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# Journey to the Doctorate: Motivating Factors for Persistence and Completion of Doctoral Programs Among McNair Scholars

Deborah Baness King

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**JOURNEY TO THE DOCTORATE: MOTIVATING FACTORS FOR  
PERSISTENCE AND COMPLETION OF DOCTORAL PROGRAMS  
AMONG MCNAIR SCHOLARS**

**BY**

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M.S., Physical Education, University of New Mexico, 2000

DISSERTATION

Submitted in Partial Fulfillment of the  
Requirements for the Degree of

**Doctor of Philosophy**

**Language, Literacy, and Sociocultural Studies**

The University of New Mexico  
Albuquerque, New Mexico

**July, 2011**

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## DEDICATION

This dissertation is dedicated to my family. You are my life, my love and my reason for being. Thank you for loving me. It is dedicated to my husband, Van, for not letting me quit, to my kids, for reminding me of the everyday wonders of life, to my parents, Jerry and Carol Baness, for always listening, to my sisters for their on-going support, and to my late grandmother.

Finally this dissertation is dedicated to low income, first generation and students of color that continue to struggle for equal access and opportunity in education. To my participants, thank you for blazing a trail for all those that will follow in the path that you have created.

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**ABSTRACT**

Using a qualitative approach, this study investigated the perceptions of motivating factors for persistence and completion of the doctorate among low income, first generation and students of color that participated in the federally funded Ronald E. McNair Postbaccalaureate Achievement Program. Purposive sampling was used to obtain a pool of nine research participants that were enrolled in a McNair program during undergraduate study and successfully completed a doctoral program. Research questions were designed to retrieve information regarding how the McNair program impacted the successful completion of the doctorate. The findings were developed through analysis of data collected from interviews, an online focus group, and document review.

Utilizing various theories of socialization, the doctoral experiences of the nine participants were explored and the perceptions of the impact of the McNair program on successful completion were examined. The findings resulted in a model of intervention that demonstrates how the McNair program can accelerate the progression of McNair

Scholars through the graduate school socialization process for increased opportunity for successful completion of the doctorate.

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## Chapter I

### Introduction

#### *Background*

In the spring of 2000 I made a career change that would significantly alter my life, my beliefs, and my commitment to education. I vividly remember being completely lost regarding one of the programs that I had been hired to support as a Student Program Advisor, the Ronald E. McNair Postbaccalaureate Achievement Program, a federally funded program through the U.S. Department of Education, Office of Federal TRiO Programs.

At the time I was hired, I was progressing through my master's program and was totally unfamiliar in navigating the road to the doctorate. I had never known anyone with a doctorate other than my professors. In fact, I struggled to even get into a master's program with my low undergraduate GPA, as I never anticipated that my years of slacking at the undergraduate level would catch up to me. This is what made my role with the McNair Program difficult. What did I know about research? How could I advise students to excel in their academics when I could barely pass and graduate? What could I teach them that they didn't already know?

During the six years (2000-2006) that I worked with the program, I learned a great deal about preparing for, financing, and enrolling in doctoral programs. My own education had led me to the completion of my M.S. in 2000 and acceptance into a doctoral program in 2002. Excited that I was also willing to experience the journey of doctoral education, some of my scholars<sup>1</sup> presented me with a business card holder with

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<sup>1</sup>The term scholar is commonly used to refer to current and former participants in the Ronald E. McNair

“Dr. Deborah Baness” inscribed as an "accepted into graduate school" gift. Over the years my role as a mentor morphed into that of friend and colleague as I came to value the students as more than just students with whom I worked. We created a bond that was inexplicable that has lasted well beyond my tenure with the program.

As a fellow graduate student, I share similar experiences as the students who have gone through the McNair Program and engaged in countless conversations about our shared experiences of frustration, fatigue, unworthiness, and self-defeating thoughts. Over the years we have often called on each other for encouragement and advice in an effort to support our progress through a process that can often be very alienating.

By allowing myself to be part of the learning process with the McNair scholars, I have been granted access into a world that is full of inspiring individuals who in the face of tremendous adversity - poverty, discrimination, and alienation - continue to persist and succeed. As a doctoral candidate, I cannot count the number of times I have wanted to give up. After experiencing the ups and downs of nine years of excitement, doubt, insecurity, and, at times, indifference, it is difficult to maintain passion and inspiration for a goal that so often seems unreachable. What has kept me going and determined to complete the doctoral process is the knowledge that so many of my students will never have this opportunity. As a White woman of economic and social privilege, I realize that I am afforded abundant opportunity to succeed academically (Hooks, 1994; Hurtado, 1989; McIntosh, 1990; McIntosh, 1993; Tatum 1999). I cannot walk away or give up when so many others will never be given the same chance to realize their full potential. As educators, how can we expect McNair students to

succeed when so many are likely to fail? What motivates those who succeed when times get tough? What keeps McNair scholars going in the face of the overwhelming odds of doctoral attrition?

To continue to support students in their doctoral journey, as well as my own, I needed to understand why some students persist while others don't. I needed to gain insight into the experiences of those McNair scholars gain strategies and inspiration from their experiences to share with others so that improvements can be made to appropriately support doctoral students and increase the likelihood of their completion of the doctoral degree. As educators, we need to understand the struggles and the victories that allow for completion, embrace the changes that are required to sustain doctoral students, and release the practices of the past that are structured to oppress populations deemed inferior. It is our responsibility to encourage students with dreams of the doctorate to adopt techniques and mindsets that are most beneficial while addressing the problems that plague academia.

The McNair Scholars Program was created to expand educational opportunities for low income, first generation, and students of color in doctoral education. By expanding the number of Ph.D. recipients from these backgrounds, faculty will become more diversified and changes can be made in the traditional mindsets that have held students from low income, first generation, and underrepresented<sup>2</sup> backgrounds down for generations.

### *McNair Program Overview*

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<sup>2</sup>The term underrepresented is utilized by the U.S. Department of Education to describe students of racial backgrounds historically underrepresented in graduate education. These groupings include African American, Hispanic, American Indian, Pacific Islander, and Alaskan Native. This term will be used interchangeably with students of color throughout this study.

A federally funded program authorized under the Higher Education Act of 1965 and reauthorized under the Higher Education and Opportunity Act of 2008, the Ronald E. McNair Postbaccalaureate Achievement Program is sponsored by the U.S. Department of Education, Office of Postsecondary Education, Federal TRiO Programs. The Ronald E. McNair Postbaccalaureate Achievement Program, or the McNair Program as it is more commonly referred, is named after Ronald E. McNair, the second African-American astronaut in space. Ronald E. McNair was killed in the Challenger space accident in January 1986. In an effort to recognize the educational accomplishments of McNair, Congress passed legislation that same year creating the McNair Program. Their efforts were an attempt to increase the number of low income, first generation, and underrepresented students receiving doctorate degrees and establishing careers in the professoriate. Initial funding for the McNair Program began in 1989 with 14 institutions expanding to 185 participating institutions in 2008 (Grimmett, Bliss, Davis, & Ray, 1998; Parker, 2003; Sebourn, Chan, & Kirshstein, 2005).

The Ronald E. McNair awards grant to institutions of higher education for projects designed to prepare participants for doctoral studies through involvement in research and other scholarly activities. McNair participants are from disadvantaged backgrounds and have demonstrated strong academic potential. Institutions work closely with these participants through their undergraduate requirements, encourage their entrance into graduate programs, and track their progress to successful completion of advanced degrees. The goal of McNair is to increase the attainment of the Ph.D. by students from underrepresented segments of society (Ronald E. McNair Postbaccalaureate Achievement Program, n.d.).

Through services such as faculty mentoring, summer research internships, conference presentations, workshops, advisement, GRE preparation, graduate school seminars, and campus visits, participants are exposed to all aspects of graduate school preparation.

While each funded program has the flexibility to structure services to meet the unique needs of the institutions and the population being served, there is a general template that can be generated to illustrate the sequence for the program. All programs are funded to serve undergraduate students and have restrictions on the use of funding prior to the end of their sophomore year and upon enrollment into graduate school. The illustration below is based on the model developed by the University of New Mexico McNair Scholars Program.

Table 1

*McNair Program Services Template*

Junior Yr	Summer Between Jr./Sr. Yr	Senior Yr
Selection into Program	Research Internship	Research Conference Presentations
Selection of Mentor	GRE Preparation Course	Campus Visits
Research Design Course	Research Presentation Skills Workshops	Application Submission
Development of Faculty Mentor Relationship	Faculty Mentoring	Faculty Mentoring
Development of Research Proposal	Academic Advisement	Academic Advisement
Academic Advisement		GRE Completion Publication Submission  Teacher Preparation Workshops

Ideally, students are active in the program for a minimum of two years with an

extended summer internship included in their experience. They receive on-going academic advisement, faculty mentoring, and supplemental workshops and/or courses designed to enhance their knowledge of the research process, the graduate school experience, and/or the application process.

*Statement of the Problem*

The doctoral completion rate is dismal. According to a recent study conducted by the Doctoral Completion Project, students complete doctoral programs at a rate of 54% over a 10-year period. While over time there have been efforts to address the loss of students, figures have not significantly changed. More problematic are the statistics of students of color that do not complete doctoral programs. In the Doctoral Completion Project investigation, it was noted that 49% of students of color will not complete their doctoral programs. The National Center for Educational Statistics provides the following information in relation to doctoral degrees awarded to students of color in 2003-2004.

Table 2

*Doctoral Degrees Awarded to Students of Color*

Total Degrees Awarded	African American	Hispanic	American Indian
48,378 (100%)	2,900 (5.9%)	1,662 (3.4%)	217 (.04%)

Source: (NCES Table 25.1)

This disparity is further highlighted by the Woodrow Wilson National Fellowship Foundation (2005), “Though nearly 32% of the doctoral age U.S. population was African-American or Hispanic in 2003, only 11% of the Ph.D.'s in American universities

conferred on US citizens that year went to African-Americans or Hispanic students” (p. 12). This is disheartening given the investment of significant federal funds to bridge the completion gap and ensure diversification of faculty at institutions of higher education.

The McNair Program provides the opportunity for students to successfully complete their undergraduate career and transition into graduate school. However, once graduated, McNair Programs can no longer provide services or spend federal money to support scholars. While federal reporting guidelines for the McNair Program require staff to continue to track all participants through the completion of the doctoral degree, and continuation of federal funding is determined based on this measurement, services are restricted to participants that have not yet enrolled in graduate school. In essence, programs are accountable for the performance of scholars at the graduate level without the ability to spend funding to provide direct services to support them. The program’s foundation is based on the theory that intense preparation for graduate school during the undergraduate years will be sustained through the pursuit and completion of the doctorate and that the reputation of the program, and its scholars will provide opportunities for students to gain long-term benefits. In fact, there are fellowships and assistantships that schools often reserve for McNair scholars, and most of the scholars who participated in this project were granted significant financial packages for graduate school. However, if funding was the key to sustaining interest in and promoting successful completion of the Ph.D., then what would be the purpose of the McNair Program?

According to the publication Ronald E. McNair Postbaccalaureate Achievement Program: 2002-05 Facts and Figures at a Glance (2005), McNair scholars enroll in graduate school at rates higher than non-McNair scholar undergraduates. The increase in

graduate school enrollment is directly contributed to the services provided by the programs that are designed to address the barriers that often deter low income, first generation, and underrepresented students from applying to and enrolling. Projects are funded to provide services to participants including academic counseling, financial aid assistance, mentoring, research opportunities, seminars, summer internships, and tutoring. Guidance for students seeking admission and financial aid for graduate programs is also supported (Ronald E. McNair Postbaccalaureate Achievement Program, n.d.).

While the list of services is outlined by the federal government, each institution has the flexibility to design the services to best meet the needs of the scholars. Over the years the following activities have become common place for funded programs:

- Campus visits,
- Unique graduate fellowship opportunities for McNair scholars only,
- Graduate Record Exam fee waivers,
- Graduate application fee waivers,
- Tuition incentives,
- Assistantships,
- Conference presentation opportunities,
- McNair graduate school fairs, and much more.

All services are designed and funded for undergraduate students that have completed their sophomore year and have not yet enrolled in graduate school.

Additionally, graduate school deans nationally view the highly trained McNair scholars as “good investments” for graduate acceptance based on the rigorous requirements of the program. Most McNair programs require a grade point average



(GPA) over 3.0 for acceptance into the program and compel scholars to maintain or increase their GPA while in the program. In fact, the McNair programs often provide contact lists of graduating scholars to graduate school deans for recruitment purposes.

However, enrollment in graduate school is not a predictor of completion. "After the first year of graduate school, between 79 and 96 percent of these students were persisting (still enrolled at the end of the year). At the end of the second year of graduate school, approximately 60 percent were still persisting, and after three years, between 44 and 53 percent were still enrolled. Forty-three percent persisted through the fourth year" (Seburn, Chan, & Kirshstein, 2005, p. 28 ). As demonstrated, the McNair Scholars Program is successful in promoting enrollment in graduate school; however, this gain is almost immediately lost due to attrition. In fact, the percentage of McNair scholars completing the Ph.D. outlined in the report is similar to that of national statistics reported by the Doctoral Completion Project. This lack of persistence and completion leaves unanswered questions regarding the impact of the McNair Program on the scholars' success in graduate school. Although McNair scholars are academically, socially, and emotionally prepared for graduate school through programming, services, support, and mentoring, scholars experience lower rates of persistence and completion in doctoral programs in comparison to the total doctoral student population.

On the surface, these data would suggest that the McNair Scholar Program is not an effective tool for addressing the completion gap of low income, first generation, and underrepresented students. However, instead of dismissing the program in its entirety, it is beneficial to examine the program through the perspective of scholars that have successfully completed their doctoral degrees. This examination provided insight into the

impact of specific services on the scholars in relation to their doctoral journey and suggestions for improving program services to have a more substantial impact on the participants.

### *Purpose of the Study*

The purpose of this qualitative research study is to examine factors contributing to persistence and completion of doctoral programs by McNair scholars. More specifically, the objective of this investigation was to describe the participants' experiences during their pursuit of the doctorate and identify self-reported influences, motivations, and contributing factors resulting in persistence in and completion of the Ph.D. This study was designed to answer the following research questions:

- What factors contribute to the persistence and completion of the doctorate by McNair scholars?
- How did program services impact the success of the scholars in their progression through the doctoral process?
- How can institutions structure doctoral programs to meet the needs of low income, first generation, and underrepresented students and increase opportunities for successful completion of the doctorate degree?

### *Research Design*

This qualitative study was designed to explore and analyze contributing factors for persistence and completion of the doctorate by individuals that participated in the McNair Scholars Program. Data collection included interviews, background

documentation, focus groups, and surveys of nine scholars that have been awarded doctorate degrees. Eligible participants were selected based on verification of participation in a federally funded McNair Program, completion of a doctoral degree from an accredited institution, and completion of an initial information survey. No restrictions were implemented regarding the location of the host McNair Program or doctoral program, with the exception that all participants needed to have completed a Ph.D. Also, all participants needed to meet program eligibility criteria of being either, 1) low income and first generation college students or 2) students of color. However, participants could be eligible under multiple program criteria, as was the case with many of the participants in this study. A detailed chart of study participants is located in Chapter III.

#### *Limitations of the Study*

Due to the nature of this study, there are several limitations that must be addressed. First, although I share some common ground with the participants in this study - we have all experienced or are experiencing graduate school - we do not share a common platform from which we entered graduate school. I was never a participant in the McNair Scholars Program, nor do I come from a low income, first generation, or underrepresented background. Therefore, based on differences in racial, economic, and other sociocultural aspects, I am an “outsider” studying this group of individuals. This lack of insider status could have affected the depth of information the participants were willing to provide. Not knowing the participants could have created restricting the participants’ willingness to share personal information.

Second, as the researcher and former director for a McNair Scholars Program, there may have been a level of heightened trust or mistrust due to the personal relationships that the researcher maintains with other professionals that work with McNair scholars, which could have impacted the type and amount of information shared during the data collection process.

Third, the sample size for this study is relatively small at nine participants; hence, the data does not reflect a full representation of the population and their experiences with persistence in graduate school.

The participants came to the study with a wide-range of experiences from their host McNair Program. The McNair Scholars Program has required services for programs nationally that the participants engaged in. However, the duration, intensity, and consistency of those services varied from program to program. Therefore, it was only possible to examine activities on a general level. This study does not represent the impact of program services on all scholars, nor does it reflect the quality of the services provided. Since there was no way to verify the type and quality of services each scholar received, the experiences of the participants were based on personal accounts only and varied from program to program.

### *Summary*

Retention and completion in higher education is a problem that continues to cause concern for education administrators who realize that it is vital to research the persistence of students through their education. As such, a large amount of research has been conducted relating to persistence and completion of low income, first generation, and/or

underrepresented students at the undergraduate level (Astin, 1999; Levitz, Noel, & Richter, 1999; Tinto, 1993). However, very little research has been conducted for similar populations at the graduate level (Lovitts, 1996; Tinto, 1993).

