators as revealed in the theme, “trusting the people”. The second section identifies two major themes that were constructed from the mentor interviews. The first major theme was “DFS changed my life”; two subthemes were constructed within it, “I can go to college”, and “social capital”. The second major theme was “I want to help others”, and three subthemes were constructed within it: “relationship building”, “shared background”, and “commitment”. Very little data related to mentoring was found through review of the extant texts, apart from brief descriptions of the mechanics of the mentoring program intended for stakeholders from outside of DFS.

Trusting the People: Initiators and the Development of DFS

The development of the DFS program was revealed through interviews with three key program initiators, as well as review of extant texts including documents from the Dean’s personal archive and news articles from local media outlets. When the Dean came to Nevada to lead the College of Education in 1998, he was struck by the lack of diversity in the college student body. It became one of his top priorities to recruit and train teachers and counselors who would reflect Nevada’s increasingly diverse population. The inspiration for creating DFS came from the institution where he had worked immediately prior to accepting the position of Dean at Nevada. The program he emulated was fundamentally a booster program of the same name. DFS at Nevada was based on this booster model.

The Dean noted that other mentoring programs faced challenges in maintaining consistent contact with students using models reliant on volunteers rather than paid staff. Because of this, the Dean decided to dedicate financial resources to provide services for students. “We knew from the beginning that the type of services we could provide would be dependent on the resources that we had available, because basically we were supporting it with a 20-hour a week graduate assistant”. He also asked a member of the faculty to serve as advisor to the program and provide research on outreach and college preparation programs. The Dean, along with a graduate assistant and the DFS faculty advisor, began recruiting sixth-grade students in the year 2000.

During the initial stages of the program, two different graduate assistants and the faculty advisor worked directly with the Dean to make contact with Title I schools in Washoe County, and to organize the recruitment and selection processes for the first group of students. The Dean recalled, “In those early days, it was simply identifying 50 kids from six Title I schools, bring them on campus, and try to stay connected with them”. Michelle was the third graduate assistant hired to work for DFS, and she subsequently became the program’s first director while still employed as a graduate assistant. The Dean stated he believed that Michelle shared his vision for the program, and gave her the reins as the program director so that he could focus on the many other demands of running the College. Despite the initial lack of resources, Michelle recalled that “we all shared the common vision: help these kids get to college in a real way, understanding that they dealt with a lot more situations than other kids might deal with because of their demographics”. Michelle also emphasized that making a serious, positive

impact on the students would require far more contact, and resources, than what had been in place.

Michelle enrolled in a School Counseling seminar taught by Tom, who also worked at one of the initial Title I schools involved with DFS. They discussed the need for more professional support within DFS for students and parents. In 2002, after Tom retired from the school district, he volunteered for the program and was subsequently offered a part-time appointment to work with DFS in a counseling capacity. Both the Dean and Michelle gave tremendous credit to Tom, and noted how he also shared the common vision, and had a passion for helping students. After Michelle completed her doctorate, the Dean appointed Tom the second program director, albeit part-time. Tom's recollection of the early days of DFS reflected program's 'booster' focus to develop students' college-going aspirations:

When we first started there was no mentoring... We brought the kids on campus and they found someone who was diverse at the University who would talk to the kids and say 'hey, look, I went to college' and give their life story. We'd feed them a nice lunch, and then send them home and say, 'OK - we'll see you next year'.

There was no real follow-up with the kids.

In 2002, the Dean was able to secure a \$50,000 grant from USA Funds that allowed DFS to become more than an annual booster event. Sparked by the USA Funds grant, Michelle implemented the first summer program:

We brought those kids to campus every day, and we provided them with services and built relationships with them. I hired low-income [Federal Work-Study]

college students from the different ethnic [organizations] so that... 50 percent of the cost would be provided by the university.

Although the initial consideration for hiring low-income students was a financial one¹, the seeds had been planted for what would become a key component of the mentoring program: employing students with ethnic and socioeconomic backgrounds similar to the students served by DFS.

DFS had gained resources and momentum, but its direction and focus were still in question. Without a strategy or a program history to inform their practice, the staff did their best to help their students, as Michelle recalled:

I don't know if I could do anything differently, because I didn't really know what I was doing when I got in there [laughter], I just had a lot of latitude... It was just such a beautiful model that [the Dean] introduced to us, and he allowed me a lot of space to create.

Although the mentoring program during the school year built upon the relationships started during the first summer program, Tom also noted the lack of structure in the early days of the mentoring program. “Honestly, it was a lot of floundering for a while, because we didn't know what was going to be effective with the kids. It took us six years to really know what the hell we were doing [laughter]”. In Tom’s view, the Dean’s patience was commendable - and rare for a senior academic administrator:

You're recruiting a kid this year, and we don't know for six years if they're successful or not, because we don't know if they're going to graduate high school. So it was a pretty amazing deal, I think, by [the Dean] to believe in the process... that he had the courage to hang with it as long as it took to get some success.

¹ Schools and employers typically pay up to 50 percent of a student’s wages through the Federal Work-Study (FWS) program (U.S. Department of Education, 2012).

The Dean's strong belief that he had the right people in place to lead the program was built upon the commitment to his vision for DFS shared by Michelle and Tom:

I relied very heavily on good people who really caught the vision and were deeply committed to the process. With [Michelle] and the connection she had with [Tom]... and [Tom] has such an absolutely big heart, he got it immediately with respect to what we envisioned with the program.

Michelle indicated that her personal experiences as a Native American FGLI student reinforced the need for commitment, to ensure that DFS was a consistent source of support for students. "I came up on the reservation, with numerous programs and they would come and they would go, and we would see people then we wouldn't see people, so I wanted this to be different than that". The Dean recalled student testimonials about the impact of the program in their lives, and how the students' voiced their appreciation for the consistent, long-term commitment the program staff demonstrated:

Some comments from students were, 'I feel safe', and 'I feel like it's a family'... Somebody who was there on a regular basis, reaching out, demonstrating empathy and understanding, a willingness to engage with them over the longer term, unlike programs that sort of reach out to 11th or 12th graders, and by that time it's effectively too late.

As DFS was beginning to expand beyond a booster program, Tom worked with the faculty advisor to research best practices in the college access literature: "What we were doing, well there was no research saying that that stuff works. So we started to look at what does work". From this research, processes eventually evolved within the program, including academic advising to ensure rigorous high school coursework; academic

support including tutoring, as well as time management and study skill development; extensive college admissions and financial aid knowledge; and increased time spent by mentees on the university campus.

In 2006, six years after the program began, students from the first DFS cohort of sixth graders began to enter college, and many were recruited to serve as DFS mentors. Tom recalled this as a key moment in the program's development. "[Before 2006] there weren't really staff that we could hire who really knew about these kids and who could help them until the first group of kids got into to college so they could mentor. To really get good at it took us six years". As the first DFS cohort prepared to enter college, Tom asked them whether the program had helped them to succeed in high school. The mentees emphatically agreed that DFS was a critical factor in their achievement, and many noted that they would not have attended college at all without DFS.

More than any other factor, the mentees told Tom, the relationship with their mentor was what helped more than anything else. "What really made a difference was being able to have a relationship with someone who cared about them. The kids talked about having somebody who understood their situation, understood their challenges, and who wouldn't give up on them". Over time, the consistent contact became strategically linked with follow-up on specific short- and long-term goals. As Tom stated, this focus gave the mentees direction and motivation, and a sense of accountability to both their mentor and to DFS.

[Mentors] need to have the skills to help the mentee to set short and long-term goals: we didn't do that initially. Let's write their goals down, let's evaluate them,

and hold the kid to them. We're trying to get our mentors to be really specific with the kids on what to do, and when and how to do it.

Tom noted that DFS staff members have recognized that students have different challenges in their lives, and develop at different rates. If a student is willing to make an effort, Tom said, “we don't give up on anyone... Just give me some great kids who want to go college, first-gen, low-income kids. Whoever you send us we'll work with”.