Through the existing structure of the Ronald E. McNair Postbaccalaureate Achievement Program, it is possible to research the retention and persistence of low income, first generation, and/or underrepresented graduate students that have received similar levels of preparation training for graduate school. By better understanding the motivations of graduate students, specifically those that traditionally face multiple barriers in their educational pursuits, graduate programs can prepare their institutions, faculty, and administrators to support students more effectively. Retention of low income, first generation, and/or underrepresented graduate students at a higher rate can lead to higher completion rates and diverse faculty representation. The importance of undergraduate retention is well researched; however, in order to truly change educational systems, the retention and completion rates of graduate students from low income, first generation, and/or underrepresented populations needs to be addressed. Without this research, marginalized populations are destined to be underrepresented at the doctoral level.

## Chapter II

### Literature Review

Graduate school attrition within doctoral programs has been researched since the 1960s. Although until recently only anecdotal information was shared, early researchers agreed it presented a significant problem for institutions of higher education, even though the impact of this research in terms of education reform within the graduate school structure has been slow moving. A common reason for slow action included traditional mindsets of attrition being a healthy component of doctoral education.

Whether recognized as a weeding process for the academically weak, a necessary evil to ensure exclusivity of the doctorate, or a systemic structure used to marginalize underrepresented students, high attrition is a problem that has not gotten the attention that it deserves. Until fairly recently, high attrition has been presented by faculty and graduate school deans as a badge of honor. Schools traditionally capitalized on high attrition as a mark of a rigorous program and quality students. In the high-pressure, highly competitive world of the Ph.D., the idea of weeding out the weak can be common practice (Breneman, 1977). The unspoken truth is that those that “fit” into the system are more likely to successfully navigate it. For those that the system was meant to reject, the “fit” is rarely good and the support structure intolerant of their differences (Tinto, 1993). By default, the structure of education is discriminatory, designed to keep academia a wealthy White system that selectively allows participation by others that have proven themselves “worthy.”

It is not unusual to hear stories of faculty creating barriers for doctoral student success as a rite of passage for their students. In an article in the *Chronicle of Higher Education*, Scott Smallwood states,

That has been the way that graduate school has worked for years. It's about separating the wheat from the chaff, some professors will argue. Others may spout additional clichés about the cream rising in sync or swim environments. The good students get through, they say (2004, p. 1).

But, unfortunately, that is not always the case. In fact, research has shown that even those that have high entrance test scores and above average grade point averages have low persistence and completion rates. Academic readiness and general intelligence is not a predictor of success in doctoral programs (Austin, 2002; Golde, 1998; Lovitts, 1996; Lovitts, 2001; Tinto, 1993; Vaquera, 2004; Vaquera, 2008). This is especially true when discussing low income, first generation, and students of color who often face multiple challenges in the transitioning into graduate school. Often the weeding out process that has held firm in graduate school cites academic rigor as the catalyst for attrition.

However, other barriers such as lack of diversity among faculty and students can create environments that hinder success among this population (Austin, 2002; Tierney, 1997; Turner & Thompson, 1993; Winkle-Wagner, Johnson, Morelon-Quainoo, & Santiago, 2010). Attrition at the doctoral level cannot simply be attributed to academic rigor within program or departments.

This literature review explores research and available data regarding persistence and completion of students in doctoral programs research regarding doctoral program completion by students of color and programming developed through research and practice. Investigation is presented regarding the cost of low persistence and completion among doctoral students and how the small number of Ph.D.s conferred to low income,

first generation, and students of color affect the system of higher education. Several solutions are presented as offered by experts in the field (Austin 2002; Golde, 1998; Golde & Dore, 2001; Lovitts, 1996; Tinto, 1993; Vaquera, 2004; Vaquera, 2008) as to how the problems should be addressed. Finally, the McNair Scholar Program is examined as a solution to the problem of low persistence and completion of doctoral degrees among low income, first generation, and students of color. The success and failure of the program is discussed, and gaps in the ability of the program to make long-term impact on students are explored as presented in available research.

### *Persistence Rates*

The most common definition of persistence in educational settings is the continuation of a student to be enrolled from one semester to the next. However, this definition is not appropriate for use within doctoral education. As stated in the Summary of Workshop on Graduate Student Attrition,

...one presenter defined attrition as the proportion of the entering cohort into a doctoral degree program that does not complete the graduate program undertaken. Immediately, this definition presents problems concerning the two key data points: how to identify the cohort and the proportion who do not complete the program (National Science Foundation, 1998, p. 3).

The lack of a solid definition for persistence among graduate students is one reason that research has been sparse and record-keeping minimal. The same publication goes on to state, "With the total process extending as long as 12 years, the task of determining which students remain on doctoral degree course, let alone those who have definitely dropped out, is formidable" (p.3). Institutions of higher education, more



specifically graduate schools, have found the process of defining persistence so cumbersome that it has prohibited many from collecting the data.

Issues such as time to completion, and what is generally referred to as the in and out phenomenon, make it difficult to track persistence among doctoral students. The best information that can be provided is that of individual research studies on smaller populations, which estimate doctoral student persistence at approximately 50% (Lovitts, 1996; Tinto, 1993; Vaquera, 2004; Vaquera, 2008; Zwick, 1991). Until a national database or standardized data collection is implemented, it will be difficult to completely ascertain the problem of persistence in doctoral education. Instead, what most institutions choose to do is rely on completion data within a set time frame to determine persistence.

### *Completion Rates*

Similar to persistence rates, there is limited research that accurately reflects completion rates for doctoral students. Limitations have generally been due to a lack of common requirements regarding time to completion of degree. However, unlike persistence rates, external guidelines can be placed on time to completion, which allows for researchers to determine appropriate completion levels. It is not surprising that data on completion rates has been estimated at approximately 50 % over the past 30 years (Tinto, 1993; Zwick, 1991). What is surprising is that this number has been substantiated by new research and data collection over the past 10 years.

In 2002 at a conference of the Council of Graduate Schools (CGS), tremendous focus was placed on the issue of persistence and completion in doctoral programs. As a result, the CGS, in collaboration with other funding partners, established the Ph.D.

Completion Project that “addresses the issues surrounding Ph.D. completion and attrition” (Ph.D. Completion Project, n.d.). The project funds research universities to design, develop, implement, and evaluate projects and interventions that support graduate students. “The Ph.D. Completion Project aims to produce the most comprehensive and useful data on attrition from doctoral study and completion of Ph.D. programs yet available” (Ph.D. Completion Project, n.d.). The establishment of the Ph.D. Completion Project has provided statistically solid data on attrition rates and Ph.D. completion. In their most recent publication that outlines the first set of data points for the project, the Ph.D. Completion Project places the cumulative completion rate for Ph.D. students entering programs from 1992-1993 through 1994-1995 at 54% over a 10-year period (Council of Graduate Schools, 2008). The same study reports cumulative completion rates for Ph.D. students entering programs from 1992–1993 through 1994-1995 at 46% compared to those entering 1995-1996 through 1997-1998 at 47%. This comparative data demonstrates little improvement between these two cohorts representing a span of six years.

The creation of the Ph.D. Completion Project coincided with the implementation of reporting mechanisms that capture completion rates among doctoral students at several institutions and national education agencies. The National Center for Educational Statistics released a report in February 2007 that represented a ten-year longitudinal study of graduate school completion. Within this report, statistics were shared relating to doctoral degree completion. However, this report did not focus on completion rates but on time to completion. According to the National Center for Educational Statistics, doctoral degree recipients completed degrees, on average, in six years. In this study,

"about two thirds (65 percent) took more than five years to finish, 29 percent took three to five years to finish, and the remaining six percent finished within three years"

(National Science Foundation, 1998, p. 49).

Both the Ph.D. Completion Project study and the data presented by the National Center for Educational Statistics agree that those enrolled in fields such as Science, Engineering, and Math (SEM) complete degrees at a higher rate than those in Social Science fields, such as the Humanities. According to the Ph.D. Completion Project (2008), completion rates for students entering doctoral programs in SEM fields from 1992-1993 through 1994-1995 is 43% after a six-year time span. Comparatively, the same report indicates students enrolled during the same years in Social Sciences and Humanities complete at a rate of 25% after six years. Additionally, these reports indicate that men (39%) complete doctoral degrees at a higher rate than women (30%), and that White students (33%) complete the Ph.D. at a higher rate than both African American (25%) and Hispanic (24%) students in the same six-year period (Council of Graduate Schools, 2008).

Research indicates that aspects of doctoral education in SEM fields contribute to higher persistence and completion rates (Golde & Dore, 2001; Jashick, 2009; Lovitts, 1996; Nevill & Xianglei, 2007; Tinto, 1993; Zwick, 1991). These include conducting work in "team" environments, maintaining lab assistantships, and regular interaction with their faculty mentor. Additionally, persistence and completion in education is often driven by the perceived results by the students. In doctoral education, outcomes of completion are often measured by career aspirations and/or job availability. As a result, students enrolled in doctoral programs in SEM fields generally have greater career

opportunities after completion than those in Social Sciences and Humanities. For most SEM fields, career options post-doctorate included both private and public sector positions, including faculty placements. This is not generally the case for Social Sciences and Humanities whose graduates often compete for limited faculty positions in a shrinking pool (Golde & Dore, 2001). However, there continues to be little representation in SEM fields by students from low income, first generation backgrounds, as well as students of color.

#### *Low Income and First Generation Students*

Low income, first generation college students are also disproportionately students of color. This population tends to be less academically prepared for college, are more likely to work while going to school, and are older than their counterparts (Chen, 2005; Choy, 2001; Engle & Tinto, 2008; Kahlenberg, 2010; Nuñez & Cuccaro-Alamin, 1998). These characteristics present real barriers for success in undergraduate education. According to Engle and Tinto (2008), low income, first generation college students comprise approximately 24% of the total undergraduate population nationally. However, 43% left college without earning their degrees after a six-year period, and at the end of a six-year period only 11% had completed their bachelor's degree. This number is significantly lower than that of students that have college-educated parents and are from non-low income households.

It is not surprising that the lack of persistence and completion among low income, first generation populations impacts representation at the graduate school level. Engle and Tinto (2008) also present data related to low income, first generation graduate student

enrollment and completion. Based on a 2003 cohort, low income, first generation students enrolled in graduate school at a rate of 37%, while those that were not low income or first generation enrolled at a rate of 48%. This disparity between these groups is highlighted when looking at graduate school completion.

Only 21 percent of low-income, first-generation students earned a graduate degree compared to 36 percent of their peers...Overall, only half of low-income, first-generation graduate students completed their degree programs compared to approximately two-thirds of students who were neither low-income nor first-generation (Engle & Tinto, 2008, p. 18-19).

It is more pronounced when examining statistics regarding Ph.D. completion within this 2003 cohort. Ph.D. completion for low income, first generation students in this cohort was 1%.

Barriers for persistence and completion of low income, first generation students at the graduate school level have not been extensively researched, nor have the strategies for supporting this population in graduate school been extensively explored (Chen, 2005; Choy, 2001; Engle & Tinto, 2008; Nuñez & Cuccaro-Alamin, 1998). However, research is available regarding persistence and completion of students of color. As indicated earlier, low income, first generation students are more likely to be students of color. Therefore, in order to understand the educational barriers of low income, first generation students, it is important to understand the educational barriers of students of color.

### *Students of Color*

Statistics regarding persistence and completion among all doctoral students are agreeably low. However, there is a larger problem that has drawn the attention of academic administrators nationally. Persistence and completion rates among students of

color are significantly lower than those of their White counterparts. One study conducted by Rebecca Zwick (1991) demonstrates the disparities between Black and Hispanic students and their White counterparts. In the study of three institutions, the data shows that African American and Hispanic students complete doctoral degrees after five years at a rate that is approximately half of their White counterparts. Furthermore, the study shows that eight years after entry Hispanic students complete at a rate that is one-third that of their White peers (p. 9). The same study outlines percentages of students achieving Ph.D. candidacy after five and eight years in the program. On average, over 50% of White students achieve candidacy within five years, and approximately 60% achieve candidacy eight years after entry. This is not the case for Black or Hispanic students. According to Zwick (1991), Black students achieve candidacy after five years at a rate of approximately 36% and Hispanic students at 26%. The statistics increased after eight years to approximately 50% for Black students and 34% for Hispanic students.

Most obvious in this report is the absence of any American Indian or indigenous students.

Though nearly 32% of the doctoral age U.S. population was African-American or Hispanic in 2003, only 11% of the Ph.D.s in American universities conferred on U.S. citizens that year went to African-Americans or Hispanic students - just 7% of all Ph.D.s awarded in the U.S., including those granted to international students (Woodrow Wilson National Fellowship Foundation, 2005, p. 12).

The report goes on to demonstrate the disparities between African-American and Hispanic students and their White counterparts in all fields granting Ph.D.s. In 2003 only 6.6% of Ph.D.s awarded were granted to African-American doctoral students, and only 4.9% were granted to Hispanic students. American Indian students are not reflected in this data.

In their report "Ph.D. Completion and Attrition: An Analysis of Baseline Demographic Data from the Ph.D. Completion Project," the Ph.D. Completion Project presents similar data in relation to the completion rates for students of color. African-American students entering doctoral programs from 1990-93 through 1994-95 completed doctoral programs after six years at a rate of 25% and after 10 years at a rate of 47%. Hispanic students entering during the same time frame completed at a rate of 24% after six years and 51% after 10 years (Council of Graduate Schools, 2008). These statistics are significantly lower than those of their White peers. When discussing completion rates for students of color in SEM fields during that same entry period, the completion rates for African American students is 28% after six years and 43% after 10 years. These figures represent completion rates that are almost 10% lower than their White peers in the same fields. The disparity in the completion rates among students of color and their White counterparts is reflected in the social science fields as well.

The issue of persistence and completion of doctoral students of color is highlighted in statistics provided by the National Center of Educational Statistics. In 2003-2004, 48,378 doctoral degrees were conferred by degree granting institutions. Of those degrees, 5.9% (2,900) were conferred to African-American students, 3.4% (1,662) to Hispanic students, and .04% (217) to American Indian/Alaska native students (National Center for Educational Statistics, 2009). The low representation of American Indian students in this report demonstrates the absence of this population in studies conducted regarding doctoral completion and students of color. This is the only study available that presents information on completion for American Indian students. It is apparent that low persistence and completion among students of color is problematic.

However, the extent of the problem is wide-spread and has implications for the entire higher education system.

### *The Cost of High Attrition and Low Completion*

As demonstrated, there is a significant problem with high attrition rates and low completion rates in doctoral education. While research has been conducted in this area for decades, there is little evidence of systematic response to the problem (Lovitts, 1996; Lovitts, 2001; Tinto, 1993; Vaquera, 2004). If the sentiment has traditionally been that attrition is not necessarily bad and that low completion rates serve as a filter for the academically unfit, then why should higher education address this issue?

There are several reasons that institutions of higher education should address these issues - the most prevalent being the financial drain that attrition causes an institution. Most institutions front load their investment into a doctoral student through recruitment materials, visits, funding, faculty time, and other resources and support. When students leave programs or do not complete, there is little if any return on that investment (Lovitts, 1996; Lovitts, 2001; Tinto, 1993). In an article that appeared in the *Chronicle of Higher Education*, Scott Smallwood discussed the cost effect of attrition at Notre Dame as presented by the dean of the graduate school. "Notre Dame would save one million a year in stipends alone if attrition went down by 10%, because programs would not over-enroll students to compensate for attrition" (2004). While it is obvious that the financial cost to the institution is high, there are other costs involved as well.

High attrition and low completion have a tremendous cost for society at large and the nation's place in the global economy. Research demonstrates that academic readiness,



grade point averages, and placement test scores are not predictors of doctoral completion. Students that have high academic promise leave programs at rates comparable to their peers. Therefore, the students that are being lost to attrition in doctoral programs are not necessarily the bottom of the barrel. This loss of students is not only a financial loss to the institutions but to society in the form of potential expertise, elevated workforce knowledge base, and contributing researchers in the field. Most impact, especially in the case of students of color, is the loss of potential faculty.

Diversification of faculty has been a focal point for institutions of higher education across the country for at least a decade. Low persistence and completion rates among low income, first generation students, and students of color prevent progress in the area of faculty diversification. Furthermore, the lack of faculty diversity directly impacts the retention and graduation rates of undergraduate students (Astin, 1999; Tinto, 1993). As such, the problem of persistence and completion of low income, first generation students, and students of color in doctoral programs comes full circle.

The last generally identified cost of high attrition and low completion is that of opportunity. When doctoral students leave programs, it is often their first failure in academia (Lovitts, 1996; Lovitts, 2001; Nelson & Lovitts, 2001). The time, money, and effort invested into programs is high, and the return for those that leave is likely none. While few students leave as a result of equitable career opportunities, most leave as a result of a failure to find the support they need to be successful. This inability to connect to the program, department, or institution can reduce their experience to one that is nothing more than an emotional, physical, and financial drain.

### *Theories of Graduate School Socialization*

Researchers have attributed student persistence and completion to socialization into the program department (Astin, 1999; Bieber & Worley, 2006; Golde, 1998; Golde & Dore, 2001; Lovitts, 1996; Malone, Nelson, & Nelson, 2001; Nelson & Lovitts, 2001; Parker, 2003; Schmidt, 2008; Tierney, 1997; Tinto, 1993; Vaquera, 2008). Socialization occurs at different levels for undergraduate and graduate students largely due to the fundamental differences between undergraduate and graduate education, such as the processes in place for admission, recruitment, financial aid, and other aspects of student life. At the undergraduate level, these processes occur within institutional offices and represent the organization as a whole. However, at the graduate school level, especially the doctoral level, these processes are facilitated within the student's department with little need to engage with the larger institution. As a result of departmental level processes, there is a need to view issues such as retention and completion of doctoral students at the departmental level as well. While research for undergraduate retention and completion indicates that academic and social integration occurs at the institutional level, research has indicated that this same integration at the doctoral level is localized within the department and discipline.

Regardless of the educational level, the concept that successful socialization into educational environments leads to persistence and completion is strongly supported. Grounded in organizational socialization (Van Mannen, 1984), the socialization of graduate students has been thoroughly researched. As a result, several models have emerged as it relates to doctoral education.

Barbara Lovitts (2001) presents a model that is based on development phases of graduate students. She interprets the socialization process as including four stages beginning at Stage Zero and moving through Stage Three. Each stage in this model corresponds with a particular year of study. For example, Stage Zero and Stage One represent the Pre-Entry and the Entry and Adjustment Stage of the socialization process. Students then progress through the stages as they progress through their doctoral program. At Stage Two (Development of Competence), students complete coursework and required examinations, which culminates at Stage Three (Research) when the student enters candidacy through the defense of the dissertation. Lovitts (1996) states, "By focusing on the social structure of graduate degree programs and the process of student socialization into the academic and social systems of graduate programs as well as students' reactions to the socialization process, factors that may lead to attrition become apparent" (p. 7).

The stages of socialization presented by Lovitts (2001) are strikingly similar to the theory of graduate student socialization offered by Weidman, Twale, and Stein (2001). This theory also indicates that there are four stages to graduate student socialization: Anticipatory, Formal, Informal, and Personal. As with Lovitts, each stage represents significant stages in the graduate student development process. At the Anticipatory stage, students are just entering the program, learning the norms and their role within the program, getting to know faculty and fellow students, and how to navigate the process. At the Formal stage, students are engaging in coursework, embracing expectations, learning from advanced students, and beginning to interact with faculty. At the Informal stage, students are learning to navigate the discipline through a more

professional lens with the support of mentors, peers, and professionals in the field. This is a strong networking stage that is vital to helping foster the transition from student to professional. The Personal stage is the point at which all aspects of the graduate student experience merge to create the final persona. At this stage, the individual becomes the professional they have been studying, networking, role modeling to be.

Graduate school socialization is unique in that it is not only integrating the student into the academic setting, but it is also preparing the student for a profession/ life as a faculty member. In this regard, Golde (1998) presents a theory of graduate school socialization that is two-fold:

The socialization process is one in which a newcomer is made a member of a community – in the case of graduate students, the community of an academic department in a particular discipline. The socialization of graduate students is an unusual double socialization. New students are simultaneously directly socialized into the role of graduate student and are given preparatory socialization into a profession (p. 56).

As such, Golde (1998) describes the process of graduate school socialization as being a four step process that includes:

- 1) Intellectual mastery,
- 2) Learning the realities of graduate school life,
- 3) Learning about the profession, and
- 4) Department integration.

According to Gold, each stage allows for various levels of self-discovery for the doctoral student.

- Stage one - the students question whether they are capable of the completing the coursework.
- Stage two - the student reflects on his/her desire to be a graduate student.

- Stage three - students explore their desire to enter this career path.
- Stage four leads to questions regarding whether or not the particular department is a good fit (p. 56).

This model seems to represent a combination of that presented by Lovitts (2001) and Wiedman, Twale, and Stein (2001). These stages of socialization, in theory, lead the student through a process of self-reflection that should highlight indicators for attrition.

Finally, Tinto (1993) outlines his own Theory of Doctoral Persistence, which presents a dual process of student integration as an indicator of attrition. Although slightly different in the use of terminology (integration vs. socialization), the general concept is the same. The more successful students are in integrating academically and socially into their departments, the more likely they are to persist and complete the Ph.D.

...the process of doctoral persistence, relative to undergraduate persistence, is more likely to be reflective of, and framed by, the particular types of student and faculty communities that reside in the local department, program, or school. In this respect, the notion of social integration at the graduate level is more closely tied to that of academic integration than it is at the undergraduate level. Social membership within one's program becomes part and parcel of academic membership, in social interaction with one's peers, and faculty becomes closely linked not only to one's intellectual development but also to the development of the important skills required for doctoral completion (p. 232).

Tinto also presents his theory in stages. The first stage is transition, which coincides with the first year of study when the student is establishing relationships and membership within the community. It is as this stage that students determine "fit." There is internal reflection regarding the departmental choice, career choice, and discipline choice. The second stage is that of preparation for candidacy - a demonstration of skill, ability, and knowledge. However, this is a cloudy stage that maintains focus on academic integration while sharing space with the social integration necessary to gain the

confidence of faculty through demonstration in and out of the classroom that academic mastery has occurred. Finally, Tinto presents stage three as being the period between candidacy and the completion of the dissertation. During this stage, the interactions with faculty become much localized to the relationship with the faculty advisor and those members of the dissertation committee. This is also the stage that is considered crucial by Tinto in the professional aspects of socialization or integration into the larger discipline arena.

For the purpose of this research, academic integration refers to those aspects of doctoral study that include the classroom, research, faculty, and any other component of daily academic life. Social integration refers to all non-academic aspects of doctoral study, including the student community, peer interaction, etc. (Austin, 2002; Golde, 1998; Lovitts, 1996; Lovitts, 2001; Tinto, 1993). While Tinto (1993) argues that doctoral persistence and completion relies on successful integration of the student in both social and academic arenas, others have indicated an unbalanced impact.

Lovitts (1996) recognizes the relation of academic and social integration to doctoral attrition. However, she argues that academic integration is a greater indicator of attrition. Golde (2000) confirms this theory:

This is not to say that social integration, especially because it is closely linked with academic integration, is unimportant. The absence of social integration can have a negative effect on the quality of the student's experience, but it is not a preceptor of attrition. Problems with academic integration, on the other hand, do lead to doctoral student attrition (p. 222).

However, at this time the research may be too limited to determine whether academic or social integration or both are indicators of successful completion of the doctorate.

Instead, funding organizations have turned theory into practice as a way to determine

whether or not socialization or integration can be fostered early in a student's academic career as a way of increasing the likelihood of successful completion of the doctorate. Additionally, there is limited research available to determine if the models presented are appropriate for doctoral students from all backgrounds.

Socialization at the graduate school level is the process of students integrating academically and socially into the departmental culture and that of the discipline (Gardner, 2010; Golde, 1998; Lovitts, 1996; Lovitts, 2001; Tierney, 1997; Tinto, 1993; Turner & Thompson, 1993). However, in the models offered, there is limited consideration for various cultural perspectives that may be present based on the backgrounds of the students. The models are also one directional, which restricts exploration of students who may not be socially prepared for graduate school or may not fit the traditional graduate student mold that these models represent (Gardner & Mendoza, 2010). More specifically, do low income, first generation, and/or students of color proceed through the socialization process in the same ways as their White privileged counterparts? Do the models presented account for the historically limited access that has been afforded to students from these backgrounds and the unbalanced cultures that exist at the doctoral level?

### *Turning Theory into Practice*

To increase the likelihood of successful completion of the doctorate, especially among traditionally underserved populations, programs have surfaced to address the need to initiate the socialization process as soon as a student indicates a desire to pursue doctoral education. In an effort to start the socialization process as early as possible,

several core components of programming have surfaced that reflect the need for both academic and social integration into doctoral program. These are viewed as vital to increasing persistence and completion of doctoral students (Astin, 1999; Bieber & Worley, 2006; Breneman, 1977; Golde & Dore, 2001; Grimmett, Bliss, Davis, & Ray, 1998; Lovitts, 1996; Lovitts, 2001; Nelson & Lovitts, 2001; Parker, 2003; Perna, 2004; Tierney, 1997; Tinto, 1993; Vaquera, 2004; Vaquera, 2008; Zwick, 1991). The following core components are often integrated into student support programming at the undergraduate and graduate level and used as a template to promote student success in doctoral education. The core components represent the general concepts presented various researchers, not necessarily exact labels.

#### *Pre-Enrollment Preparation*

Research suggests that students that are familiar with the doctoral process are more likely to persist and complete doctoral programs (Bieber & Worley, 2006; Lovitts, 1996; Lovitts, 2001; Tinto, 1993). This preparation includes selection of the graduate program and ensuring that there is a good fit with faculty and expertise in the department. Additionally, knowing the process of completing the doctorate is beneficial to students and prepares them for the stages of completion and the expectations of their program. Studies have demonstrated that doctoral students that are not familiar with the process of completing the degree delay the conferment process (Lovitts, 1996; Lovitts, 2001; Vaquera, 2004). Simply de-mystifying the ins and outs of getting a Ph.D. reduce the anxiety of the student and the dependence that a student has on the faculty and department to guide them through the process. Exposing students to proposal hearings



and the dissertation defense process reduces the sense of wonderment that often occurs as student progress through the completion requirements.

Finally, preparing students for the rigor of doctoral programs and the research techniques used at the graduate level are beneficial. By providing students with the terminology used at the graduate level and exposing them to the types of environments and interactions they will have is vital to the acclimation process. Similar to approaches taken at the undergraduate level to ease transition, preparation completed prior to enrollment in graduate education can provide for an easier transition into a new environment that allows the student to focus on academic requirements.

### *Funding*

Funding is a key predictor to doctoral persistence and completion and has become a driving factor in the admissions process for some institutions. However, it is not necessarily direct funding that determines persistence and completion. The benefit of funding in graduate school stems from the paid teaching and research assistantships. While fellowships may allow for students to focus time and attention on their studies, assistantships provide doctoral students with the direct interaction with their department. This relationship building is a key component to success in doctoral programs (Golde, 1998; Golde & Dore, 2001; Nelson & Lovitts, 2001; Tinto, 1993).

### *Relationship Building*

Research (Astin, 1999; Golde, 1998; Golde & Dore, 2001; Lovitts, 1996; Nelson & Lovitts, 2001; Tinto, 1993; Vaquera, 2004) indicates that connectivity or student engagement in the campus community has a significant impact in success. While most research in the area has been conducted at the undergraduate level, the same theory can be applied to graduate students.

Graduate students, particularly doctoral students, are greatly impacted by the type and nature of relationships that they form. Whether with faculty, colleagues, or institution personnel, the result of relationships that doctoral students make can affect the way in which they navigate the doctoral process and ultimately their ability to complete their degree. In her dissertation, Gloria Vaquera (2004) highlights the importance of doctoral students building strong relationships within their departments. “In doctoral education, faculty plays a critical role in the lives of graduate students. Making a connection to faculty members and forging a relationship is the crucial ingredient to successfully navigating a doctoral program” (p. 81).

This need to maintain strong relationships is expanded to include fellow graduate students, as well as active participation in student groups. The impact of relationships, especially those with advisors, is a common theme within qualitative studies in this area. Researchers (Astin, 1999; Bieber & Worley, 2006; Golde & Dore, 2001; Lovitts, 1996; Nelson & Lovitts, 2001; Tinto, 1993; Vaquera, 2004) have maintained that personal interactions and support and encouragement received or denied during the doctoral process can make or break the student’s ability to complete their program. However, it is not enough to encourage students to create relationships with those that can positively

impact their doctoral process. To strengthen the persistence and completion rates of doctoral students, institutions, departments, programs, faculty, etc., need to be intentional about helping establish, foster, and expand these relationships. Examples of intentional programming include assistantships, student/faculty events, faculty mentoring, joint conferences, student organizations, and writing groups. Additionally, it is vital to explore those factors that successful completers indicate supported their completion of the doctorate. By studying students that have successfully completed the doctorate, research studies such as this create the opportunity to identify factors that increase the likelihood of successful and replicate those factors for other doctoral students.

#### *Departmental Environment*

Department environment refers to both the seen and unseen aspects of day-to-day operations. Establishing a welcoming environment that encourages students to engage in activities within the department is vital to the overall success of doctoral students. Departments that have faculty engaging in both professional and “social” activities with students often demonstrate higher levels of persistence and completion (Nelson & Lovitts, 2001). This type of success through regular interaction has been documented widely by comparing persistence and completion rates between fields requiring students to work in lab settings and those that do not. Completion rates of students in the sciences are higher than that of students in Social Sciences and/or Humanities. This difference in success rates is attributed to the impact of strong relationships and team-type environments and those that are more isolating in nature (Golde & Dore, 2001; Lovitts, 1996; Lovitts, 2001; Tinto, 1993; Vaquera, 2004). According to Lovitts (1996), “A

student who is given opportunities to integrate into the department's academic community is more likely to complete than a student who must rely on his or her own resources and ingenuity to become integrated" (p. 275).

#### *Process and Procedure*

Doctoral students that are familiar with the process and procedures of navigating their degrees are more likely to persist and complete. In referencing a participant in her research study, Gloria Vaquera (2004) indicates that students in her study would have completed their programs sooner had they been granted access to information during "critical points" in the program (p. 105). Knowing what to expect and when to expect it provides doctoral students with the tools they need to be proactive in navigating the system. This is extremely important when students are faced with limited access to faculty, faculty new to the process, or a system that maintains a "gatekeeper" approach to disseminating information. While institutions generally adhere to fundamental benchmarks or stages of progressing through degree completion, each has their unique way of documenting the process that often causes confusion and/or delay in the completion of degrees. In fact, many students get frustrated with the process and simply leave in lieu of working their way through the red tape.

#### *Professional Development*

To increase the likelihood of persistence and completion, research has demonstrated that doctoral students need to have opportunities for professional development. Ranging from active research with a faculty member, co-publishing, and/or serving on editorial boards to being a teaching assistant, doctoral students need to

visualize themselves in their field of study. Often while completing doctoral program requirements, students get lost in the process and fail to see the potential outcome of their work and dedication. This is especially true for those fields of study whose students are not generally linked directly to a lab or other organized structure. Without intentional professional development opportunities, students are at risk of getting lost in the day-to-day and losing focus of the larger picture.

This is particularly important for those students seeking to make careers as faculty. Without opportunities to publish, teach, and actively research, it is difficult to truly prepare doctoral students for life as faculty. The rigor that is involved with the tenure process can be overwhelming for any new faculty, let alone one that has not been adequately prepared.

Finally, for those students seeking doctoral degrees for reasons outside of the professoriate, it is important that they have opportunity to explore their intended fields, network for future employment, and begin to establish themselves as emerging leaders. It is not unusual to hear stories of Ph.D. completers that are unable to break into their field due to lack of exposure and or direct experience. This is especially common in areas of study such as English where students are presented with career opportunities while in school that are equal to those they would qualify for after completion. Equally necessary are honest conversations regarding availability of full-time, tenure track faculty positions. In referencing their study regarding the experiences of doctoral students and doctoral education, Golde and Dore (2001) state, “The data from this study show that in today’s doctoral programs, there is a three-way mismatch between student goals, training and

actual careers” (p. 5). Maintaining a balance between a student’s professional growth, expectations, and progress toward a degree is completion in doctoral education.

### *Research-Based Programming*

In response to the lack of diversity within doctoral education and the impact this has on faculty diversity within the higher education system, the federal government developed several programs to increase enrollment and completion of doctoral programs by low income, first generation, and students of color. Programs designed to target students pursuing doctoral degrees in Science, Engineering, and Math (SEM) have become commonplace. However, as discussed earlier, these fields are not necessarily at the highest risk of having low persistence and completion rates among doctoral students. While SEM fields continue to demonstrate weak gains in diversifying faculty in these areas, students enrolling in SEM fields are more likely to complete than those in Social Sciences and Humanities. Therefore, exploring implementing programming that cuts across all disciplines is vital to the long-term diversification of higher education.

In the late 1980s, a comprehensive program was piloted by the U.S. Department of Education, Office of Federal TRiO Programs. The Ronald E. McNair Postbaccalaureate Achievement Program was developed to support low income, first generation, and underrepresented students pursuing doctoral education, specifically, the Ph.D. This targeted purpose resulted from the recognition that while more students of color were embarking on graduate education, the face of the faculty remained largely White. However, due to political pressure and the need to address the lack of access for

poor White students as well as students of color, the program was expanded to include low income, first generation students. To date, the McNair Scholars Program remains the only TRiO program that includes regulatory language including “underrepresented status” as an eligibility consideration.