Most DFS mentors who participated in this study were FGLI students who experienced the DFS program as mentees. The Dean stated that although committed, empathetic mentors can have tremendous positive impact on their mentees irrespective of their SES, ethnicity, or generational status, mentors that have a shared background with their students can be even more effective:

The students who serve as [DFS] mentors and tutors look like and *are* like the kids they are mentoring. I think that is very powerful: it's not just middle-class white kids or white adults coming on board for a short period of time, it's kids who have been there and done that, you know? [laughter]... To have kids who have come through that process, that's what I would describe as a plus factor.

Similarly, Tom emphasized empathy over ethnicity, but also acknowledged the additional challenge that the lack of a shared background can create:

Right now we have a couple of blonde girls that work for us. The kids love them and they'll do anything for them, but initially they see, 'Oh, here's a blonde rich girl,' and they'll push back. But given a little time they work through it... [You need] the ability to put yourself in their shoes for a bit. It helps if you've overcome some adversity. I don't think you have to be first-gen and low-income to help a

first-gen low-income kid, but you have to make them believe you care about them... Because if you have that, you'll say, 'OK, you said you were going to do this, did you do it?' And they'll do it for you - they'll do it for their mentor.

One of the original goals of the program was to prepare students from diverse backgrounds for service as teachers, to reflect the changing demographics of communities across Nevada. The Dean gave an annual speech to the DFS students, and it included the three primary goals of the program. At the beginning, the three goals were: (1) you can go to college; (2) you can go to the University of Nevada, Reno; and (3) you can be a teacher. These goals implied the presumptive goal of high school graduation. As Tom recalled, early in the program's history students were selected for DFS, in part, because of their interest in teaching. Over time, the students' views and career interests changed. Tom remembered conversations with the Dean on the topic:

So the initial groups were all kids who told the Dean or told somebody that they wanted to be teachers, and those were the kids that got picked. So [the Dean] would ask me, 'So, are the kids going to be teachers?' Well, no: some are, but they change their minds of course... We are doing lots of active things to get kids to become teachers, but whether it takes, I don't know. I think it will.

Michelle shared an anecdote of an early gathering of 15 DFS students at a middle school. She brought them all together to give them an overview of the program. "So you're DFS students, and you're wondering why I called you down. I just wanted to introduce myself and congratulate you on all wanting to be teachers! They all looked at me like, 'we don't want to be teachers' [laughter]". Once the students began college, very few elected to

pursue teaching as a career path, as the Dean had envisioned, and it became an ongoing concern for him professionally:

As they began to get into college and take on majors, very few would get into education [groans]... [Tom] and I would talk on occasion: 'How can we sell the program if they aren't going into education'? Finally I just accepted that the goals were you can go to college, you can go to UNR, and you can become a teacher *or* a doctor, a nurse, an engineer, or anything else.

At the time of the study, both Tom and the Dean noted that there was one DFS graduate serving as a teacher at a high school served by DFS.

Although the number of DFS students who became teachers was less than the Dean envisioned, many of the mentors had altered their majors or career goals to focus on helping professions after their experiences as DFS mentors. The Dean noted his relief at this outcome, particularly because it indirectly fulfilled the goal of helping FGLI students become college-educated, so they could help other students achieve:

The unintended consequence that we were able to relate back to education is that these... mentors, once they graduated, are now getting into the master's program in Ed Leadership, wanting to get into college student services... Once they began to get engaged with the program, they suddenly wanted to get into a helping profession, into counseling, into student services.

The Dean was also a professor of educational leadership. He recalled teaching a graduate course in which three former DFS students were enrolled, and said, "every time I saw those young women, I was just bursting with tremendous pride. Even now I can mist up thinking about that".

Tom also noted changes in the mentors' career goals. Although their experiences within DFS may not have motivated them to become teachers, many mentors wanted to make a positive impact in their communities after making a difference in their mentees' lives. Tom said, "I've seen kids who were going into business and they're going, 'Oh no, I want to be a school counselor', or 'Because of the mentoring, I really feel like I can make a difference for the kids'". For Michelle, DFS affirmed her career path in counseling, rather than altering it. Having completed both Master's and Doctoral degrees in Counseling, Michelle was unequivocal about the program's importance in her professional development, particularly in terms of applying theory to practice in a real-world setting:

DFS was absolutely the most powerful part of my counseling education because everything I learned about anything I used to try to build this program. It was a really powerful learning experience for me.

In 2008, the Dean and Tom were able to create experiential learning experiences for DFS students. As the mentees progressed through high school, Tom noted that the number of students enrolled in the summer program was declining. He learned that many students were expected to work during the summer months to help support their families. The Dean had a contact who worked for the City of Reno's youth work program, and discovered that the City administrators were struggling to identify youth eligible for a federal Workforce Investment Act (WIA) grants. Tom and the City administrators established a subcontract enabling DFS students to work on campus while attending the summer program, which was financed by WIA funds.

The following year, the City of Reno turned over the grant to DFS. Additional funds became available in 2009 through the American Recovery and Reinvestment Act (ARRA). The ARRA funds, administered by Nevadaworks, enabled the creation of 50 work sites on campus. DFS students who were juniors and seniors in high school worked in a wide variety of university offices as summer interns, at no cost to the university. The students were often able to begin their freshman year of college already having secured student employment through their internship site. Tom said, “We realize if they can become connected to university staff that they have a much better chance of staying on campus... It's a way for them to stay connected”. Although the program had continually added new services to become even more comprehensive, Tom emphasized the highest priority for DFS: “The mentoring is the cornerstone, it is the foundation program. Without that relationship building, without that consistent connection with the kids, none of the rest of it would work”.

More than a decade after the first students were recruited, both the Dean and Tom noted that DFS had expanded far beyond its original status as a booster program to become both a broker, providing services related to college access, and a bridge, serving as a direct link between high school and college. In addition to mentoring, the program has also provided assistance with selecting rigorous high school coursework, tutoring, aid in paying and preparing for standardized testing, access to summer school coursework to obtain high school and college credits, guidance in applying for financial aid and completing college admission materials, as well as job placement in a paid summer internship program for high school juniors and seniors in positions across campus.

DFS Changed My Life

All of the mentors interviewed noted the positive impact of DFS in their lives. The theme was articulated through a shift in mentors' self-perceptions, as well as through the subtheme "I can go to college". For the mentors who had personally experienced the program as former DFS mentees, those experiences informed their understanding of mentoring. The review of DFS annual report documents showed that DFS had helped to support hundreds of students since the year 2000, and there were more than 400 students involved from sixth through college when the interviews were conducted. Grace summarized how the mentors provided direct support to DFS students:

I work with first-generation, low-income students from all sorts of diverse backgrounds, and I help them get to college. I will help them with any academic services they need, get tutors for any areas they need, and I'm there if something goes wrong in their family. Maybe they need an extra outlet, and also I'm an added support and role model for the students.

All of the mentors interviewed noted the substantial positive impact that involvement with DFS had on their lives. Tala reflected on his experience as a mentor and its impact on his maturity. "I have a lot of empathy for them because I understand what they're going through... I'm able to understand them, to not judge a book by its cover; these kids definitely taught me patience, stuff like that that you can apply to anything".

Miguel spoke about the shift in his own view of education through his experiences with DFS. He grew up in a rural area where many of his peers dropped out of high school, and very few went to college. Miguel's sister became a DFS mentor while Miguel was still in high school, and her example, along with encouragement from Tom, helped him to see college as a possibility and as a pathway to a better life.

DFS has not just changed my life, but so many people. Education makes a difference in who you are, who you become, and what you want to achieve... I'm more resourceful [now], I know how to talk to people, help people. [DFS] has given me so many opportunities to work with students who, like me, didn't have any knowledge of what's available to them.