One of the first federally funded programs to address access in doctoral education, the McNair Program was designed to implement core services for the purpose of encouraging participants to pursue doctoral education - preparing participants for doctoral education and ensuring the success of participants in doctoral education. It is not surprising that the core components highlighted in research relating to doctoral completion are also the fundamental components of the McNair Scholars Program. In fact, most researchers have either recognized or validated the McNair Program as a leader in graduate education preparation, making McNair scholars some of the most sought after applicants for graduate programs in the nation.

Generally recruited in their junior or senior year, participants must demonstrate academic excellence through minimum grade point averages, commitment to pursue doctoral education, commitment to actively participate in program activities and services, and engage in program events. During participation in the program, scholars mimic situations that they are likely to find themselves in during graduate schools and that align with the core components outlined above. For example, most McNair Programs require participants to “select” a faculty mentor. Using training provided by the program, scholars interview faculty in their area to determine who they feel would be the best “fit” as their mentor and advisor for their research project. Once a mentor is selected, both mentor and scholar attend various workshops and events in preparation for participation

in a hands-on research project. While the nature of the research projects varies from student to student and project to project, the intent is to provide real life experience in an area that the student is interested in pursuing. In fact, most scholars continue the work initiated through the program in their graduate programs.

In addition to selecting a mentor and research project, scholars are provided information on all aspects of research design, including creating a poster presentation and oral presentation for McNair conferences held nationally. It has become common for faculty mentors and their McNair scholars to co-publish papers on the research as well. While preparation for graduate level research is vital to success and preparation for doctoral study, scholars are also exposed to the application and the doctoral completion process.

According to the Profile of the Ronald E. McNair Postbaccalaureate Achievement Program 1997-1998 through 2001-2002 (2005), McNair scholars received the following service during the 1997-2002 academic years:

- Research opportunities for college junior and seniors (Pre-enrollment Preparation / Departmental Environment / Professional Growth / Process & Procedure),
- Mentoring (Departmental Environment / Relationship Building),
- Seminars and other activities to prepare students for doctoral studies (Process & Procedure / Pre-enrollment Preparation),
- Internships for participants who have completed their sophomore year in postsecondary education (with a research stipend of up to \$2,800 – Funding),
- Tutoring (Pre-enrollment Preparation),



- Academic counseling (Pre-enrollment Preparation), and
- Assistance in securing admission and financial aid for graduate school (Funding).

It is not coincidental that all of the services listed above are consistent with the core components discussed in the previous section. Over the past 20 years, the McNair Scholars Program has earned a reputation as a solid national program that produces quality, prepared students for doctoral education. This reputation is taken seriously among McNair directors as the continuation of their funding is evaluated, in part, by the Ph.D. completion rates of their scholars.

The graduate school acceptance and enrollment rates among McNair scholars are impressive. As reported by the U.S. Department of Education, 40% of participants graduating in 2000-2001 were accepted into graduate programs, and 39% entered those programs the following year. In dissecting specific eligibility populations, this same report states that more underrepresented students (42%) enrolled in graduate programs the year after graduation than did low income and first generation participants (35%) (Seburn, Chan, Kirshstein, 2005). This report indicates that McNair scholars enroll in graduate programs immediately following graduation at rates approximately 6% higher than that of their peers and make up nearly three-fourths (72%) of all low income/first generations students and over one-fourth (28%) of all underrepresented students in graduate education (p. 26).

These statistics demonstrate the influence of the McNair Scholars Program on the students that participate. By impacting enrollment rates significantly, the program is able to begin the process of affecting persistence and completion rates and ultimately the lack

of faculty diversity in higher education. It is reasonable to assume that increased enrollment by disadvantaged students would result in increased completion rates and therefore increased diversity among faculty, right?

*Falling Short*

While the McNair Scholars Program has demonstrated tremendous success in the enrollment of students into graduate school, it struggles with their persistence and completion. Data collected from McNair Programs nationally indicate that McNair scholars persist in graduate education at a rate much lower than their peers, and their persistence drops dramatically over time. In fact, the persistence rates of McNair scholars in doctoral programs are actually lower than that of the national rates of 50%. The following table is taken from the Profile of the Ronald E. McNair Postbaccalaureate Achievement Program 1997-1998 through 2001-2002 (2005) to demonstrate the drastic decrease in persistence over time for the four cohorts outlined.

Table 3

*Graduate School Enrollment and Persistence Rates for McNair College Graduates*

*Enrolling in Graduate School Immediately after Graduation by Graduation Year 1997-98 through 2000-01*

	<u>Undergraduate Graduation Year</u>			
	1997 -98	1998 – 99	1999 – 00	2000 – 01
Number of graduates enrolling immediately in graduate school	79	166	312	417
Percent of enrollees persisting to end of 1 <sup>st</sup> year	96.2	78.9	89.4	93.0
Percent of enrollees persisting to end of 2 <sup>nd</sup> year	62.0	59.6	60.3	
Percent of enrollees persisting to end of 3 <sup>rd</sup> year	53.2	44.0		
Percent of enrollees persisting to end of 4 <sup>th</sup> year	43.0			

Data in this chart reflects cohort information over a four-year period. Grey areas represent persistence years that data was not yet completed or tabulated.

As highlighted in this table, the persistence of McNair scholars once enrolled in graduate programs decreases rapidly over a four year period. Additionally, the data shows that this downward trend is consistent over the subsequent cohort years and is much

lower than the 50% persistence rates of their peers outlined in the Profile of the Ronald E. McNair Postbaccalaureate Achievement Program 1997-1998 through 2001-2002 (2005). Although McNair scholars receive program services consistent with research-based core components designed to increase persistence and completion of doctoral program, why do they persist at rates lower than their peers?

It is suggested in this study that this trend is the result of the McNair scholars' status as low-income, first generation, and/or underrepresented students.

“Underrepresented and low-income students have less financial and social support in graduate school, making an ambitious goal even more difficult for McNair participants, who are more likely to be underrepresented and low-income than are graduate students in general” (Seburn, et al., 2005, p. 28). But can this trend really be explained away that easily?

Research outlined previously (Golde & Dore, 2001; Lovitts, 1996; Lovitts, 2001; Tinto, 1993; Vaquera, 2004) indicates that financial need is only a partial indicator of persistence and completion and explains that the most important relationships and social network for persistence and completion are those forged on the campus and in the department. Where does this place McNair scholars that have been successful in completing their Ph.D.? Did they just slip through the cracks of a system otherwise structured to keep them out?

While research has been completed on doctoral students that have left their programs, students of color that have persisted and overall experiences of current and former doctoral students limited qualitative research has been conducted with doctoral students from low income, first generation backgrounds, or students of color. This is also

true for students that participated in programs designed to support their persistence and completion. No research that has explored the contributing factors for persistence and completion of doctoral programs by McNair scholars was found in the course of this study. Most research looks at students that have failed to complete their doctoral programs.

This research explores the experiences of those that have been successful and how they were able to navigate a system that have historically limited their opportunity for success - a system, as acknowledged by the U.S. Department of Education that makes the ambitious goal of a doctorate even more ambitious for low-income, first generation, and/or underrepresented students (Seburn, et al., 2005).

This study utilizes the several theories of graduate school socialization including those of Tinto (1993), Lovitts (2001), and Weidman, Twale and Stein (2001) as well as work presented by Golde (1998) as a framework to examine the journeys of nine scholars from the McNair Scholars Program that successfully completed their Ph.D. programs.

## Chapter III

### Methodology

A shift in the perception that low rates of doctoral program persistence and completion reflects the rigor, competitiveness, and quality of institutions has opened the door for a wide range of research (Astin, 1999; Lovitts, 1996; Lovitts, 2001; Tinto, 1993; Vaquera, 2004). Traditionally estimated at 50% for all doctoral students, persistence and completion rates have been researched based on practices of institutions, differences in academic programs, gender, race and socioeconomic status. Research in the area of doctoral persistence and completion has been widely quantitative and/or focused on the factors contributing to attrition. There is a lack of research that explores McNair scholars and the contributing factors for persistence and completion of the doctorate.

The objective of this research study was to explore the participants' experiences during their pursuit of the doctorate; identify the self-reported influences, motivations, and contributing factors resulting in persistence in doctoral programs; and identify contributing factors resulting in the completion of the Ph.D - more specifically to answer the question of how some McNair scholars, given the reportedly low persistence and completion rates of doctoral programs, are able to complete doctoral programs.

This section provides the methodology used to conduct the study following a delineation of data collection methods. Participant selection, steps taken to protect the participants' privacy, and the methods used to bring trustworthiness to the study will be described. The section concludes with an overview of researcher positionality, a presentation of the data analysis, and a brief discussion of the theoretical framework that was applied to this inquiry.

## *Research Design*

This study is a qualitative research project utilizing qualitative interviews as the primary research design to provide a thick, rich description that result from interviews, focus groups, and document review. Based in the identification of certain phenomena that occur among groups of people, qualitative research looks beyond numbers to explore how meaning is created in various contexts (Coffey & Atkinson, 1996; Creswell & Miller, 2000; Denzin & Lincoln, 1994; Mason, 2002; Strauss & Corbin, 1998). Denzin & Lincoln (1994) offer the following definition of qualitative research.

Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials – case study, personal experiences, introspective, life story, interview, observational, historical, interactional and visual texts – that describe routine and problematic moments and meanings in individuals' lives. Accordingly, qualitative researchers deploy a wide range of interconnected methods, hoping always to get a better fix on the subject matter at hand (p. 2).

This qualitative research study was structured utilizing interviews, focus groups, and background information of participation in the McNair Scholars Program. While the initial intent of this process was to construct a phenomenological study, it was ultimately determined that the process represented a simple qualitative interview study. Primary data collection methods were based in qualitative interviews in the form of one-on-one interactions, as well as group discussions or focus groups that are explained in more detail below. Background information was collected from the participants' host McNair Scholars Program to determine the level of services provided through the program to each study participant.

The population identified for participation in this study represented individuals that shared a common experience of participation in the federally funded McNair Scholars Program and also successfully completed their doctoral degree. In consideration of the definition provided by Denzin and Lincoln (1994), the phenomena that was explored in this qualitative interview study was the completion of the Ph.D. by McNair Scholar Program participants. Study participants were asked to make meaning of their experiences as McNair scholars and discuss how those experiences shaped their successful completion of the doctorate.

Strauss & Corbin (1998) state that “qualitative methods can be used to obtain the intricate details about phenomena such as feelings, thought processes, and emotions that are difficult to extract or learn about through more conventional methods” (p. 11). Current research provides insight regarding general attributes that result in attrition at the doctoral level. However, little progress has been made in identifying factors that support successful completion among low income, first generation, and doctoral students of color. Developing a research design that allows for the details to surface and the voices of the participants to be heard was vital in this study. This was accomplished through a more simplified design reflecting qualitative interviews as the primary method of inquiry.

#### *Participant Sampling and Data Collection Methods*

Participants for this study consisted of a purposive sample of nine McNair Program alumni who successfully completed their doctorate degree in Science, Social Science, and Education; all were research based programs of study. Participants met at least two eligibility criteria as participants in the McNair Scholars Program: 1) low



income, 2) a first generation college student, or 3) a student from a racial background historically underrepresented in graduate education<sup>3</sup>. The chart below outlines the specific eligibility criteria met by each of the nine participants, as well as their racial background and program of study. A more detailed presentation of each participant is included at the end of this chapter.

Table 4

*Study Participant Information*

Participant Name	Gender	Low Income (Y/N)	First Generation (Y/N)	Under-represented (Y/N)	Race	Program of Study
Hana	Female	N	Y	Y	Hispanic	Health Education
Jason	Male	Y	Y	Y	African American	Chemistry
Annette	Female	Y	Y	Y	African American	Educational Psychology
Nathan	Male	Y	Y	Y	African American	Clinical Psychology
Rachel	Female	Y	Y	N	White	Clinical Psychology
Kendall	Female	Y	Y	N	White	Community Psychology
Tina	Female	Y	Y	Y	African American	Clinical Psychology
Ernesto	Male	Y	Y	Y	Hispanic	Genetics
Sonia	Female	N	Y	Y	Hispanic	Neuroscience

Participants for this research study were solicited through social networking sites, word of mouth, e-mail requests, and announcements coordinated with the national McNair Scholars Program listserv. A total of ten announcements were sent over a six

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<sup>3</sup> The following ethnic and racial groups are currently underrepresented in graduate education: Black (non-Hispanic), Hispanic, American Indian / Alaskan Native (Title 34 Code of Federal Regulations, Part 647 ).

month period of time. All of the participants were referred to the research study by their host McNair Programs.

A total of fourteen individuals responded to the announcements for participation. All respondents completed a screening survey to determine eligibility for the study (Appendix A), and thirteen respondents were deemed eligible for participation. Once eligibility for participation was determined, participants were asked to partake in the full study. All eligible participants were sent a letter outlining the purpose of the research study, the process for data collection, intended use of research data, contact information for the researcher, the committee chairperson, and the researcher's institution (Appendix B).

Participants were selected for this study based on their willingness to take part in two interviews and a virtual focus group through the social networking site Facebook. Additionally, participants were asked to allow their host McNair institution to release verification of services received (Appendix C). Signed informed consent documents were distributed, reviewed, and collected prior to the initial interview.

Once selected, participants were scheduled for interview times. Nine participants were selected for this study based on their willingness to complete all aspects of the study, completion of the appropriate and required consent forms, and their availability and responsiveness to a call for interviews. The remaining four individuals initially screened for participation in the study did not respond to requests for interviews and/or did not return required consent paperwork. Therefore, they were deemed ineligible for participation beyond the initial survey.

The nine participating individuals completed two individually conducted interviews each. Interviews were audio taped with the consent of the participants, and although not ideal, were conducted via phone. Several of the participants were in the process of relocating, traveling, or conducting research that made it extremely difficult to schedule interviews in person. To accommodate the need for flexibility in involvement, all first interviews were conducted over the phone. Interviews followed a uniform protocol and consisted of a series of open-ended questions. Participants were encouraged to expand on their responses (see interview questions below).

Second interviews were utilized to clarify participant responses during the initial interview and ask follow-up questions. Second interviews were also conducted by phone due to unpredictable participant schedules. Unlike the first interviews, one participant elected to meet in person, which followed similar protocol as the phone interviews. During all of the interviews, participants were not restricted by time and were given the opportunity to explore the questions without parameters. A total of eighteen interviews, two per student, were audio taped and transcribed by the researcher. All transcriptions were submitted to participants for review and assurance of accuracy. Participants verified the transcriptions; no requests were made for changes.

The interview questions developed for the initial interview were designed to retrieve information regarding the purpose of this study. Each question was created as an open-end question to encourage participants to discuss graduate school experiences, structure of graduate programs, perception of their involvement with campus activities, and perceptions of persistence in graduate school. Questions were condensed so as not lead the participant into providing answers that address the assumptions of the researcher.

### *Interview Questions*

- 1) Tell me about your educational journey.
- 2) Why did you go to graduate school?
- 3) What was your experience like in your doctoral program?
- 4) What barriers or challenges did you experience in your graduate program?
- 5) Why do you think you were able to persevere through the completion of your doctorate?
- 6) How did the McNair Scholars Program impact your experience in your doctoral program?
- 7) What role did the McNair Scholars Program play in your decision to enroll in graduate school?
- 8) What role did the McNair Scholars Program play in your graduate program selection?
- 9) How did you select your advisor?
- 10) Please describe your relationship with your advisor.
- 11) What funding did you receive during your time in the doctoral program?
- 12) What advice would you give to an entering doctoral student?
- 13) What support would you suggest doctoral programs provide to promote completion of doctoral programs?
- 14) If given the chance, what would you have done differently?
- 15) Is there anything not addressed that you feel is important?

Additionally, participants were asked to participate in focus group activities that were held virtually. The social networking site Facebook was used to gather participants upon

completion of the second interview. This focus group was used to further explore themes that emerged from the interviews and allowed the participants to interact with each other in discussions. Additionally, several participants posted questions for their peer participants. Overall, this method of data collection was not successful in producing appropriate data. However, there was one piece of data that emerged during analysis that is discussed in Chapter VI. It was extremely difficult to engage all of the study participants in this virtual group. While they signed into the virtual platform, few contributed to the on-going dialogue that was often side-tracked by the participants' own interests.

Finally, documentation from the participants' host McNair institution was utilized to explore levels of program involvement, support, and participant exposure to the core components of successful doctoral program preparation discussed in Chapter II. This information was searched to determine consistency of services provided through the McNair Scholars Program and the study participants' experiences while in the program.

### *Participant Confidentiality*

In an effort to ensure anonymity among the participants of the study, as well as any professors, institutions, or other identifiable entities that may be directly named during the course of the interviews, pseudonyms were assigned to all individuals. The implementation of the virtual focus group through Facebook followed IRB approved protocol. A secure virtual room was established through invitation only. Study participants were invited into the room through an e-mail sent by the researcher and were required to accept the invitation in order to participate. Additionally, the consent form

included language regarding the inability of the researcher to retain anonymity among the participants within the focus group. Given the status of success of the group and the general topics of discussion, this breach of anonymity among participants was viewed as appropriate and necessary to collect data in this format.

### *Positionality / Reflexivity*

As a researcher in the field of sociocultural studies, I am aware of my responsibility to position myself within the field of research that I am studying, as well as reflect on my political, cultural, and social perspectives. The following section of this chapter examines my positionality as it relates to my research and reflexivity in relation to my perspectives, as well as the participants in my study.

As a doctoral student in sociocultural studies, I position myself within the field of sociocultural studies as a feminist, a researcher, a Ph.D. student, and an advocate for disadvantaged populations, and populations underrepresented in graduate education. I believe that the educational system is structured to provide opportunities to specific individuals and keep others out, including people of color, low income individuals, first generation individuals, just to name a few. I maintain the standpoint that the educational system fosters failure, or at the very least underachievement for this population of society. I further believe that students from disadvantages backgrounds, or those traditionally underrepresented in education, have been silenced and marginalized in education, as well as society at large.

As an administrator in higher education, I am an agent of the education system, an advocate for equal access and opportunity in education, as well as a mentor to the

students with whom I interact. I am aware of the importance of recognizing the diversity of the campus population, and I'm trained to understand that each student is different and maintains personal needs regarding his/her educational attainment. I approach students in a holistic way and appreciate all aspects of students' lives in providing advice and guidance. I am aware that my own beliefs and values, as well as my position as a White woman, mold the way in which I view the world. I embrace my political, social, cultural, and racial perspectives openly in an effort to understand how my being affects the way in which I conduct research.

There is no hiding that I have biases. As a middle-class White woman, the lens through which I view the world is skewed by societal privilege and ignorance to the challenges and barriers created to promote failure within the education system for oppressed people. Although I actively participate in the process of self-reflection and education, it is impossible to identify and reconcile all of my biases. However, I am committed to continuing this process in an effort to be truthful about pre-conceptions that can and will affect my research. By acknowledging all of the aspects of my being, I believe that I can confidently present myself as a learner and facilitator of research and knowledge and provide voice to my participants.

### *Data Analysis*

According to James P. Spradely (1980), "Analysis of any kind involves a way of thinking. It refers to the systematic examination of something to determine its parts, the relationship among parts, and their relationship to the whole. Analysis is a search for patterns" (p. 85). Through the process of open coding as discussed by Strauss and Corbin

(1998), the data collected through interviews, the focus group, and document review were analyzed to identify general concepts. These concepts were then categorized and sub-categorized for inclusion into various themes that surfaced during the analysis process. This development began with broad-based coding through which the data was continuously reduced to identify and connect various common elements emerging from the data. This initial coding system was open and not conceptualized through any particular lens as suggested by Merriam (1998) and Strauss and Corbin (1998).

Open coding was used to make sense of the initial data. However, once conceptualized and categorized, axial coding was utilized to “link categories at the level of properties and dimensions” (Strauss & Corbin, 1998, p. 123). Through this process, both inductive and deductive analysis occurred, which accounted for the data to speak to the researcher as well as the research to interpret the data which, as Strauss and Corbin (1998) point out, is a form of deduction. After implementing open and axial coding, the data was analyzed in relation to the theories of graduate school socialization (Lovitts, 2001; Tinto, 1993; and Weidman, et al., 2001) presented below. These theories were utilized as a framework to organize and structure the data in a meaningful way. The stages of graduate school socialization provided the lenses through which to view the data, but did not determine the types of data that surfaced. The various methods of analysis occurred immediately upon data collection utilizing assorted methods simultaneously and continued throughout the duration of the research study.

Data analysis consisted of interview transcription upon completion of each taped interview. Themes and categories were sorted that were consistent throughout each interview. Based on topics identified in the first set of interviews, a second set of



interview questions were developed that included inquiry that would expand on already identified subjects. Once both interview sessions were completed for each participant, the online focus group was established and questions were posted to the group based on themes and categories that emerged from interview data. At the completion of all data collection, a cross data analysis was conducted to determine additional themes and categories not recognized in individual data sets.

### *Trustworthiness*

In response to my awareness of my own biases, and in order to protect the interests of the participants and to protect my own findings, several of the six basic strategies identified in *Qualitative Research and Case Study Applications in Education* (Merriam, 1998) were utilized to authenticate the research study.

- 1) Triangulation was achieved through the use of multiple data collection methods and verification processes. Each participant completed two separate interviews and engaged in online focus group activities. Additionally, historical documentation was collected from the participants' host McNair Program to assess the consistency of program services and level of participation in McNair programming.
- 2) Member Checking was extremely important to add trustworthiness to this study. After the interviews were transcribed, all information was given back to the participant for review, clarification, and accuracy.
- 3) Peer Examination was implemented once the transcriptions were reviewed and the data coding and analysis began. Data analysis findings were shared with

peers in the field including committee members to ensure that the coding and interpretation of the data had a sound basis.

- 4) Participatory or Collaborative Modes of Research were utilized in the active solicitation of participant feedback in the analysis of the data, and input was encouraged throughout the presentation of the study in written format.

Qualitative research allows for research data to be seen through a variety of lenses (Creswell & Miller, 2000) that can be advantageous in determining the validity of the research study. The primary lens is that through which the research views the study, data collection, and analysis. The second is that of the participant and the third of an external party. By capitalizing on all three lenses through member checking, peer examination, and research bias (Merriam, 1998); using evidence collected through multiple methods to provide for triangulation (Creswell & Miller, 2000); and implementing data analysis that is consistent with open coding and axial coding methods described by Strauss and Corbin (1998), study validity was established (Creswell & Miller, 2000).

### *Participant Profiles*

This section focuses on introducing the nine research participants through background information, information related to their undergraduate and graduate educational paths, and participation information from their experience in the McNair Scholars Program. The profiles serve as brief biographies that present a variety of information, including socioeconomic status, racial/ethnic background, and the education

level of their parents. Additionally, these profiles highlight the participants' journey through graduate school and the successes and struggles they faced along the way. All participant names, names of other faculty, staff and project directors, and names of institutions of higher education have been replaced with pseudonyms.

The information below has been extracted from data analysis. Complete data analysis is presented in subsequent chapters.

### *Hana*

Hana grew up in a large urban city in the Southwest. She describes her family as being extremely close, indicating that until she left for graduate school she had never lived outside her parents' home. Hana is Hispanic and a first generation college student. Neither her mother nor her father completed a bachelor's degree. However, Hana's older sister does have a master's degree in education and is currently a teacher.

Hana attended undergraduate school in the Southwest while living at home. She was introduced to the McNair Scholars Program through her participation in a similar state-funded program at her institution. Hana was an extremely active scholar participating in multiple campus visits, presenting at various research conferences, and even serving as a mentor in other TRiO programs within the same department. She was academically successful during her undergraduate education and participated in a funded summer research program at her future graduate institution immediately after graduation.

Hana completed her bachelor's in Health education and enrolled in a dual master/doctoral graduate program in Family Studies and Human Development. She was fortunate to enroll in a doctoral program at the same university that provided her the opportunity to participate in a summer bridge research program similar to that of the

McNair Program. This university is located in a neighboring state that contributed to her decision to attend there. She expressed hesitation to go to school far from home and was comforted that this institution was within driving distance to her family and, if necessary, would not cost too much to fly home. However, Hana experienced challenges with funding and her faculty advisor. After she completed all of her course requirements and the comprehensive exams for the completion of her master's degree, Hana made the decision to leave this program without completing her Ph.D, as it was not a good fit. Her educational and research interests are in Health Education, not the field of Family Studies and Human Development, which was the focus of this program.

The following fall semester Hana enrolled in a Health Education program at a state university in the Southwest to complete her Ph.D. where she found the research and academic support she had been seeking not only from her advisor but also from faculty and staff across the department and the university. Hana completed her degree and was awarded her Ph.D. in 2009.

As a single woman without children, Hana attributes her educational path to her independence from family or other outside obligations. However, she also recognizes that had she not participated in the McNair Scholars Program, she would have been satisfied with completing her teaching requirements and possibly a master's degree and teaching at the high school level.

### *Jason*

Jason is a first generation college student from a low income family. Low income status is defined by the federal government as having a total family income that is 150% above the poverty rate. Additionally, Jason is African American.

Jason had a unique academic experience as an undergraduate student at a large public institution in the Southwest. In his junior and senior year of high school, Jason was enrolled in college level courses to complete his first two years of his undergraduate degree. As a result of his participation in this program, Jason was approached to apply for the McNair Scholars Program at the same institution. During his participation in the McNair Scholars Program, Jason spent a significant amount of time, approximately thirty to forty hours per week, in a research lab under the mentorship of a faculty member. Jason completed a bachelor's degree in Chemistry and pursued a graduate degree on the East Coast in the same field.

Similar to Hana's experience, Jason did not find the type of support from his program and advisor that he needed. After a couple of years in the program, he made the decision to leave and returned to his hometown and began a career as a high school science teacher. While teaching he began the process of obtain his teaching credentials. During this process, Jason enrolled in a master's degree program specifically designed for teaching professionals. Upon completing his master's degree, he made the decision to continue his education and pursue his doctorate degree. After a final year of teaching high school, Jason enrolled in a Ph.D. program in Chemistry at an institution in the same state that provided the type of support and environment that Jason needed to be successful. He completed his degree requirements and received his Ph.D. in 2008.

Jason attributed his success and his decision to go back and complete his Ph.D. to his wife, stating that without her encouragement he would have not pursued his doctorate degree. Additionally, Jason indicated that his commitment to completion was driven in part by his desire to be a role model for his high school students. Having grown up in the

same area that he taught, he believed that it was up to him to show the students that they could do it too. He felt that if he did not show them, there may not be anyone else that would. Jason participated in the same McNair Scholars Program as Annette and Ernesto.

*Annette*

Annette is from a low income, first generation background. She is African American and is the first in her family to complete a bachelor's degree. She is a focused individual committed to her goal of becoming a psychologist from very early on in her educational career. She attended her first university immediately after high school and transferred two years later to pursue her degree at an institution in the Southwest that had a psychology program. Upon transfer, Annette applied to the McNair Scholars Program at her new institution and found a great deal of support and encouragement from the staff. She describes her McNair Scholars Program as being a second family for her. She felt that the staff saw her as a person and that the scholars were well taken care of.

After receiving her undergraduate degree, Annette enrolled in a graduate program in Educational Psychology at a prestigious university in the Midwest. She describes her program as rigorous and the faculty as supportive, being more the mentoring type than advisors. Annette was the only African American student in her program and indicates that being secure and confident in her own abilities prevented her from being intimidated by the faculty in the program who are among the most respected in her field.

Annette completed her master's degree in 1999 and successfully completed the requirements of her doctoral program and received her Ph.D. in 2001. Annette recognized that she would have pursued a doctoral degree with or without participating in the McNair Scholars Program. However, she attributed her pursuit of the doctoral degree at a

top tier institution to her involvement in the program. Through the encouragement of her McNair faculty mentor, Annette pursued a doctoral program outside of her home state and attended one of the top graduate programs in the country. Annette participated in the same McNair Scholars Program as Jason and Ernesto.

*Nathaniel*

Nathaniel is an African American male from a low income family on the East Coast. He is also the first in his family to complete a bachelor's degree. Nathaniel began his educational path at a historically Black college in the South as a psychology major. He attended this institution having a positive experience for three semesters until financial challenges required him to transfer.

After a semester out of school, Nathaniel moved back to his home state on the East Coast and enrolled in a university located in the northern part of the state where he applied for participation in the McNair Scholars Program. Through the McNair Scholars Program, Nathaniel conducted research under the mentorship of a faculty member and was actively engaged in all aspects of the program. He firmly believed that all McNair scholars should be required to participate in all activities sponsored by the program. As a result of his participation in the McNair Scholars Program, Nathaniel believed that he gained the confidence he needed to effectively navigate the politics of graduate school. He also recognized that the McNair Program shaped his graduate selection process.

Nathaniel attributes the McNair Scholars Program with developing his academic confidence, which was strengthened through his personal experiences. As a first generation college student, no one in his family or in his neighborhood had really gone to graduate school. When navigating through his doctoral program, he felt as if he had

nothing to lose; if he failed he would be no worse off than his family and childhood peers. They were still surviving, so if he failed he knew he would still survive. He knew that if he got knocked down, he would be able to get back up. He was not worried about what others thought. He focused on the goal and his need to get the information that was being taught. In short, Nathaniel says he left his ego at the graduate school door.

In addition to completing his Ph.D. in Clinical Psychology, Nathaniel entered his doctoral program with the goal of graduating in five years. To accomplish this goal, Nathaniel developed a study partnership with a fellow student, which he attributes to his success in meeting his five year graduation goal. Nathaniel completed his degree in 2007.

While Nathaniel admits that graduate school was challenging, he says that the experience has given him a thick skin. "If you can survive a doctoral program, everything else seems much easier." Nathaniel attended the same undergraduate institution and participated in the same McNair Scholars Program as Rachel.

### *Rachel*

Rachel is a White woman that entered the McNair Scholars program as a low income, first generation college student. She admits that she is not sure how she found her way to college. Rachel states that she always knew she wanted to go to college, but never really knew how to get there. It just sort of happened for her. Once in her undergraduate program at a university on the East Coast, Rachel was recruited for the McNair Scholars Program. She began her participation in the program during her second year of school and believes that starting a little earlier than most gave her an advantage. Rachel believes that the McNair Scholars Program set her on her educational path and shaped her perception of the graduate school process that was beneficial in her success.



Rachel remained at her undergraduate institution for graduate school. However, her experience once in graduate school was very different. Being in a highly competitive program in the area of Clinical Psychology, Rachel felt that she was an outsider with her peers. Conversations regarding summer travel and other financially extravagant endeavors were something that Rachel just could not relate. While they were kind and accepting of her, she was approaching graduate school from a much different place than her classmates. She shared that one of her graduate school stipend payments was higher than her father's annual salary.

At the same time Rachel struggled to find common ground with her peers, she encountered resistance from her family. While supportive of her goals, she was often accused of having changed by those with whom she had grown up. As presented by Rachel, she felt caught between two worlds without really belonging to either.

Throughout the duration of her program, Rachel's relationships with her peers strengthened, and she counts those individuals as key people in her support system. Additionally, she leaned on her husband, who was also a graduate student, for support and encouragement. Rachel is clear that her family was supportive in the way that they knew how. They just did not understand the process of graduate school and therefore were not able to support her in the same way that her peers and her husband could.

Almost to the date, Rachel graduated with her Ph.D. in Clinical Psychology in 2009, six years after starting the program. Rachel credits her participation in the McNair Scholars Program for her pursuit of graduate school and her Ph.D. Without the McNair Scholars Program to guide her, she is confident that she would not have gone to graduate

school, let alone completed her doctorate degree. Rachel attended the same institution and participated in the same doctoral program as Nathaniel.

*Kendall*

Kendall was a non-traditional college student, who entered her undergraduate program as an adult student and is one of the most unique participants in this study. She participated in the Student Support Services Program, one of the federally funded TRiO programs designed to support low income, first generation, and disabled students through the undergraduate degree.

Kendall is a White, low income, first generation college student with a documented disability. She pursued a college degree at a state institution in the Midwest after being placed on disability status from her job. Viewing college as a way to access money through grants and scholarships, Rachel started her degree without much direction. Her interest in psychology stemmed from her strong desire and need to become an effective advocate for her special needs child.

Through her participation in the Student Support Services Program, Kendall was introduced to the McNair Scholars Program where she had the opportunity to complete research under the guidance of a faculty mentor in an area that related to the needs of her son. Making the personal connection between her McNair research and the needs of her son gave Kendall the chance to impact her son's education and work with his teachers to improve this educational experience.

This personal connection with research, combined with the insistence of the McNair Program staff that she was going to graduate school, resulted in Kendall's enrollment in a graduate program immediately after graduation. Presented with the

opportunity to attend graduate school in a neighboring state, Kendall made the decision to remain at the same institution so she could be close to her grandmother.

Although she remained in a familiar area, Kendall's graduate journey was not easy. While addressing issues of confidence, time management, age disparity, and an advisor that could be somewhat challenging at times, Kendall was juggling a wide variety of personal issues. As a single mom on disability, Kendall navigated graduate school with minimal amounts of financial support. She describes being faced with heart wrenching financial decisions, such as whether or not to fix her car that she relied on to commute the lengthy distance to school or buy groceries.

Financial issues were not her only concern. Kendall also struggled with physical issues related to her eye sight, which resulted in her having undergone several surgeries during graduate school. There were times during her program when she did not have the resources to secure much needed lenses or upgrade to new ones after surgery.

Life during graduate school was lived day to day. As Kendall describes, on some days she wasn't sure that she would be able to make it to school and home before the babysitter left. She did not have the support that some students did, but instead of allowing that to defeat her, it became her motivation.

In the week prior to her dissertation defense, a close personal friend to Kendall passed away after battling cancer. She actually wrote her final dissertation chapter in the hospital while keeping vigil at her friend's side.