Rick joined the DFS staff having already completed his bachelor's and two master's degrees. For him, the program's impact was less about educational resources and achievement, and more about his view of himself and how he interacts with people. When he first took on his mentoring role, Rick viewed himself as the teacher, with an agenda for how to help his students succeed academically. Ultimately, his students taught Rick about himself:

DFS has changed me as a person entirely. I'm a completely different person, it's the best experience I've ever had in my life. It's been a very emotional experience, to build relationships with these kids... they've made me a better person, seeing how they care, and the kind of community they create, it's made me more conscious about things I do.

I Can Go to College. Most mentors interviewed shared experiences within DFS that overlapped between their years as DFS mentees, and their later roles as mentors: “I can go to college” was constructed as a subtheme within “DFS changed my life”. Multiple mentors recalled that they did not consider college a realistic possibility before becoming involved in DFS, and mentors also noted that this was a common perception among their mentees. The experiences that helped some participants get to college also shaped their interest in service and helping professions. Tala's testimonial on the positive

impact of DFS was concrete. DFS kept Tala in school, helped him get to college, and likely kept him out of prison:

I never would have been in college without DFS. My parents came to this country not knowing the language, so they definitely couldn't help me get into college. By the time I was in fourth grade, they couldn't help me with my homework... Out of all my cousins, I'm one of the few that's in college. Other ones are locked up, or running around, and it's because of the DFS program [that I stayed in school].

Sasha was an uncommon DFS student because she was recruited from a Title I elementary school but attended a high school in an affluent community. Although her school had a college-going culture in place, she felt disconnected from the educational pipeline due to her financial circumstances and family history. Her peers all seemed to be headed to college, because they could afford it, and ultimately her mentor provided the motivation and resources to help her gain access:

I have older brothers and sisters, and they didn't even finish high school, so it was the norm to just say, OK I'm going to get a job after high school. I didn't even think I was going to college to be quite honest, I didn't think that I would get the money to do so, but my mentor suggested that I apply, and she said, 'You'll get in, and you'll get financial aid'... and she told me, 'You could become a mentor too!'

In addition to the barriers to college access she already faced as an FGLI student, Inés became pregnant as a senior in high school, and thus had no expectation of attending college. She stated that Tom helped to motivate her to continue her education, hired her as a mentor, and connected her to scholarships as well as to the TRIO programs on campus. As a result, Inés expected to complete her degree in four years, having balanced

academics, work, and motherhood. She credited DFS as a major factor in her success, and although she had always wanted to become a teacher, her experiences as a mentor shifted her focus to school counseling. “I always liked working with kids, and I envisioned myself teaching K-3... but being able to experience more through the high-schoolers, I feel like I could give a lot more as a counselor”.

One shared experience demonstrated the program’s effect on both an initiator and a mentor, and was discussed by both the Dean and Grace. At Nevada, each college names a Senior Scholar, the top-performing student in the graduating class that year. Senior Scholars select a mentor for recognition as well, someone who has made a significant positive impact on their personal academic careers. Grace, a recent Senior Scholar for the College of Education, selected the Dean as her mentor. Grace and her mother had developed a connection with the Dean through her years as a DFS mentee, and the program he created was a great resource for getting into and paying for college.

[The Dean] had a big effect on me and my outlook on college. I understood that there was money out there for me, and I was going to be able to go to school, and I was going to succeed, and it's not something that's crazy or too far out there... I couldn't thank him more for the program he started. He told me, ‘I am so excited, this is the best honor ever’. He was elated to be my mentor.

Not only did the mentors state that DFS changed their lives, but the Dean also recalled how one DFS particular mentor had an impact on his own life. After more than thirty years as an educator and administrator, he indicated that when Grace selected him as her mentor as part of the Senior Scholars award it was the greatest recognition of his long

career. Even after creating the program more than a decade earlier, the Dean was still humbled and thrilled to be called a mentor:

When [Grace] graduated as our Senior Scholar and she selected me as her mentor, talk about a humbling experience. I was just absolutely blown away at that... For someone to say, 'you've been my mentor', I'm thinking, 'wow!' Of all the things I've ever been recognized for, that is just by far the greatest.

Social Capital. The participants also noted how their mentees' lives had been changed, in part through the development of social capital. Social capital was not a term in common usage within DFS, but when they were read Stanton-Salazar's (2004) definition, every one of the study's participants agreed that DFS helped to build social capital. Social capital is "those 'connections' to individuals and to networks that can provide access to resources and forms of support that facilitate the accomplishment of goals" (Stanton-Salazar, 2004, p. 18). Michelle explained that although social capital was not an explicit part of the program's design, "I think it was innate, because I understood how important it was to build community around the goals. Yes, DFS absolutely builds social capital. It's a community-based organization bringing resources together". A typical example of how DFS promoted social capital was illustrated by the relationship Tom had with an individual student, as well as relationships with colleagues on campus:

I'll get a kid with a financial aid problem and I'll take them to see somebody I know in financial aid and say, 'Hey, here's a DFS kid' and they will bend over backwards to help that kid, and I'm just amazed. The kid will say, '[Tom], thanks so much!' And it's not me, but they found somebody who will listen to them and will care about them. You know who to take kids to, and they'll change the kids'

lives, because otherwise, they'll drop out of school... That wouldn't happen if you didn't have an active support system.

Tala's personal experiences further supported the pragmatic social capital built by exposing students to the university campus and the resources available to help sustain their academic success:

The year before me was when they just started the DFS program. In the early years we didn't have the middle school program on campus, and when I came to campus my freshman year I was intimidated... Now they're always around UNR, so they feel comfortable here.

Jessica observed her mentees' recognition of their own social capital through increased college knowledge and familiarity to university resources:

Some of my students took a campus tour, and they said, 'Yeah, that [tour guide] didn't really know about the campus,' and, 'I'm so thankful we had DFS because I've been at UNR ever since I was 14, I've been exposed to all that, and I'm going to be ready when I go to college...' We're exposing them to the resources that they probably wouldn't know about otherwise... I felt that same way when I started, I already knew a bunch that other freshmen didn't know.

College knowledge is the fundamental information necessary for applying to and succeeding in college. Many DFS students would have very little college knowledge without assistance from their mentors, as Sasha explained:

Our students tell us that they wouldn't know about a lot of things if it weren't for their mentors; financial aid, college tours, getting accepted to college... It's just that someone has to tell you, 'You can do it, here's where to find the

information.’ None of our family members have ever done it, and we're very positive in their lives because we help them with these tasks that seem so simple but they're very necessary to our students.

Grace summarized the multi-faceted approach that DFS uses to support students entering college, and to build social capital. She viewed the mentor as the first connection to broader networks and resources within the university and the community:

We see a lot of social capital come into play especially when the students are in their senior year and are going into college... We're able to pay certain parts of their application fees for them as they apply to college... With our summer work program there are over 50 different job sites on campus, and all these different departments have DFS students, so we have connections to admissions, financial aid, study abroad, the med school... Our students can turn internships into jobs on campus, and all these connections can come into play later on.

From Rick’s perspective, the relationships built through DFS are a form of social capital in and of themselves, whether or not the term social capital is employed by the mentors:

I don't think that we do it under the auspices of social capital, we refer to it as relationship building, but absolutely: we build reciprocal, obligatory relationships in order to get things done. We provide access, and we definitely provide resources. Any time we're in any meeting, when you get to the heart of hearts of DFS, [Tom] always comes back to, 'it's all about the relationship building’.

I Want to Help Others

The second major theme articulated through the mentor interviews was “I want to help others”. A commitment to service, ideally in education, has been a constant

throughout Tom's tenure as director of DFS. Tom had frequently told students, "you've got to help your brother, your cousin; you've got to help somebody get to college like someone helped you. There's a lot of talk about paying it forward". The theme "I want to help others" was constructed through three subthemes: relationship building, shared background, and commitment. Sasha shared a common sentiment among mentors: the positive dividends of service not only help the mentees achieve, but improve the lives of the mentors as well.