Friends have told Kendal that finishing the doctorate degree was her destiny. She recognized that her experience was full of many more obstacles than that of other

students. She is humble and contributes her decision to go to graduate school to the McNair Program. Kendall completed her doctorate and received her Ph.D. in 2008.

*Tina*

Tina is an African American female from a low income, first generation background. She completed her undergraduate degree at a university in the Plains area and always had a desire to pursue a career in Clinical Psychology. As a participant in the McNair Scholars Program, Tina actively participated in research and received guidance and preparation for the graduate school application process.

Clinical Psychology is an extremely competitive field. Tina credits the McNair Scholars Program with strengthening her applications to graduate school by providing her with research experience, helping her better understand the process, and preparing her for graduate school. While the McNair Scholars Program provided support in the preparation for graduate school, she was not necessarily prepared for the transition into graduate school. Tina described having some challenge with being a graduate student in a dual master's/doctoral program. She said this type of program did not allow for students to have experience in a master's program before pursuing the doctorate. Therefore, she did not have any experience in graduate school before pursuing her doctoral program.

Although there may have been several external factors that could have derailed Tina's pursuit of her doctorate degree, she strongly believed that internal motivation drives successful completion. Her experience was that those who completed their Ph.D. had strong internal motivation and were not deterred by external factors.

Tina pursued a doctoral degree in Clinical Psychology at a university in the Southeastern region of the country. She received full tuition funding and a stipend while

in her program, and in addition to her advisor she received mentorship from the only faculty of color teaching in the program. Tina completed her doctoral degree and received her Ph.D. in 2008.

*Ernesto*

Ernesto is a Latino from a low income, first generation background. Growing up on a farm in the Southwest, he acquired an interest in genetics while helping raise chickens and hogs. After graduating high school, Ernesto attended a small university in the western part of his home state. He initially enrolled in an Agricultural Business program; however, after three semesters he realized that this program was not a good fit. Ernesto transferred to a university in the northern part of the same state and became a participant in the McNair Scholars Program. While pursuing an undergraduate degree in Biology, Ernesto participated in research with a faculty mentor and presented his research at a conference on the East Coast at the university that he eventually selected to be his graduate school. Ernesto credits the McNair Program for the opportunity to explore various graduate schools and meet faculty prior to selecting a program.

After completing his undergraduate degree, Ernesto enrolled in a biochemistry program at a university on the East Coast, which posed academic challenges for Ernesto whose strengths lied in genetics. Therefore, after completing the requirements for his master's degree, he moved to the doctoral program in Genetics. Luckily for Ernesto, this did not require him to change advisors or research projects. There was enough overlap in the programs to allow him to maintain those components of his master's program.

Finding a program that was a better fit for Ernesto was important, as was identifying a strong support system. For this purpose he utilized other McNair scholars at

his graduate institution, his wife, and his mother. Overall, Ernesto recognizes his wife as his main supporter who also went through graduate school at the same time. Since they shared a common experience, he felt that she could relate to his struggles, and they could support each other in a way that was mutually beneficial. Ernesto completed his doctoral degree in five years and received his Ph.D. in 2008. Ernesto participated in the same McNair Scholars Program as Annette and Jason.

### *Sonia*

Sonia is a first generation Latina raised in the Southwest in a close knit family. While her parents encouraged her and her siblings to go to college, she was also encouraged to stay close to home. She attended a small private school in the Southwest for her undergraduate degree. She started her degree in Early Childhood Education, but during her course of studies changed her major to Child Psychology. It was an undergraduate abnormal psychology course that Sonia realized her passion for neuroscience and desire to pursue research in that field.

As a McNair scholar at her undergraduate institution, Sonia had limited opportunities for research in the science field. However, she did recognize the support and preparation she received in the application process and the name recognition the McNair Program provided in her applications. After receiving her undergraduate degree, Sonia pursued a doctoral program in the Midwest. Her transition from a small, private university in the Southwest to a large public university in the Midwest was not easy. One of the largest adjustments was going from an area of the country where the Hispanic population was very large to a city and institution where the Hispanic population was very small. Additionally, Sonia did not always feel academically prepared for her

graduate program based on her limited background in the sciences. She had excelled in her undergraduate program but found herself in the lower half of her cohort academically in graduate school.

Sonia describes the tradition of “weeding” out students by the faculty in the first two years as one that created a sense of being inferior. These initial years in the graduate program were very difficult for her. It wasn’t until she found her advisor that she began to feel supported and her experience became a more positive one. She identified a student’s relationship with his or her advisor as the most important aspect of the graduate experience.

If given the chance, Sonia would have taken a year or two between her undergraduate and graduate programs to expose herself to additional research opportunities. She believed that she did not have the research experience required to be prepared for expectations of her graduate program. Not having that background created challenges for her in her graduate program, she relied on a support structure that primarily included her then boyfriend and now husband. Like Sonia, her husband was a graduate student at the time, and this shared experience was beneficial to his ability to understand her struggles and support her journey. Although there were many challenges in her program, Sonia successfully completed her doctoral program and received her Ph.D. in 2009.

### *Summary*

This research study is founded on the phenomena of McNair scholar alumni completing their doctoral degrees. The study explored the doctoral experiences of nine

McNair Scholar Program alumni from low income, first generation, and underrepresented backgrounds in the fields of Physical Science, Social Science, and Education. Through interviews, online focus discussions, and program participation documentation, data was collected to address the following research questions;

- What factors contribute to the persistence and completion of the doctorate by McNair scholars?
- How did program services impact the success of the scholars in their progression through the doctoral process?
- How can institutions structure doctoral programs to meet the needs of low income, first generation and underrepresented students and increase opportunities for successful completion of the doctorate degree?

Data were coded and categorized into various themes that surfaced during the analysis process. A cross data analysis was also conducted to determine additional themes and categories not recognized in individual data sets. The data was analyzed using the theory-based models of graduate school socialization presented by Lovitts (2001), Weidman, et al. (2001), and Tinto (1993). The chapters that follow present this critical analysis in detail.



## Chapter IV

### Graduate School Socialization and the McNair Scholars Program

This chapter explores the impact of the services offered through the McNair Scholars Program and how those services helped to accelerate the graduate school socialization process and impact successful completion of the Ph.D. The information presented represents the major findings of this study as they relate to the research questions and the participants' perceived impact of the McNair Scholars Program services on the successful completion of the Ph.D. Content is organized based on the stages of graduate school socialization and attempts to present insight into the experiences of the participants while in the McNair Scholars Program and how those experiences initiated the graduate school socialization process and shaped their journey through to the completion of their doctorate. Analysis is presented throughout the chapter and summarized at the conclusion.

In Chapter II several theories of graduate school socialization are presented and discussed (Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001). While each has unique approaches to graduate school socialization, there are overlapping components that can be used to generate support for students in their quest to achieve a doctoral degree. These components have been identified through research as areas of intervention that can be targeted in an effort to improve persistence and completion rates for doctoral students (Astin, 1999; Bieber & Worley, 2006; Breneman, 1977; Golde & Dore, 2001; Grimmett, et al., 1998; Lovitts, 1996; Lovitts, 2001; Nelson & Lovitts, 2001; Parker, 2003; Perna, 2004; Tierney, 1997; Tinto, 1993; Vaquera, 2004; Vaquera, 2008; Zwick, 1991). The components include:

- 1) Pre-enrollment preparation,
- 2) Funding,
- 3) Relationship building,
- 4) Departmental environment,
- 5) Process and procedure, and
- 6) Professional development.

The table below outlines the correlation between the stages of graduate school socialization and these components.

Table 5

*Stages of Graduate School Socialization and Corresponding Components*

Pre-Entry Stage Prior to Enrollment	Entry Stage First Year	Knowledge Attainment 2nd Year through Candidacy	Research/Professional Development Candidacy through Completion
Pre-enrollment preparation	Relationship Building	Process and Procedure	Professional Development
Funding	Departmental Environment		

These theories and components can be utilized to determine the best methods of support for students interested in pursuing doctoral studies that come from backgrounds that are underrepresented in doctoral programs. Without interventions or intentional support structures, underrepresented populations have significant difficulties in navigating the stages of doctoral education. This is reflected in the high attrition rates of underrepresented student as presented in Chapter II as a result of limited access to information related to graduate study.

The understandings students have about the nature of graduate education shape their global and local cognitive maps of their programs. These understandings include the relationships among people, policies, and practices at each stage of their graduate careers. The quality and accuracy of their understanding depend heavily on the type of the information they have access to and the sense they are able to make of it (Lovitts, 2001, p. 50).

To address this lack of access, a variety of funding has become accessible to increase the availability and accuracy of information provided to underrepresented students.

The federal government funds the Ronald E. McNair Postbaccalaureate Achievement Program to provide supportive services to prepare low income, first generation undergraduate students, as well undergraduate students of color for doctoral study. The McNair Scholars Program implements services that support the components and provide opportunities for program participants to begin the process of preparing for graduate school. The table below outlines the services offered by the McNair Scholars Program and the association with those services to corresponding components.

Table 6

*Intervention Components and Corresponding McNair Services*

Pre-Enrollment Preparation	Funding	Relationship Building	Departmental Environment	Process and Procedure	Professional Development
Research Opportunities		Research Opportunities	Research Opportunities	Research Opportunities	Research Opportunities
Doctoral Preparation Seminars		Mentoring	Mentoring	Doctoral Preparation Seminars	Doctoral Preparation Seminars
	Internships	Internships	Internships		Internships
Tutoring					
Academic Counseling					
Securing Admissions and Financial Aid	Securing Admissions and Financial Aid				

Participants in this study received all of the services outlined in the chart above through their McNair Scholars Programs. However, only five of these services were identified by the research participants as having a perceived impact on their success in doctoral studies.

- 1) Research opportunities,
- 2) Mentoring,
- 3) Doctoral studies preparation,
- 4) Paid research internships, and
- 5) Assisting in securing admission and financial aid for graduate school.

In considering the four general stages of graduate school socialization and the services provided by the McNair Scholars Program, data collected through this study indicate that the McNair Scholars Program made significant contributions to the acceleration of the first two stages of graduate school socialization and exposed students to elements of the final stage of the socialization process. The third stage, Knowledge Attainment, was not cited as impacting the success of the study participants. This stage focuses heavily on student performance with coursework and the process of demonstrating academic ability in the field. Based on the technical nature of Stage Three and the unique cultures of each individual academic program or department, it is not reasonable to expect a general support program such as the McNair Program to impact or accelerate this stage of socialization. Therefore, this chapter is divided into three sections representing the first, second, and fourth stages of the graduate school socialization process as presented in Chapter II. These stages include Pre-entry, Entry, and Research/Professional Development. Participant quotes presented in this chapter have been minimally modified to account for comprehension and fluidity. This chapter answers research question two: How did program services impact the success of the scholars in their progression through the doctoral process?

### *Pre-Entry Stage*

Graduate school preparation as it relates to the application and selection process impacts persistence and completion at the doctoral level and determines the students' ability to effectively socialize into graduate school (Lovitts, 2001; Wiedman, et al., 2001). Actively researching graduate programs and faculty to secure admission to an

institution that is a “good fit” is vital to successful completion of the doctorate (Golde, 1998; Lovitts, 1996; Lovitts, 2001; Tinto, 1993). Lovitts (2001) recognizes the importance of pre-enrollment guidance as a tool to support the graduate school selection process and assist students in exploring expectations of individual graduate programs. She indicates that a lack of appropriate fit in a graduate program can be contributed to the student’s lack of information as well as the program’s primary focus on academic achievement and not fit between student interest and program strength. A pre-enrollment advisement process allows for examination of faculty research interests, availability of program support, funding, and other factors that ultimately determine whether the institution is a good choice for the student.

It is no coincidence that the McNair Scholars Program is designed to meet this need by providing participants from first generation backgrounds with the information necessary to make selections that will contribute to their overall success. Program activities such as campus visits, graduate admissions application workshops, graduate school fairs, and faculty mentoring are designed to support the process of applying to and selecting graduate programs in an effort to support the scholar in finding a doctoral program that is the best fit for their individual circumstances and academic interests.

Nathanial, an African American, low income, first generation college student reflects on the benefit of pre-enrollment advisement through the McNair Program.

A lot of students think about graduate school in much the same way we think about undergraduate studies. You're thinking about names first. As I was starting to compose my list, I had a who's who of schools that I was giving major consideration to. Here is where I want to go, here's where I want to be. The coordinators and professors that were associated with the McNair Program educated me that graduate school is about the fit. So if you're interested in doing a specific type of research, you want to go to a program where that research is being done. Where are professors doing that type of research? That could be Eastern Michigan, that could be Central Connecticut State where they are doing just that kind of work. You want to think about the fit. Where are you going to be a good fit, where are you going to get what you need, and where are you going to build yourself? I think that the program really helped me to think along those ways, and the program was really good about educating me on finding an excellent fit for me as a student.

Nathaniel's perception of the benefit in receiving support in the graduate school application and selection process through the McNair Program is consistent with Lovitts (2001) statements regarding the role of pre-enrollment advisement in the socialization process. For Nathaniel, having a structured support system to provide guidance was impactful. Programming that supports pre-enrollment advisement fills an information void that exists for first generation college students.

Rachel, also a low income, first generation student describes her experience with applying to graduate school and how her experience was shaped by the activities provided for in the McNair Scholars Program.

The McNair Program definitely helped me to decide where to apply and shaped the things that I thought were important in schools. The McNair Program was really important. As McNair scholars, we had meetings to talk about where people were applying, why we were applying to these schools, what we liked about those graduate programs, and what to look for in a program. The process of actually selecting where I was going to go was a combination of the feel that I got in the interview and which program fit into my life at the time. I talked with the McNair Program staff and my mentor about where I was going to go and what I was going to do ad nauseam. The McNair Program impacted directly where I was going to apply, why, and all that kind of stuff.

The graduate school selection process is not limited to discussions regarding how to select a graduate program. A student's fit is not simply regulated to faculty accomplishments, program prestige, or research interests. Graduate students have to forge interpersonal relationships with fellow students, faculty, and staff while pursuing their degree. Therefore, assessing institutional and departmental environment is a key aspect to the selection process. This assessment can be accomplished in several ways including campus visits, graduate school fairs, faculty interaction, and interaction with current students in the graduate programs, all of which are provided for through the McNair Scholars Program.

Ernesto, a Hispanic male that is also low income and a first generation college student attributed his graduate school selection the support of the McNair Program in providing the information he lacked as a result of being a first generation college student.

The McNair Program was definitely a catalyst to help the graduate school application process go a lot smoother than it probably would have if I had done it all on my own. It was helpful to have them as a support group to direct the process and provide on-going support, and to know I could go to them and talk to them. I really didn't know anyone who had finished a Ph.D. or even gone to graduate school outside of the people I met at the McNair Program.

Getting started with the process was the first step in selecting a graduate program for Ernesto. He attributes his final program selection to his ability to directly assess the institutional and departmental environment through the McNair Program.



The school that I ended up going to was one of the schools that the McNair Program sends students to present their research at. I went there to present research, and I liked the school and liked the people there. I think that helped open the doors to allow me to go to graduate school. It was important for me to meet the professors there before I sent my application in. The interaction with the faculty was pretty important for helping me pick a graduate program. I got to meet and continue to communicate with people who would be making decisions on who to allow into their graduate program.

Ernesto expanded this discussion during a later interview. He recognized the importance of visiting graduate programs and how his visits helped him assess the students in the program as well as ability of the program to support his needs as a low income, first generation student of color.

It was through the McNair Program that I chose the university to go to. I probably wouldn't have picked that university on my own without being exposed to it through the McNair Program. In addition, there were graduate students that I met there from similar backgrounds that share similar feelings, and ideas for continuing higher education and getting the Ph.D. They were the ones that I talked to about how to apply and things that I just didn't know.

The services provided through the McNair Program manifested Ernesto's ability to personally experience the environment of his graduate program and interact with faculty and graduate students prior to applying and enrolling. Through his visit he learned that there were many scholars from other McNair programs at the university and in his graduate program giving Ernesto confidence that he would not be isolated based on his background and that he would have the support necessary to be successful.

Theories of graduate school socialization are grounded in the ideology that persistence and completion of doctoral programs is impacted by the ability of the student to effectively socialize at the departmental or program level. When decisions regarding

graduate school programs are not made based on fit, the likelihood of attrition increases (Gardner, 2010; Golde, 1998; Lovitts, 1996; Lovitts, 2001; Tinto, 1993).

Donna, a Hispanic female who was also a first generation college student, made her initial graduate school selection based on funding and proximity of the graduate program to her hometown - factors that would not sustain her enrollment in the program. Donna was able to transfer and successfully complete her doctoral degree at another institution but reflects on her missteps and those of the graduate program she eventually left.

For me funding was a huge issue. I knew that I would only be able to go to graduate school if I had funding. That was one big reason that I chose to go to that university. I got accepted into all of the programs that I applied to, but in terms of the cost of living, location, that university just seemed to be the best choice for me at the time. Also, I had not really been away from home before. The university was not too far from my hometown. It was drivable, affordable to fly, so that is kind of why I choose it.