Watching these students and helping them grow has been so rewarding, I feel like I would do this if I wasn't getting paid... We have so many barriers as students that it almost seems impossible, but I feel like if I wouldn't have gone through the program and become a mentor I wouldn't have such a positive outlook on life. The program was designed promote teaching as a way to give back to the community, including connecting students with school district scholarships and recruiters, career exploration sessions within the summer program, and placing DFS students in classified school district jobs. Grace shared a common experience among the mentors about Tom's diligence in promoting education careers:

Tom might as well have beat it into our heads: teaching or counseling, or teaching [pauses] or counseling [laughter]. It had an impact in that way, and it's actually made me want to go into teaching in some capacity, maybe at a community college... I would only get my doctorate for the purpose of being able to teach at a university, so somehow the brainwashing works.

Although Daniel had not decided on a career path to pursue after graduation from college, his involvement with DFS served as an outlet for his interests in teaching and

tutoring. He viewed service as inevitable for those connected to the program. “If you spend enough time around DFS, whether you want to or not, you're going to have some inclination to want to do something helping people, and probably in education because it's been stressed to you for so long”.

Although far fewer DFS students had become teachers than the Dean originally intended, many students altered their majors or career paths to focus on helping professions. Seven of the nine mentors interviewed directly attributed their interest in working in education-related fields to their experiences in DFS. Tala’s years of service as a mentor reinforced the idea that he can make a tangible difference to students, especially those growing up like he did. Although Tala was pursuing a bachelor’s degree in criminal justice, he was also considering graduate school for either counseling or educational leadership:

I would love to go to the schools I went to and work with those kids so they could see someone like them who graduated from college... The majority of people I saw, were just like, no offense, white people from the upper middle-class who I really didn't feel comfortable talking to... I'll hopefully be able to relate to and help more students.

Rick’s goal of becoming a professor preceded his involvement with DFS, but his focus shifted based on his experiences as a mentor. It became more important to Rick to find a career that served students, either on or off the tenure track:

My whole life I've wanted to teach, and now... I kind of just want to go teach at community college... When I lecture my kids on sociology and I see their faces light up, I get really excited. It does make me think a lot about student services or

outreach program...It's definitely changed my entire career outlook. Ideally, I would like to start a DFS program somewhere.

Similarly, Jessica remained committed to working in public health, but with the potential for reaching students as well. “I know I want to work in public health, but I know now that I really enjoy working with students, and that's something that I want to continue down the road, maybe as a professor”.

Brianne was surprised to be offered a mentoring position as a freshman in college; she viewed the role of guiding DFS students through school as a tremendous responsibility, and wasn't sure if she was ready. Her experiences with DFS changed her career path significantly from an initial interest in pharmacy to student services (advising and financial aid), a field in which she was working at the time of the study. Brianne took her mentoring role seriously, and the fact that her students expected so much from her was a motivation to live up to her personal values. She chose educational leadership because of the many career options it offered within higher education. “Working with these students, it keeps me grounded as a person, with my own values, what's right and wrong, and what I want to do with my life, so it has impacted me”.

Relationship Building. The mentors also discussed how they help others through mentoring. Without exception, all of the respondents stated that the most crucial element for the success of the program was relationship building between mentors and mentees. The mentors were asked about how they approached relationship building, and Sasha summarized the evolution of DFS mentoring strategy over time:

In the past, we just went in and started lecturing: ‘you can go to college, but if you're not doing your homework you'll get low grades,’ and now we dig deeper

and get to know these students on a personal level. It's easy to just sit in front of a student and say 'you need to go to college,' and now the mentors go further than that into topics that matter to them every day, like bullying: everyday problems that impact that student. If a student's grades drop, it's not only because they didn't study, it's outside things that can be impacting them.

Sasha's experiences paralleled Grace's, who also echoed the need to connect personally first, despite the academic focus of DFS:

The first time that I meet my students... I try to first get a grasp on who they are as a person, not only their academics but also what they're interested in... Maybe not focus so highly on the academic side from the beginning, because they hear it all the time: They hear it from their teachers, they hear it from their counselors, they hear it from everyone. It's one of the last things they want to talk about, but they'll come to you with those things as time goes on.

Rick's experiences reinforced the need to set aside his academic agenda in order to build a meaningful relationship with a mentee. Although Rick was a first-generation student himself, the primary struggles he encountered were with academics, which did not necessarily mirror those of his mentees:

I came in with an agenda, and it was academics, academics, academics. I'd have these meetings, and they'd just stare at me blankly, and I realized that what these kids really needed was emotional support. They felt like all the other kids were doing just fine and school wasn't hard, and other kids weren't in a difficult place... Until I figured out that I really struggled with mentoring.

Every mentor interviewed emphasized the high value they placed on the relationships they built with their students, and all nine discussed being viewed by their mentees as a role model, and perhaps as a friend as well. Inés summarized her conception of balancing roles as mentor and friend:

You're not there to be their friend, and you need to be able to draw that line, but it's also hard because although you're not technically their friend, to them, you are. We're there to see you progress and overcome your obstacles, but it's also necessary for them to see you as somebody with respect, for them to admire you as well, so it's more like an older brother or sister.

Shared Background. Prominent within the context of relationship building was the importance of background between mentors and mentees, especially being first-generation, low-income, or part of an ethnic group underrepresented in higher education. Tala stated that mentors who shared background characteristics with their students were better able to build lasting relationships:

Because I came up in this program, I think I hold more weight than other people... I was in the same position as they were: low-income, first-gen, I went to the ghetto schools like they do... so it's easier to relate to us. Do we have the same struggles? If you say you can relate to me, can you really? Can you relate to being low-income, being where I'm from? It's not necessarily about race, it's more about your background, where you come from.

For Miguel, his ethnicity and struggles made it easier to connect to students, but he also acknowledged the value of both achievement and empathy, regardless of background:

Most of my mentees are Hispanic too, and I see myself in them... It makes a difference, they connect more because they see, 'Oh if you have gone through this, I think I can do it too'... With some mentors, the students say, 'You haven't had the hard time that I have,' but in the end, they have their own struggles and reached their goals, and students connect with them too...it just makes it a little harder to connect.

Brianne noted that a lack of familiarity with the needs of diverse students must be addressed not simply through study, but through experiential learning:

People who are outsiders to the program need to get experience with diverse students by actually going into the schools and mentoring students to try to see what mentors experience hands-on, instead of just coming in and telling them what to do based on books.

Although Rick was a first-generation student, he did not identify as low-income or as a person of color, and did not join the program until he became a graduate student. He stated his mentees frequently challenged him based on his status as an outsider to the program:

I was talking to one of my mentors today about when I first started at DFS... And they said, 'You know we gave you such a hard time when you first started because you were an outsider and you were just another one of these GAs [graduate assistants] rolling through for a year...' For me it was treating each kid individually, and changing what I was doing based on what they needed. DFS is a very closed community, and I think once you get in with one group of kids, after that it becomes easy.

Commitment. The commitment subtheme was central to the program's values, and according to both initiators and mentors, success in connecting with FGLI students is due in large part to the long-term, consistent contact between mentors and mentees. As Grace related, simply showing up is a critical element in building trust with a student, and demonstrating an ethic of care:

In order to build that trust they need to see that you're there for them on a consistent basis. What helps is that the mentors are there every single week, or at least contact the students weekly so the students know that they care, and through time, in talking to them and listening to what they have to say and giving the best advice they can, that's how you build the relationship.

In addition to the mentor holding their mentees accountable for their commitments, the reverse is also true: mentees expect their mentors to fulfill their obligations as well, particularly given their status as role models, as Miguel recalled:

I'll be here on this day, so I expect you to be here... So I'll be checking up on your goals, and contacting them if they aren't at school, or if there are any issues... it's going good. They get motivated, but they also expect a lot. Say I get too busy with school and don't show up at the school twice a week, they'll call you out, like, "how do you expect me to do *this*, but *you're* a little behind" [laughter]...

Rick also experienced mentees' strong reactions when their mentor's conduct was inconsistent with their stated commitments. Rick experienced this both as a mentor himself, and as an observer of undergraduate mentors.

Kids will call their mentors on all kinds of crap. I've been out with mentors before, and the kid's been like, 'Hey, you said you were gonna do this, and you

didn't,' and the kid's mad... I guess because they're putting so much faith in that person guiding them through a process that nobody in their family knows, I think that takes a big level of trust and commitment. So when you say you're going to do something, and you don't, it really lets them down.

For some mentors, the trusting relationships they had built with their mentees endured even after a student dropped out of school. Jessica described one of her students who lacked motivation and had poor attendance in high school:

It's hard to motivate someone who isn't interested in school anymore... He ended up leaving school, but he came to me later and asked me to help him apply to TMCC, so he's at TMCC right now.

Sasha shared an anecdote about a student who she continued to mentor, even after his girlfriend became pregnant, which led to him dropping out of high school. In this example, DFS extended beyond its typical role as an outreach program:

I remember my most challenging mentoring session was when one of my students told me that his girlfriend was pregnant and he was only a junior in high school. This student is extremely intelligent. He was doing so well in his [AP] courses and here he was thinking that he needed to drop out because he needed to work... I had to ask [Tom] for help because I didn't know what to do. We let him know what clinics to go to and where to get help... I still mentor him, and I'm going to take him to get his GED soon... hopefully he comes back.

Daniel also highlighted the DFS commitment to supporting struggling students. Daniel presented this value as both a challenge for him personally as a mentor, and as an indicator of the program's success:

The challenges we'll face in DFS are when students are borderline where we don't know if the time and effort we invest is going to be returned in terms of them succeeding... Tom will always stick by someone so long as they're willing to try, even if it doesn't seem like they are. You can see the highlights of his approach. You can see people who just needed a little more time to grow up, to realize what they wanted to do.

Research Questions

The themes constructed from the interview data served to answer the study's four research questions:

1. What mental models do the mentors hold about the role of mentoring in the lives of their mentees?

Mentoring was regarded as a positive, potentially life-changing process, from the perspective of both mentor and mentee. Mentors viewed relationship building as the central element in successful mentoring relationships. Although knowledge of academic skills and resources were viewed as important, demonstrated empathy and commitment were understood as critical in building the trust necessary for mentees to receive academic support. Shared background was regarded as helpful, but not essential, for creating strong mentor-mentee relationships. To that end, status as an FGLI student and membership in an ethnic minority group were seen as helpful characteristics for mentors. However, outsiders who did not share much common background with mentees were still able to connect with mentees, provided that they demonstrated consistent commitment to and empathy for their students. The mentors' interests in service and helping professions

were shaped by experiences gained through DFS, both as mentees preparing for college, and as mentors helping others to succeed.

2. How do the mentors' mental models influence their mentoring strategies?

Mentors who were FGLI students themselves experienced the obstacles mentees were likely to encounter, and could speak from their own struggles about how to make it into and through college. Over time, the mentors recognized that their primary focus on academics was misplaced: strong, trusting relationships should be established first, which would open the door to academic focus later. Mentees often encountered people in their lives whose commitment or empathy were inconsistent, and mentors recognized the need to honor commitments to mentees in order to maintain trust. Mentor-mentee relationships became reciprocal, often with both parties encouraging the other to set and achieve goals. Mentors also reported supporting mentees who fell short of their goals: persistent support of students who struggled to stay motivated was interpreted positively as persistence of the mentees.

3. What mental models do the program initiators hold about the mentors' role with the mentees and mentoring strategies?

Initiators noted the critical role of mentoring amidst the many services DFS provided: mentoring was the cornerstone of students' success through DFS. Successful mentoring relationships were built through genuine care for mentees and investment in their success personally and academically. Similarly, mentors reflected that sustained care over the long-term appeared to help their mentees overcome typical challenges of FGLI students, including selecting rigorous coursework and remaining academically focused despite conflicting educational values of peers or family members. Initiators also

valued shared socioeconomic and ethnic background between mentors and mentees, but maintained that consistent empathy was more important than shared background for building trusting relationships. Service as a DFS mentor often influenced students to pursue helping professions, including but not limited to teaching, the original goal of DFS.

4. What is the relationship between the mental models of the mentors and program initiators?

The mentors and program initiators identified the same elements necessary for successful mentoring relationships. The interview data suggested that the participants had moved beyond individual mental models related to DFS mentoring and collectively embraced a shared vision for building social capital. Both groups identified the construction of strong, trusting relationships as the most important factor in supporting college access and student success. Trusting relationships could only be built through empathy, consistency, and mutual accountability. Shared background was viewed as a helpful element in connecting to mentees, particularly during the early stages of relationship building, but not an essential characteristic of successful mentoring relationships.

Summary

The initiators interviewed recalled the development of the DFS program through the constructed theme of “trusting the people”. DFS began as a booster program, and expanded its scope and services based on available human and financial resources. The initiators described the program’s evolution as both proactive and reactive. Initiators demonstrated proactive practices such as grant writing and aligning program activities

with the research literature. Their reactive practices included taking advantage of unplanned opportunities, such as the connection to Nevadaworks grants, and implementing new ideas or techniques suggested by mentees and mentors.

The Dean trusted that both Michelle and Tom would make decisions in the best interest of the program based on their shared vision of college access and success for students through DFS. A fluid philosophy of program development nurtured their creative process to produce the DFS model that appears to meet the needs of FGLI students. As the program developed, the initiators cultivated specific strengths, especially long-term commitments, caring mentor-mentee relationships, and hiring mentors who shared backgrounds and experiences with their mentees. Although the initial goal of producing teachers with diverse backgrounds became a lower priority, an unintended consequence was the large proportion of mentors who pursued helping professions, particularly within higher education student services.

Two major themes were constructed from the mentor interviews: “DFS changed my life”, and “I want to help others”. The subthemes constructed within “DFS changed my life” were “I can go to college” and “social capital”. Three subthemes were constructed within “I want to help others”: “relationship building”, “shared background”, and “commitment”. Seven of the nine mentors reflected on their experiences as both mentees and mentors within DFS. Mentors recalled positive changes in their outlook on life and maturity developed through mentoring, including gratefulness, humility, patience, and empathy. Several mentors who joined the program as mentees stated that they would not have gone to college without the support their DFS mentors provided.

The mentors noted that strong personal relationships with mentees were the key to promoting student success. Academic focus was important, but should be the second priority after consistent, caring interactions with mentees. All of the participants, including both initiators and mentors, agreed that DFS built social capital for its students, and one mentor stated that the relationships built through the program were synonymous with social capital. Mentors emphasized the need to balance the role model aspect of the relationships with the mentees' expectations of friendship, and to maintain mutual respect and accountability. Shared background, especially being a FGLI student or a person of color, were described as helpful in developing mentor-mentee relationships, but not essential. Mentoring experience was seen as more important than knowledge of textbook mentoring practices, particularly for mentors recruited from outside of DFS. Demonstrated commitment and follow-through were also noted as crucial elements to successful mentoring: mentors indicated that both mentors and mentees held each other to high expectations, through a system of mutual accountability. To that end, DFS mentors demonstrated commitment through support of their students through all manner of struggles, even when students left school. A discussion of the results and potential implications for practice and future research is provided in the following chapter.

CHAPTER V: DISCUSSION

The discussion of the research findings is divided into four sections. The first section summarizes key findings based on the results of the data analysis, and the potential meanings as constructed by the researcher. The second section outlines implications for practitioners involved in creating, managing, or evaluating mentoring initiatives. Recommendations for future research are found in the third section, and the chapter concludes with the fourth section, a summary of the research study.