Donna did not complete this program but left in her second year and began a graduate program at a different institution where she ultimately finished her doctoral degree. In looking back at her experience, Donna is honest in her assessment of her experience and attributes her attrition to a combination of poor fit and misrepresentation by the university.

In my first program at the university, it was really challenging for me. It was not a great fit. It was family studies and human development, and I was really interested in adolescent health. It just seemed like I had to constantly justify why my research on adolescent health was important to human development. When I was recruited to go to the university, I was told there was a heavy emphasis on health in that department, and when I got there I learned that really none of the faculty worked on any health related studies or projects. I learned that this happened to a lot of other students that were also recruited to go there. At least the university was consistent in their misrepresentation of the program and it wasn't just with me.

Donna's story mirrors those outlined in research conducted by Lovitts (2001). As with Donna, several of the participants in the Lovitts study also indicated a sense of false advertisement in the recruitment process.

Universities and departments send out materials and brochures advertising the attractive features of their programs. Faculty court prospective students over the phone and make special overtures to students who make formal campus visits, often arranging lunch and/or housing with other student or taking them out to lunch or dinner themselves. Several students who relied on the university's materials or who had these experiences reports that these solicitations were false advertising.

While the participants in Lovitts' study did not complete their graduate programs, Donna was able to utilize the tools provided through the McNair Scholars Program to impact her selection process the second time around.

The second time around I knew a lot about what not to do. I pretty much interviewed them instead of them interviewing me. I set up my own campus visits. That's how the McNair Program influenced me. I would not have known to do that if I have not been in the McNair Program. I needed to know that the second program would be a good fit for me and that my advisor would be a good mentor to me.

Although Donna was not successful in her first attempt at graduate school, she recognizes that the foundation created through her participation in the McNair Program provided the opportunity to reselect a program that would be a good fit for her individual interests.

The lack of fit in Donna's first program can be attributed to mismatched academic interests, but this is not always the case. For some, the lack of fit within a graduate program can be the result of individual needs as they relate to faculty interaction, level of isolation, and other interpersonal characteristics (Golde, 1998; Lovitts, 2001; Tinto, 1993).

This was the case for Jason, an African American male from a low income family. He is also the first in his family to attend college. Jason's undergraduate experience was

full of academic rigor, countless hours in a research lab, and several research publications. He was an ideal candidate for graduate school and pursued a graduate program based on faculty reputation. His selection was influenced by the recommendation of his undergraduate research mentor who referred him to a colleague from his post-doctoral years. Although this faculty member conducted research outside of Jason's interests, he selected the program based on reputation and his mentor's recommendation. Jason describes his experience in his first program as isolating and unsupportive. On the surface, the funding allocation, faculty expertise, and institution appeared to be a good fit, but once engaged in the program he became discouraged and ultimately left his program. Upon reflection of his experience, Jason realized that finding a good fit for him meant understanding his own personality and needs for support and interaction.

I'm not an isolated scientist and could never just work in a lab not caring about what is going on outside my own research. I'm more of a personality type that enjoys interacting with people, doing good science, and talking to other people about it. I enjoy finding ways to socialize in depth with people I work with on a daily basis. I had that while I was in the McNair Program, and it shaped me and helped me understand those are the kind of things that I needed.

He eventually used this understanding of his own needs in selecting his second graduate program.

I met with people in the department at the university. I knew that they were excellent, strong researchers, but I needed to get a sense from them that I would be more than just pair of hands. I noticed from the chemistry department that it was a small tight knit group. The graduate students knew each other; they were close. They shared a lot of life together outside of the research lab, outside of the sciences. The department as a whole was very friendly in that way. Those were things that I didn't have at my first institution and they were very important to me. I was glad to see those things going on. My decision to go there was the right decision. All of those things that I thought I was seeing in my initial visit were true.

As with Donna, Jason found that selecting a graduate program needed to be more intentional than just working with faculty that was highly regarded in his field. Faculty reputation did not provide Jason with the individual interaction and support that he needed in a doctoral program.

In their first programs, both Donna and Jason appeared to have successfully navigated the Pre-Entry and Entry stages of the graduate school socialization process. Both were moving through stage three, Knowledge Attainment, when things started to erode. Although they both managed to make accommodations for the lack of academic fit to this point, the transition into more localized, isolated research forced them to revisit their decisions and leave their programs. For many students, making a decision to leave at this stage of the process would result in the abandonment of the pursuit of the doctoral degree entirely (Golde, 1998; Lovitts, 2001; Tinto, 1993). However, both Donna and Jason were able to revisit their choices and re-engage in the process of graduate school selection based on knowledge gained from their experiences in previous programs, as well as the McNair Scholars Program. Having a strong pre-enrollment experience had an impact on these scholars, and their experiences support the argument that the graduate school socialization process is not a linear experience but one that allows for reengagement at each stage as necessary for successful completion (Gardner, 2010; Weidman, et al., 2001).

### *Entry Stage*

The second stage of graduate school socialization focuses on the ability of students to gain membership into their departments or programs through their

commitment to being a graduate student and pursuing a career in academia. This process includes understanding the norms and expectations of the program and developing relationships with faculty and other students in the program (Golde, 1998; Lovitts, 2001; Tinto, 1993; Weidman et al., 2001). Clearly, no external program truly affects the success of graduate students gaining membership into a program or department. Given the individualized cultures that each program maintains, it is impossible to predict how the membership process will unfold until the student is actually engaged in relationships and is exposed to the norms and values that are unique to that specific environment (Tierney & Bensimon, 1996). However, external programs can foster students' commitment to pursue graduate education and provide a solid foundation in relationship building that can impact the process of socializing into specific program departments. This is what the McNair Scholars Program strives to accomplish and is what the participants in this study recognized as the impacts of the McNair Program on their success.

### *Commitment*

Demonstrating commitment to graduate school and a profession in academia is vital to the overall success at the doctoral level. In her research, Chris Golde (1998) presents four general tasks that most graduate students complete during their transition and initial socialization into graduate school. Included are the processes of the student making a commitment to becoming a graduate student and to a profession in academia. The overarching question the student is asking is: 'Is this the right choice?' Answering this question is often difficult for students, especially those not exposed to the possibilities of graduate education and the process of gaining entry. The McNair Program

is designed to help shape participants commitment to graduate school and reinforce the goal of completing the Ph.D. Through the completion of the Ph.D., scholars are encouraged to enter into academia as faculty that addresses the final outcome of the McNair Program - to increase the number of low income, first generation and faculty of color. The program encourages, supports, and often helps shape the goal of completing the Ph.D. For example, program staff works with each participant to explore the professoriate and establish a commitment to graduate school and a career in academia.

In the socialization process, commitment is a component to the entry stage. The process of committing to graduate school and a career in academia is directly linked to the process of goal setting. Locke and Latham (2001) state that “Two key categories of factors facilitating goal commitment are (a) factors that make goal attainment important to people, including the importance of the outcomes that they expect as a result of working to attain a goal, and (b) their belief that they can attain the goal (self-efficacy)” (p. 707). These categories surfaced in discussions with study participants as also being key impacts of the McNair Program on their doctoral completion. Participants in this study placed value in the outcomes expected from attaining the goal of completing their doctoral degrees.

For some of the participants, the value of this outcome was realized prior to entering the McNair Program. This was the case for both Tina and Annette. Tina, a clinical psychology student, knew that she needed a doctoral degree to engage in her field. She found that participation in the McNair Program aligned with her goals of getting a doctorate in psychology. “They seek out students that already have an interest in completing graduate work. It was already in my mind that I wanted to obtain this

degree.” Having a goal that was important to her prior to entering the McNair Program provided Tina with validation of her decision.

Aligning personal goals with those of the McNair Program was also discussed by Annette. She was clear in her interviews that she was focused on her goal of being a psychologist prior to participating in the McNair Program and knew that in order to achieve her goals to work in the field of psychology she would have to complete a Ph.D.

I firmly believe had I not even gotten into the McNair Program, I still would have completed my Ph.D. My goal was to get a Ph.D. and become a psychologist even before I was aware that the McNair Program existed. For me the McNair Program was gravy. I was going to do get my Ph.D. anyway. My goal as a person was to get my Ph.D. and to become a professor. It just so happened that the McNair Program’s goal for me aligned with that. I am happy that I was able to fulfill my commitment to the McNair Program because I don’t like to walk away from my commitments. But I would have finished had I been a part of the McNair Program or not.

The goal of completing the Ph.D. was important for Annette and would result in a career that she had always desired. The complimenting goals of the McNair Program made Annette’s goal one that was supported and encouraged but driven by her own commitment.

Ernesto’s outlook on how the McNair Program impacted his goal to complete a doctoral degree is similar to Annette. He attributes the alignment of his goals with those of the program as being a good fit. He does not consider his participation in the McNair Program as being the catalyst for pursuing a doctorate degree, as he entered the McNair Program with the goal of getting a Ph.D.

There was some pressure to complete the doctorate for the McNair Program, but it was what I was looking for. I don’t know if the impact of the goals of the program was that great. I wanted to get my Ph.D. and the McNair Program pushed me in the direction that I was seeking. For me it was a good fit.



Tina, Annette, and Ernesto entered the program with personal goals that mirrored those of the McNair Scholars Program. However, this is not the case for all of the participants in this study. As first generation students, it is not likely that the participants had the knowledge or resources to explore the options available to them. Participation in the McNair Scholars Program allowed Kendall and Rachel to explore their interests and expand their educational opportunities to include doctoral study.

Rachel, a first generation college student, was not aware of education opportunities beyond the undergraduate level. While she had a vague understanding of graduate school, the McNair Program gave her the chance to explore her passion in research and convert that passion into a career path.

I don't think I would have actually gone to graduate school had it not been for McNair showing me there's a way to do this. I joined McNair early on. I was a sophomore. I didn't exactly know what I was getting myself into. I would say that I was naïve, and McNair shaped what I wanted. At the time I was in McNair, I was like 'sure I want a Ph.D.', but I really didn't know what that meant.

The McNair Program educated Rachel on the possibilities of a Ph.D. and helped shape the educational goals she set for herself. This experience of being exposed to educational opportunities and being encouraged to pursue a doctoral degree was also expressed by Kendall.

Unlike the other study participants, Kendall stumbled into the McNair Program while looking for scholarship money as an undergraduate student. As a low income, single mother, she admits that her initial reason for participating in the McNair Scholars Program was the financial incentives offered through the research internships. The McNair Program provided the financial resources necessary to survive at the time.

Although she did not enter the program with any personal goals or interest in pursuing a Ph.D., the momentum of her involvement in the McNair Scholars Program moved her from seeing the short-term financial gains of participation in the program to a long-term goal of pursuing a doctoral degree. The reinforcement, direction, and accountability provided by the program pushed Kendall to expand her educational goals beyond anything she could have envisioned.

When I went into the McNair Program, it was lip service for me. The program was another access point for funds. We were told that the money was to be set aside for graduate school, but we could use it for whatever we wanted. The McNair Program was immediate financial access for me. It was over time in the program that I began to seriously think about graduate school and particularly the Ph.D. I would have never even considered it if the program staff were not persistent in asking us about our goals for the Ph.D.

Kendall and Rachel are examples of how programming can shape a student's educational career by creating a culture that reinforces high expectations for educational success. The ability of the McNair Program to create a culture that included the expectation of furthering educational goals seemingly impacts the students. This is consistent with undergraduate research related to persistence and completion and first generation college students (Astin, 1999; Tinto, 1993). Changing the students' thought process from "Are you going to graduate school?" to "Where are you going to graduate school?" implies an expectation by the program and for the student that may exceed their own personal goals.

The McNair Program environment includes specific values and norms that focused on getting a Ph.D. Donna is honest in saying that had she not been a McNair scholar she would not have pursued a Ph.D. and often feels that her participation in the program was too much of a determining factor for going into a doctoral program.

“McNair was so imbedded in my mind that I thought getting a doctorate was just what I was supposed to do.” This sense of obligation to the program to complete her degree was driven by her personal commitment to the program, as well as her loyalty to the future of the program she participated in. Donna felt that as one of the first scholars from her program to go to graduate school, she was seen as a role model for others coming behind her. She felt a sense of ownership in the overall outcome of the McNair Program to increase the number of low income, first generation, and people of color that hold faculty positions in academia. This sense of obligation to the overall program goal was shared by Jason and Nathaniel.

Jason felt compelled to be successful in his pursuit of the doctorate so that he could be in a position that would afford him the opportunity to support students coming behind him. As a student of color, he freely talked about the lack of diversity in his field of chemistry. Although he was able to connect with other students of color through various resources on his campus, he was disappointed with the lack of diversity initiatives within the graduate schools and the lack of faculty of color across campus. Knowing that his successful completion would impact the availability of faculty of color for other students provided additional importance to his goals.

I got into more of the McNair Program and found out what graduate school is all about. That really solidified that I was making the right decision to pursue graduate school to become a professor and work in a research lab, mentor people, work with other scientist and so on. It also became sort of a sense of obligation. I was part of a bigger picture, and I wanted to make my way through the doctorate and ultimately pursue a job in academia.

Jason’s reflection and commitment to effect change in academia through the completion of his own degree and a career in academia created a higher level of

importance for his goals. Attaining the goal of the doctorate provided him the opportunity to satisfy his personal commitment as well as contribute to changing the culture of academia. Jason invested in the goal of the program to impact the diversity of faculty as a means of changing the culture of academia and provide opportunities and role models for students of color to pursue doctoral degrees.

His desire to “give back” was broadened after his failed attempt to pursue a Ph.D. during his first graduate school experience. After leaving his first doctoral program, Jason spent several years as a high school teacher in his home town. Working with students from similar backgrounds he gained a new respect for the opportunity to role model educational excellence for his students. When he made the decision to return to graduate school, he not only committed to himself but to the McNair Program and the students that he taught.

I think back to my years teaching. It was hard leaving my high school students. The high school that I was teaching was in a place that I had grown up, where I had found myself as a student. So I was teaching students that saw me as someone that they could look up to and follow. Not just because I was their teacher, but because I grew up in the same streets, walked the same miles. So when I decided to finally go back to graduate school and get my doctorate I told them, ‘If I am not doing it, who is going to do it for you? Who is going to show you that you can do it?’ The McNair Program did that for me, I felt obligated to carry that forward.

Jason’s maintained the drive to complete the Ph.D. with the goals of becoming faculty and supporting students that were coming behind him. But the connection Jason made within his own community strengthened his determination to be a positive example for other students of color. His second attempt at the doctorate was not just a goal he set for himself or the McNair Program but one that could impact the lives of the students he taught.

Nathaniel, a first generation African American student from a low income family, maintained similar motivation to achieve his goals of a doctorate degree. During his interviews, he freely discussed his childhood and the impact of poverty and low educational attainment on his community. There were limited expectations within his community to succeed academically. No other member of his community had ever gone to graduate school; most never attended college. Nathaniel was aware that his failure would not be judged by his community, since there was not expectation of success. Instead, the importance of his goal attainment came from his desire to become a role model for his community and other students of color. In some sense, Nathaniel viewed attaining his goal of a Ph.D. as a contribution toward social justice. Having the opportunity to engage with the McNair Program and gain support for his educational goals created a commitment to complete his own degree as an example to others. Nathaniel saw his own success as an opportunity to return the investment made by his McNair Program.

I really felt a sense of responsibility to the McNair Program to finish my doctorate and hold up my degree for other scholars, especially those in my program. I felt like I had made a promise. There was an investment that the program made in me - the investment of time, the investment of resources, the financial investment of taking us to different conferences, paying for hotel rooms and meals. I really felt that in many ways I owed the McNair Program my degree and part of my career. I felt pretty obligated to do my best and make something of myself and to show the McNair Program and students following me in the program that I could do it. I felt this way because of the investment that was made in me initially.

Both Jason and Nathaniel used the McNair Program outcomes to solidify the importance of their goal to complete their doctoral degrees. Their stories demonstrate the power of knowing and valuing the importance of the outcomes of your goals and the impact of goal attainment on those around you and the community at large (Locke &

Latham, 2001). However, recognizing the importance of the outcomes that are expected to be gained from achieving the goals is not enough to ensure goal attainment. Goals cannot be achieved unless the person setting them has confidence in their own abilities. Gaining the confidence to attain the goal of the Ph.D. can be difficult for low income, first generation, and students of color. A lack of role models, resources, or support systems can impede even the most dedicated, focused students.

Some study participants indicated they entered the McNair Program with the goal of Ph.D. attainment and careers in academia. These participants also recognized the importance of goal attainment outcome of becoming a professional in their fields. However, simply having the goals and recognizing the importance of these goals is not enough to ensure goal attainment. While understanding the importance of the goal that has been set is a large component of successful goal attainment, it is impossible to achieve goals without self-efficacy (Locke & Latham, 2001). Having confidence in the ability to achieve the doctoral degree is central to attaining the goal of the doctorate. Through the McNair Program study, participants were able to recognize or reinforce the importance of the goal of the Ph.D., as well as gain the confidence necessary to attain this goal.