Key Findings

Three major themes were constructed from the participant interviews. From the initiators, the key theme of “Trusting the people” was developed. Through the mentor interviews, both “DFS changed my life”, and “I want to help others” were major themes built from the data. Two key findings were gleaned from the interview data of both initiators and mentors: (a) commitment to a shared vision was central to the development of DFS; and (b) the shared vision was realized through practices that built social capital for DFS students.

Shared Vision. As the research questions were developed for this study, it seemed likely that the mental models held by the initiators who created and developed the program would differ from those held by the mentors. As Senge noted, “Two people with different mental models can observe the same event and describe it differently, because they’ve looked at different details and made different interpretations” (p. 164). As the findings suggest, both initiators and mentors transcended individual mental models related to DFS mentoring, and embraced a shared vision: you can go to college, and we will help you get there. Senge explained the power of shared vision:

A shared vision is not an idea. It is not even an important idea such as freedom. It is, rather, *a force in people's hearts* [emphasis added], a force of impressive power. It may be inspired by an idea, but once it goes further – if it is compelling enough to acquire the support of more than one person – then it is no longer an abstraction. It is palpable. People begin to see it as if it exists. Few, if any, forces in human affairs are as powerful as shared vision. (p. 192)

Senge's description of "a force in people's hearts" (p. 192) was echoed in the interview data. Initiators and mentors shared passionate reflections on their DFS experiences, and the positive impact of the program on their own lives and the lives of their mentees. There was consistent agreement on the vision that DFS students could go to college with support from the program. The vision was simple yet lofty, because many DFS students faced multiple barriers to college access, and many did not consider college a real possibility before joining the program. The vision was positive, emphasizing student success, rather than negative, as in a program focused on high school dropout prevention. Senge noted three key reasons for aspiring to positive visions rather than negative ones. Positive visions: (a) help to build something new rather than seeking only to prevent a negative outcome; (b) inspire aspiration instead of the powerlessness implied by only pulling together against a threat; and (c) encourage long-term motivation, and avoid the inevitable drop in group energy once a threat is gone (Senge, 2006).

The shared vision of supporting DFS students on the path to college was not coupled with a specific plan for how to accomplish the vision. The Dean's trust in the program directors and willingness to give them autonomy were built upon their shared belief in the vision of DFS, and also their commitment to act in the best interests of

students based on the vision. As Senge (2006) explained, “Shared vision fosters risk taking and experimentation. When people are immersed in a vision, they often don’t know how to do it. They run an experiment.... Everybody knows that there is no guarantee. But the people are committed nonetheless” (p. 195). Each director acknowledged a commitment to the vision, as well as their challenges in ascertaining how best to serve DFS students. Both Michelle and Tom noted how critical it was to have the Dean’s trust as they experimented and took risks to help the program develop. Michelle focused on increasing DFS’ positive impact on students by expanding from an annual booster event to become a year-round support system through the summer program and academic-year mentoring. Tom created feedback loops with mentors and colleagues to determine the best practices for DFS based on experimentation in the field, and recommendations from the research literature.

Initiators also implemented changes to the design of the program based on feedback from their home-grown mentors, especially on how to best support mentees, which was also in alignment with Senge’s (2006) recommendations. Senge wrote that genuinely shared visions “require ongoing conversation where individuals not only feel free to express their dreams, but learn how to listen to each others’ dreams. Out of this listening, new insights into what is possible gradually emerge” (p. 202). The mentors’ investment in the program was solidified when initiators encouraged dialogue about mentoring practices, supported risk-taking and experimentation, and incorporated mentors’ ideas into program activities. This willingness to listen and find creative ways to realize the vision was noted as a strength of DFS by both initiators and mentors.

Although the mentors did not use the term shared vision, every one of them articulated the same vision, and cited Tom's example as a motivation for their own mentoring. A central tenet of supporting DFS students was to build caring, trusting relationships between mentors and mentees. The mentors discussed Tom's tremendous ability to build relationships and to make everyone involved with DFS feel cared about, his unfailing positive attitude and empathy, and his unwillingness to give up on students, even when they fell short of the goals agreed upon with their mentors. Tom reinforced the vision through frequent admonitions to focus on relationship building, to show students that the mentors cared about them through consistent contact, and to remember that because everyone received help, everyone had an obligation help others. More important than his words, however, were Tom's actions to help stabilize the program to include consistent activities that promoted student success and social capital. Tom's example was closely aligned with Senge's (2006) axioms for reinforcing shared vision: clarity, enthusiasm, communication, and commitment. Both initiators and mentors were able to operate with creative tension, to "hold" their vision while remaining committed to seeing current reality clearly" (Senge, 2006, p. 209). Participants described obstacles they faced as individuals and within their organization, yet their enthusiasm for the vision, and the success stories they shared, sustained their motivation to creatively solve problems.

Successful mentoring relationships were built through genuine care for mentees and investment in their success both personally and academically. Mentors who came through DFS as mentees consistently noted that their empathy as mentors was built from their experiences on the other side of the table. This finding suggests that whenever possible, mentors with similar backgrounds to program mentees should be recruited.

Home-grown students groomed from within DFS typically made ideal mentor candidates, particularly given their investment in the vision, and passion for the program and its impact in their own lives. Participants noted that mentors who were recruited from outside of the program often found it more difficult to connect to mentees initially than their home-grown counterparts. However, participants also noted that outsiders were able to build successful mentoring relationships: If they demonstrated empathy and commitment, outsiders could overcome mentees' initial reluctance to trust them. At the time of the study, 74 percent of DFS mentors first joined the program as mentees (Garcia, 2012). The mentors also provided positive examples for their students who often lacked academically successful role models, and further reinforced the vision: I made it to college, and I'll help you get there.

Social Capital. Although the findings suggested that shared vision was critical to the program's development, had the vision of access and success for its students been maintained without creating actual pathways to college, DFS would likely have remained static as a booster program. The Dean's vision, shared by the directors, was the motivation and the focus for each of the processes that helped build social capital for DFS students. Social capital is defined as "those 'connections' to individuals and to networks that can provide access to resources and forms of support that facilitate the accomplishment of goals" (Stanton-Salazar, 2004, p. 18). Experiences gained through DFS appeared to have helped students build two types of social capital specific to higher education: college-going capital (Bloom, 2008); and academic cultural capital (Smith, 2009).

Bloom (2008) defined college-going capital as a combination of social and cultural capital which creates a sophisticated understanding of higher education. Bloom noted that many middle- and upper-income students have existing resources and experiences in place which build college-going capital; the same resources which FGLI students often lack. Bloom's recommendations for college access programs included moving beyond transactional booster programs to offer experiences that: (a) foster inquiry about FGLI students' financial, academic, social, and career concerns; (b) bring students to campus multiple times for extended visits that include interaction with campus stakeholders; (c) offer courses for college credit to understand college-level pedagogy and expectations; and (d) involve current college students to expand FGLI students' social networks and help them to see "a range of visions of what they are aspiring to, and the routes people take to get there" (p. 6).

The findings suggested that the DFS program fulfilled each of these recommendations for building college-going capital posed by Bloom (2008). As both mentors and initiators shared, the mentoring process introduced students to immersive experiences at the University, including access to extensive college knowledge through mentors, DFS staff, and friends of DFS in the campus community. Mentors indicated that their mentees were comfortable on campus, and felt ready to become college students, particularly those that took courses for college credit or were placed in summer internships across the University. Mentors also interacted with students apart from their own mentees, often through the summer program, and mentees were exposed to a variety of paths into and through college.

Smith (2009) recommended that academic mentoring programs focus on building academic cultural capital for their students, broadly defined as a base of institutional knowledge. This knowledge could include information about how to get academic or personal support on campus, how to develop time management and study skills, as well as elements of the hidden curriculum such as how to communicate with professors and navigate social and academic norms at the institution. Smith also recommended a network mentoring model, which could maximize mentees' social capital by connecting them to multiple mentors with access to different resources and networks. Smith's recommendations were largely in practice within DFS, albeit informally in some cases.

Participants indicated that mentees were intentionally connected to campus resources, and directly assisted in skill development including time management and studying at the college level through a for-credit college success course. Participants also indicated that DFS students were encouraged to access mentors and staff before, during, and after beginning college to help navigate policies, systems, and norms, and many mentees continued to have weekly meetings with a mentor as college students. Moreover, the fluid nature of the program allowed students to interact with multiple mentors other than their own, and students were intentionally connected to people and resources to solve problems and to create networking opportunities. There was no specific concept of network mentoring in place within DFS, but given the program's flexibility, there appeared to be no need for this formality.

It is important to note that although mentoring alone did not build social capital for DFS students, the findings suggest that mentoring was the means to an end; the end result was increased college-going and academic cultural capital. The trust built through

DFS mentoring relationships appeared to have opened the door to connect mentees to resources, and motivated them to engage in activities that would help them access and succeed in college. Sustained care over the long-term made DFS uncommon among outreach programs; many mentoring efforts are characterized by inconsistent contact between mentees and volunteer mentors (Gándara, & Mejorado, 2005). According to the mentors, the long-term relationships created through DFS allowed them to motivate mentees to overcome typical challenges facing FGLI students, including selecting rigorous coursework in middle and high school, increasing their access to college knowledge, and remaining academically focused despite conflicting educational values of peers or family members.

As one mentor stated, successful mentoring relationships in DFS were synonymous with social capital. The findings suggest that once they had built trusting relationships, DFS mentors were better able to motivate their students to perform academically, to take advantage of academic and community resources, and to develop networking connections. DuBois et al. (2011) noted in their meta-analysis of 73 youth mentoring programs that relationships appear to be related to positive mentoring outcomes:

These findings suggest that effects [of mentoring] may hinge to a noteworthy extent on decisions that are made regarding which youth and mentors to involve in a program and on the care with which mentoring relationships are established and then guided toward specific types of activities. (p. 58)

The intentionality with which DFS relationships were established and guided appears to affirm the findings of DuBois et al. However, the finding suggesting that academic

mentoring relationships should be focused on instilling trust before academics appears to be novel within the mentoring literature.

The findings of this study also suggest benefits to mentees who later became mentors as college students. These home-grown mentors became resources themselves to support both their students and their peers. Through the mentoring process, the mentors' social capital appears to have increased. Mentors often reflected on their own increased comfort in the university environment, access to knowledge and resources about which they were unaware prior to their DFS involvement, and the development of skills and networks that will likely aid them as professionals. Participants also remarked on how their service as mentors had helped them to become more grateful for the opportunities afforded them, and more conscious of how they interacted with people they encountered, particularly when they had the chance to help someone. Helping others to increase their social capital became an unstated goal and outcome of DFS involvement.

Implications for Practice

The findings suggest that the initial focus of mentors involved in educational outreach should be on building trusting relationships with their students. Their mentoring relationships should also be intentionally geared towards building their students' college-going capital, academic cultural capital, or both, depending on the program's vision and goals. Educational professionals, particularly teachers and counselors, often focus on immediate academic concerns given the constraints of time and the large number of students for whom they are typically responsible. Mentors were fortunate to work with smaller groups of students through DFS, allowing them the time to build relationships first rather than immediately focusing on academics. Indeed, DFS mentors often found

that their students were reticent about discussing academics if they had not yet built a personal connection. After trust was established, students were more willing to utilize their mentors as resources to achieve their academic and personal goals. Like many outreach programs, DFS has expanded beyond mentoring to provide other student services. However, participants noted that the relationships built through mentoring were the foundation on which all other services depended, and thus the mentoring relationship should remain the central focus of the program. Initiators and mentors stated that because of their trusting relationships, mentees took advantage of available opportunities and support services as advised by their mentors.

Relationship building was central to the shared vision of access and success for DFS students. Creative tension and flexibility were also hallmarks of the DFS program, and are critical to the reinforcement of a shared vision (Senge, 2006). Initiators demonstrated exceptional resourcefulness through this tension, particularly related to acquiring and maximizing financial resources. The program's first mentors were Federal Work-Study (FWS) students, who both reflected the demographics of the mentees, and also provided an efficient return on investment given the federal subsidies supporting their wages and the limited financial resources available to DFS. In an environment that lacked stable state funding, initiators acquired grants through a variety of foundations, built relationships with community leaders to create opportunities, including the ARRA-funded internships, and leveraged resources from existing programs that aligned with DFS student demographics.

Had the initiators only utilized existing resources and continued to operate the program with only one funded graduate assistantship and whatever volunteers and small,

one-time donations could be solicited locally, it appears likely that DFS would have remained a booster program, or perhaps ceased operations. The findings of this study suggest that program administrators should focus first on the needs of their students, determine what it will take to meet those needs, and look beyond the tools readily available towards what may be possible through creative collaboration, risk-taking, and accessing resources in creative ways. Further, the passion and commitment to the vision demonstrated by initiators resonated with the mentors: If program managers expect to instill a passion for service in their mentors, they themselves must embrace this vision in thought, word, and deed.

The unintended consequence of mentors' interest in helping professions affirmed the original purpose of the program, in part. Although far fewer DFS students became teachers than the Dean envisioned when he created the program, the mentors themselves demonstrated the high value they placed on education, and their commitment to helping younger versions of themselves to access and succeed in college. The initiators made the conscious decision to shift from a focus on supporting future teachers from diverse backgrounds, to a broader focus on helping all eligible students access college, regardless of their potential majors or career paths. This outcome demonstrates the need for stakeholders to maintain patience and flexibility as programs develop. Had DFS been assessed based on the number of education majors or teachers it produced, it may not have been deemed successful, despite its positive impact on high school completion and college access for FGLI students. Program managers, and administrators assessing such programs, should prioritize creativity and flexibility. Despite climates of increased accountability and expectations of swift, measureable success in higher education,

program managers should consider the best uses of their resources to support students, even if that requires reframing the goals of the program.

Initiators noted that asking for feedback from students was another important element in the program's development. Students who had been through DFS as mentees and had successfully enrolled in college advised the initiators on how the program had helped them to succeed, and how the program could be improved. Practitioners should create feedback loops to get input from program participants, both positive and constructive, to inform the development and enhancement of mentoring initiatives.

Without exception, initiators and mentors agreed that the most important element in a successful mentoring relationship was genuine care and empathy for students. Mentors spoke with great passion about students they had helped, and the importance of their work in helping young people to gain access to college. As Tom noted, this intangible quality must be felt, as it cannot be quantified or empirically measured. Program managers must expect their mentors to have great empathy for the students served, and should ask questions throughout the interview and selection processes that require prospective mentors to articulate their connection to the students they hope to serve, and their vision for the service their work will provide.

Recommendations for Future Research

Both initiators and mentors noted the critical need for systematic data collection within the DFS program itself. Although individual mentors and the program director were aware of the life circumstances and academic success rates of their students anecdotally, measuring the global success of the program quantitatively would require more consistent data than what was available at the time of the study. Future research

specific to the DFS program should also focus on the choices of major and careers by both program mentors as well as mentees. It is unclear whether the trend of choosing helping professions is limited only to selected program mentors, or if DFS mentees who have not served as mentors are also more inclined towards these major and careers than their non-DFS peers.

Similarly, the results of this study point to another potential research question related to the original purpose of DFS: recruiting and preparing diverse teachers. Would college students who were immersed in teaching experiences gravitate towards teaching careers, just as mentors in this study pursued careers in helping professions similar to mentoring? A related topic is the choices of majors and career trajectories of mentors from outreach programs unaffiliated with DFS: is there a connection between mentoring and helping professions within programs that do not specifically focus on education as a career path? Future research in this area could examine mentoring programs geared towards the natural sciences, or programs without an emphasis on a particular major or career path.

In his critical literature review of precollege outreach programs, Tierney (2002) noted the gap between research and practice regarding family involvement: “If a program is only able to concentrate on one, two, or three activities, then it is reasonable to make family-based concerns one of those activities” (Tierney, 2002, p. 603). For DFS, connection to parents was often limited to transportation to program events, an occasional phone call, or a session for parents at the annual conference. Given the importance of family involvement, future research could also explore strategies for fostering consistent connections between families and outreach programs, particularly for FGLI students.

Summary Statement

This qualitative single-case study examined the mentoring mental models of program initiators and mentors involved in a specific educational outreach initiative, the Dean's Future Scholars (DFS) program. DFS served first-generation, low-income (FGLI) students. Mentoring was the primary service provided to precollege students. Other services included summer academic programs, tutoring, college knowledge, courses for college credit, and internship placement.

In-depth interviews were conducted with three program initiators, and nine program mentors. This study examined the development and implementation of the mentoring aspect of the DFS program. This study focused on mentors' and initiators' mental models to inform mentoring practices of outreach programs for FGLI students. Social capital was selected as the theoretical framework, and a constructivist grounded theory approach was utilized for data coding and analysis.

Three major themes were constructed from the participant interviews. From the initiators, the key theme of "Trusting the people" was developed. Through the mentor interviews, both "DFS changed my life", and "I want to help others" were key themes built from the data. Two key findings were gleaned from the interview data of both initiators and mentors: (a) commitment to a shared vision was central to the development of DFS; and (b) the shared vision was realized through practices that built social capital for DFS students.

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Appendix A

Program Initiator Interview Protocol

1. Tell me about your role with DFS. How did you first become involved?
2. As you thought about the overall design of DFS, why did you include a mentoring component?
 - a. What was your thought process? (*Why?*)
3. (*For initiators involved after the original design*) What was your role in designing or refining the mentoring component of DFS?
4. Describe the mentoring component as it was originally envisioned (*Differentiate between what was envisioned and what actually occurred – see questions 5 and 6*).
 - a. What was the role of the mentors?
 - b. What training did you envision?
 - c. What strategies did you plan, or anticipate, to ensure that the mentors connected with the mentees?
 - d. Did you originally plan for the mentor/mentee relationship to occur at the school?
If so, why? How did you think about the school's involvement in the process?
5. When the mentoring program was implemented, did it mirror your expectations? (*Role, training, building relationships, school involvement*)
 - a. If so, please explain the aspects that matched your expectations.
 - b. If not, how was it different from what you expected?
6. (*If it was different from their expectations*) Did you do anything about the difference(s), or did you let the program evolve on its own?
7. DFS has lots of components. Where does mentoring fit into the overall scheme of things?

8. Stanton-Salazar defines social capital as “connections to individuals and to networks that... provide access to resources and forms of support that facilitate the accomplishment of goals”.
 - a. Does DFS mentoring build social capital for the mentees? (*If so, how?*)
9. We have been talking about the mentor/mentee relationship, however, observations suggest that the mentors themselves are influenced by the mentoring process.
 - a. Do you agree with this statement? If so, in what ways have you seen how mentoring has affected the mentor? (*If they don't agree, move on to next question*)
 - b. (*If they agree*) Was that part of the design? In other words, did you anticipate that the mentors would be affected by the process?
10. What would you change about the mentoring component of DFS? (*Why?*)
 - a. If you were to create a new mentoring program, would you do anything differently, based on your experiences with DFS?
11. What other thoughts would you like to share that we have not touched on?

Demographic Questions

12. How long have you been (were you) involved with DFS? In what capacities?
13. What degrees do you hold?
14. What is your gender?
15. What is your ethnicity?
16. What is your age?

Appendix B

Mentor Interview Protocol

1. If you were to describe the mentoring part of your job at DFS to someone you just met, how would you describe it?
2. I would like for you to tell me about your experience as a DFS mentor.
 - a. First, how did you get here? What made you apply for the job?
 - b. When you came in for the interview (or spoke with someone about the job) did you change your thinking about what the job was? (*If so*) In what way?
 - c. After you were hired, did you go through any training? Formal? Informal? Please describe either / both (*especially informal*).
 - d. I assume that you talk with other mentors. Do you ever compare thoughts or experiences about your students?
 - i. (*If so*) First, what do you talk about? Do you share frustrations, great things, concerns, what else?
 - ii. Do you seek out specific people for advice? Why them?
3. I'd like you to think about the first encounter with a student. How does that happen?
 - a. Who contacts whom?
 - b. How do you initiate the contact? (Facebook, texting, e-mail, school counselor, etc.?)
 - c. How do you approach that first meeting? What were you thinking about?
 - i. Did you have a specific outcome in mind?
 - d. Tell me about the best first encounter with a mentee that you ever had.
 - e. Now describe your most difficult or challenging first mentee encounter.
4. How long does it typically take to feel comfortable with your mentees?
 - a. What strategies do you use to connect with them?

- b. Have you ever had the experience when you wanted to “fire” a mentee? Please describe.
 - i. How did you resolve the issue(s)?
 - c. What has been your best experience as a mentor?
- 5. Do (did) you encourage your mentees to choose majors in the College of Education?
- 6. Are you familiar with the term ‘social capital’? Stanton-Salazar defines social capital as “connections to individuals and to networks that... provide access to resources and forms of support that facilitate the accomplishment of goals”.
 - a. Does DFS mentoring build social capital for the mentees? (*If so, how?*)
- 7. Now I’d like to explore who and what have influenced you as a mentor.
 - a. Have your experiences as a DFS mentor influenced you? (*If so, how?*)
 - b. Did specific people connected to DFS have an impact on you? (*If so, how?*)
 - c. Did your DFS experiences influence your choice of major? Career? (*If so, how?*)
- 8. What would you change about the mentoring component of DFS? (*Why?*)
- 9. What other thoughts would you like to share that we have not touched on?

Demographic Questions

- 10. How long have you been (were you) involved with DFS? In what capacities?
- 11. (*If a student*) What is your major?
 - a. (*If an alumnus*) What degrees do you hold?
- 12. What is your gender?
- 13. What is your ethnicity?
- 14. What is your age?



Certification of Approval for New Protocol: Social Behavioral
Social Behavioral Institutional Review Board

Date: April 3, 2012
To: Patricia Miltenberger, PhD Department of Educational Leadership
Copy: Matthew Smith

UNR Protocol Number: S12-095
Protocol Title: Mentoring and Mental Models: Outreach to First-Generation, Low-Income Students
Type of Review: Expedited 6 & 7 Minimal risk
Approval Period: April 3, 2012 to April 2, 2013

This approval is for:

MSmith_ProtocolApplication_04-03-12.doc (Protocol application), DFSinitiator_recruit.doc (Recruitment materials), DFSmentor_recruit.doc (Recruitment materials), DFS_email_facilitation.pdf (Site approval), MSmith_Social_Behavioral_Consent_3-29-12.doc (Consent Form), Program initiator and mentor interview guides (Research instruments)

Approved number of subjects: 15

The above-referenced protocol was reviewed and approved by one of UNR's Institutional Review Boards in accordance with the requirements of the Code of Federal Regulations on the Protection of Human Subjects (45 CFR 46 and 21 CFR 50 and 56).

PI Responsibilities

- Maintain an accurate and complete protocol file.
- Submit continuing projects for review and approval prior to the expiration date.
- Submit proposed changes for review and approval prior to initiation, except when necessary to eliminate apparent immediate hazards to subjects. Such exceptions must be reported to the IRB at once.
- Report any unanticipated problems which may increase risks to human subjects or unanticipated adverse events to the IRB within 5 days.
- Submit a closure request 10 days after project completion to the IRB.

Reference the protocol number on all related correspondence with the IRB. If you have any questions, please contact Valerie Smith at 775.327.2368.

For Veteran's Administration research only

VA Research: No
Flag VA Medical Record: N/A