Kendall, a White female, is the oldest participant in the study. Due to various circumstances in her life and her primary role as a single mother, she lacked the confidence in her ability to pursue doctoral study. She credits the McNair Program for establishing her confidence in pursuing a doctoral degree and her strengthening her commitment to being a graduate student. The program provided her the encouragement, support, and discipline necessary to be successful.

As I approached the end of my bachelor's degree, I was in the McNair Program. People were telling me that graduate school was a given, and I was going to graduate school. They convinced me that I had that potential. I had no thoughts of going to graduate school whatsoever. Part of the McNair Program is that you have to apply to graduate school. The program really grooms you for graduate school. They expect you to take the GRE. I probably wouldn't have even bothered if they didn't have timelines and deadlines. The McNair Program staff was really what I needed in terms of that discipline. Somewhere in the back of my mind I figured that I might be able to go all the way through to the Ph.D. But I sure didn't dare voice it. But people in the McNair Program kept telling me 'You're a given. It's given. You're going.'

Kendall admits that she would never have moved from undergraduate to graduate student on her own. She lacked confidence in her own academic and research abilities until she was exposed to research through the McNair Program and was able to connect with faculty in her field of interest. Her research experiences and faculty mentorship provided opportunities for her to gain confidence in her decision to pursue a Ph.D. This impact is recognized even by those participants that felt they would have attained the Ph.D. even without the support of the McNair Program.

Annette, Ernesto, and Tina indicated that their success was driven by their personal goals set before their participation in the McNair Program. However, during the interview process they stated that they benefited from the confidence gained through participation. In discussing her graduate school selection process, Annette described how the program, specifically her mentor, pushed her to consider graduate programs outside her comfort zone. She credits her mentor for giving her the confidence to reach beyond what she knew and pursue her doctoral education at a highly reputable program in her field.

My mentor through the McNair Program told me that I needed to get out of the state to go to graduate school. He was the one who told me that I could make it in a doctoral program and that I could do it at the top rated university in my field...He really encouraged me and pushed me. He said that I had everything that it took to go to that university and compete.

Without the encouragement and confidence instilled by the McNair Program, Annette would not have pursued top tier graduate programs. While her goal to attain a Ph.D. and become faculty was established before participation in the McNair Program, her confidence to apply to competitive graduate programs needed fostering. As a result of the McNair Program, Annette conferred a degree that provided the prestige necessary to ensure greater options for faculty positions.

Ernesto shared the experience of gaining confidence through the McNair Program that led to his applications to selective graduate programs outside his comfort zone, which led to a higher degree of confidence during the selection process. "I would not have picked the university I attended without the encouragement and support of the McNair Program." As with Annette, the program contributed to Ernesto's goal attainment by increasing his confidence and ability to be competitive.

Ernesto also attributed the McNair Program to connecting him with other students from similar backgrounds, exposing him to graduate school, and encouraging doctoral study.

Through McNair I met people from similar backgrounds that share similar feelings and ideas for continuing higher education and getting the Ph.D. The McNair Program was who I talked to about how to apply and things that I just didn't know. Having the support of the McNair director to push us in the direction of the Ph.D. was important.

Goals cannot be attained if students do not know what to do to or how to start the process. Donna confirms this when discussing the impact of the McNair Program. "All



the student motivation in the world may not enable students to pursue graduate school.” She realizes that there is a need to have commitment as well as the confidence to navigate graduate school. Gaining the skills and confidence necessary through interaction with McNair Program staff and fellow scholars was impactful for many participants in this study.

Tina recognizes that she had the goal to attain her Ph.D., but she didn’t know how to get there. While Tina attributed her ultimate success at the doctoral level to her own determination and commitment, she reconized that as a first generation student she needed the support of the McNair Progam to show her the path to graduate school and realize her fullest potential. “I knew I wanted to be a pyschologist. I knew I was gonig to have to do more than a bachelors degree. But I didn’t understand what that was or how to get there. I didn’t understand what the next steps were.” Again, without the confidence to navigate the process of graduate school, even the most dedicated students cannot achieve their goals of doctoral attainment. The McNair Program provided Tina with the support necessary to build confidence and increase her skill set to navigate the process of attaining her goal of the Ph.D.

Building self-efficacy was an instrumental role of the McNair Program for Rachel. As a low income, first generation student, she did not have a support structure in her family that could encourage or help her in her educational pursuits. She learned about doctoral degree programs and possible careers from the program and recognized the impact of participating in the program on her decision to go to graduate school.

Learning about graduate school and doing all of those things like research during the summer made me really want to go to graduate school now that I knew what it meant. Saying it out loud helps. You're sort of stuck on your way, on a path. It is powerful. Of course you're going to graduate school because you said you were. Of course you're going to be a Ph.D. because you said you were.

Rachel points out the power of verbalizing her goal to get her doctorate.

Vocalizing this goal made it real, and sharing her goal of a Ph.D. with the McNair Program staff established commitment and accountability for her successful completion. Making her goals public through the McNair Program increased her chances of completing her goal. According to Locke and Latham (2001), goals that are made public are more likely to lead to successful attainment. Sharing the commitment to achieving a Ph.D. moves the student from an isolated experience to one that is supported by a network of individuals invested in successful completion. The impact of making goals public through the McNair Program and the established network of support that was invested in goal attainments continued for participants in this study well beyond their participation in the McNair Program.

Sharing her goal of the Ph.D. with the McNair Program created a "family" atmosphere for Annette that fostered a supportive environment. As a first generation college student, she had the support of her family to succeed, but that support was limited to the knowledge that family members had of the process and the understanding they had of the endeavor. The McNair Program represented a family for Annette that also had the resources, knowledge, and understanding of the doctoral attainment process and how to fully support her in the journey.

As soon as I went to the McNair Office the director was very supportive. She was interested in me and in my life goals. The program was beneficial in helping me become a good student and an excellent researcher. They were also a second family. The McNair Program was my second family on campus. They took care of me. They saw me as a person and were very supportive of our goals.

Annette initially discussed her commitment to graduate school and the completion of her doctoral degree to her own motivation to achieve the goals she had set for herself. She did not view the McNair Program as having made significant impacts on her decision to pursue or ability to complete her Ph.D. However, she does recognize the opportunities available through and the support provided by McNair. The family environment available to Annette through the McNair Program reinforced her commitment to doctoral completion and provided the support to be successful even while she was in her graduate program. “Whenever I had a challenge in my graduate program, I would e-mail or call the McNair Program staff. They always had words of support. They were very influential in my finishing my degree.” This support would not have been available for Annette if she had not made her goal public through the McNair Program.

The impact of the McNair Program and student making shared goals public had lasting effects on Jason as well. In speaking about his experience of re-entering a graduate program, it is clear that the confidence, commitment, and reinforcement provided through the McNair Program enabled him to return to doctoral study after a failed attempt.

After I had left my first program, I was really feeling knocked down. I had to pull myself up. Through the support of the McNair Program and knowing that they believed in me, I was able to do that. I don't know that I would have known that I was ready, prepared, and capable of going back to the doctorate after failing the first time around. Without the McNair Program telling me that I was capable of going back, I would have just let it go. I would have thought that it was just not where I was supposed to be and that I was not capable of completing a doctorate.

Having the encouragement and support through the McNair Program gave Jason the confidence to persevere after leaving his first graduate program. He continued to rely on the McNair Program staff to reinforce his goal to attain a Ph.D. even during the hardest times. Sharing goals with others, making them public, provides the opportunity for others to support the efforts toward goal attainment (Locke & Latham, 2001).

All participants in this study indicated that the McNair Program increased, shaped, or reinforced the importance of their goal to attain a Ph.D. Additionally, study participants expressed that the McNair Program expanded confidence in their ability to compete in graduate school. Personal commitment to graduate school and a profession in academia is central to attaining the goal of completing the Ph.D. (Austin, 2002; Gardner, 2010; Golde, 1998; Lovitts, 2001; Tierney & Benismon, 1996; Tinto, 1993; Wiedman, et al., 2001). The McNair Program contributed to the commitment and attainment of this goal by increasing self-efficacy and emphasizing the importance of the goal outcome for the participant as well as the program. Additionally, participation in this McNair Program required public recognition of the commitment to attain a Ph.D. creating the opportunity for the student to establish a support network with those that had an investment in their goal attainment, thus increasing the likelihood of goal attainment and solidification of the participants' commitment to graduate school and professions in academia (Locke & Latham 2001).

Commitment to being a graduate student and pursuing professions in academia is one element of the second stage of socialization in graduate school (Gardner, 2010; Golde, 1998; Lovitts, 2001; Tinto, 1993; Wiedman, et al., 2001). However, it is not the only element. The ability to build relationships with faculty and peers is significant aspect of gaining membership into program departments. The McNair Program is limited in the ability to affect relationships in individual graduate program departments, but the program does guide the students in establishing a foundation for relationship building and a network of support in their fields of interest prior to gaining entry into graduate school.

### *Relationship Building*

The entry stage of graduate school socialization encompasses the process of students gaining membership into their departments and programs. At this stage, developing relationships with faculty, staff, and peers within the program is vital to continued success in doctoral programs (Gardner, 2010; Golde, 1998; Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001). In her discussions about stage two of graduate school socialization, Sandra Gardner (2010) reinforces the importance of relationship building for graduate students. “The relationships formed in this phase and the understandings gleaned from their experiences are integral to the student’s current success as a doctoral student and future success in the particular discipline” (p. 65). The nature of establishing relationships and the environmental differences within specific programs or departments limits the ability of the McNair Program to directly impact interpersonal relationships built during a doctoral program. However, the McNair Program does provide students the opportunity to network with program peers, engage in

faculty mentorship, and interact with graduate schools in anticipation of connections being made with other students and faculty in the programs that the McNair scholars enrolls. The impact of establishing relationships through the McNair Program was discussed by several of the study participants.

Ernesto previously discussed the lack of resources and role models available to him as a first generation student. The ability to connect with other students from similar backgrounds was helpful in sharing experiences as well as navigating graduate school. The relationships that he built with other McNair scholars while in the program provided the opportunity to have an established network of peers upon entering his doctoral program. “I was pretty lucky to have the support of the fellow graduate students in my graduate program that were also McNair Scholars. There was a pretty good network of students there to help me out and support me in acclimating to the new environment.”

As indicated by Gardner (2010), “Students seek out one another for advice, guidance, and mentoring” (p. 70). Ernesto did not have to seek out other students while in his graduate program. Since these relationships were already in place upon entering his program and as a result navigating the process of learning norms, values, expectations, and processes of a graduate school department was manageable. According to Weidman, et al. (2001), “Entering graduate or professional school with a group of other students affects the socialization process differently from entering individually. The cohort influences the learning process, opens support mechanisms, and enriches the experience socially and emotionally” (p. 62). While Ernesto did not enter his doctoral program in a cohort, the network he created within his graduate program prior to entering simulated a cohort experience and provided him similar benefits.

Kendall was also able to establish relationships with graduate program faculty and peers prior to enrolling in her program. Unlike Ernesto, Kendall remained at her undergraduate institution to pursue her doctorate. She benefited from having an existing relationship with faculty and staff within the institution and her program. Having an established network was vital to Kendall's overall success. As a single mother with high financial need, Kendall was able to tap into her existing network for financial relief during difficult times. "Disability Services gave me a scholarship to purchase glasses at a time that I did not have the insurance or the funding to do so. That saved me. I could have never continued to be a student without that resource."

Being connected to the campus and knowing what resources were available helped Kendall meet basic needs while in the program. This support allowed her to resolve a problem fairly quickly and continue to focus on her goal of finishing her doctorate. Kendall's network was not limited to Disability Services. Through her experience in the McNair Program, Kendall worked with a faculty mentor in the area of developmental psychology. As a mother of an autistic son, Kendall was able to gain valuable guidance and advice as an aspiring research and a concerned parent. The ability to merge these two worlds for the betterment of her son helped forge a strong personal connection with her mentor. As a result, Kendall considered her McNair faculty mentor as being a primary source of support even while pursuing her doctorate. "The person that I relied on most was my McNair mentor. She helped me focus on day-to-day studies and get through life. We forged a friendship over time that was very supportive."

As an older student and a single parent, Kendall needed to have a support outlet that understood the multiple demands on her time and value her role as a parent. She felt

that her McNair mentor knew her as a person and had invested time in her life, including supporting Kendall's role as a mother of a special needs child. Kendall's McNair mentor served as the conduit for membership into her doctoral program and continued support throughout. "She was a gold mine for me in that respect."

Having an established network of support or even one or two contact points that can provide guidance in the process of becoming a member in a graduate school department or program can foster successful completion. However, those contact points were not available for all participants in this study. For some, the experience of how to establish those relationships was just as impactful.

Unlike Ernesto and Kendall, Nathaniel did not know any peers or faculty in his graduate program prior to enrolling. However, he remembered that his experiences in the McNair Program helped develop the skills necessary to navigate the membership gaining process.

I learned how to develop good working relationships, reach out to people, and good communication skills. I learned a lot about relationship development, professional development, and finding resources. The things I learned in McNair carried me through the early parts of graduate school.

Having the skill sets to navigate the entry stage of socialization and the opportunity to be exposed to relationships with faculty in a research setting builds a foundation from which students can grow. This foundation in fostering relationships with faculty and peers provided an advantage to McNair participants as they entered their graduate programs.

The entry stage of graduate school socialization generally occurs upon entry into the graduate program. At this phase of the process, students gain membership into graduate departments and programs, and are orientated to the norms, values, processes



and procedures. Students in Stage Two also solidify their commitment to becoming a graduate student and pursuing a career in academia and form relationships within their departments and programs with faculty and peers that will impact their overall success.

In order to fully gain membership into a graduate department or program, a student must have a strong commitment and be able to develop and maintain positive relationships with those individuals within their departments that can support that commitment (Gardner, 2010; Gardner & Mendoza, 2010; Golde, 1998; Lovitts, 2001; Tinto, 1993; Wiedman, et al., 2001).

#### *Research / Professional Development Stage*

The final stage of graduate school socialization is the Research/Professional Development stage. During this last period of the socialization process, doctoral students transition from students to professionals in their field. They are moving from structured classroom experiences to independent research, from consumers of knowledge to contributors to the knowledge base. Doctoral students in the final stage of socialization actively engage in research and are introduced to their professional peers through publications and presentations. This determines the ability of doctoral students to successfully establish themselves in their field and is the gateway for socialization into the professoriate (Austin, 2002; Golde, 1998; Golde, 2000; Golde, 2005; Lovitts, 2001; Tierney & Bensimon, 1996; Tinto, 1993; Turner & Thompson, 1993; Weidman, et al., 2001). Therefore, it is vital to initiate components included in Stage Four as early as possible to allow the transition process from student to professional to occur gradually over time, or, at the very least, expose students to the process of engaging in research,

publications, and conference presentations to eliminate additional barriers that may result from learning how to navigate academic independence while meeting the demands of professional development.

The McNair Program participants engage in research and professional development activities that emulate experiences and expectations of graduate level work. Scholars in the program work with faculty mentors to produce high quality research projects. Scholars complete the proposal process and learn how to conduct research including the collection, analysis and presentation of data. For low income, first generation, and students of color, acquisition of the most basic skill sets and hands-on learning experiences can have the greatest impact.

Kendall recalls her experience in the McNair Program and how presenting at program conferences as an undergraduate helped refine her skills and generate confidence in her abilities.

The McNair Program helped me to learn how to do the research, how to present that research, and how to create power points for presentations. That all played into my being able to make it in graduate school. My first summer in the McNair Program I completed a presentation. My mentor stood with me and pushed the mouse to advance the slides. I was so nervous that I couldn't keep track of the mouse and look at my notes. I was afraid to look up. I was really scared. By the time I got into my graduate program, presenting was a piece of cake. All of that was a piece of cake for me.

The quality of Kendall's initial presentation through the McNair Program may not have been at the level required for graduate students presenting dissertation work. However, through continuous exposure to the process of presenting her research, Kendall refined her skills in a supportive encouraging environment. Once in her graduate program, she

was confident in her skills and was accustomed to the expectations of professional presentations.

Tina's research experience in the McNair Program was with the Center for Disease Control (CDC). Placement at this prestigious research organization exposed her to the expectations of a research lab as well as the profession. This real life experience was Tina's first exposure to research and shaped her perception of standards of research.

I hadn't gotten involved in any research prior to getting involved with the McNair Program. I didn't have an understanding of research at all, other than the statistics courses that I had taken, so I didn't have applied knowledge. McNair actually set me up to work on a CDC grant funded study prior to going to graduate school which helped to further develop my research skills.

Through invaluable knowledge gained through her research experience, Tina was able to engage with professionals in a highly regarded governmental agency and learn to conduct research under their mentorship. The professional network that she was able to connect with through this project also lasted throughout her doctoral study and into her career. The ability to capitalize on these types of experiences is crucial in preparation for doctoral study. Gaining the experience prior to enrolling into doctoral programs can help off-set the lack of professional development and research training available at the graduate level. The reality of graduate school advising and mentorship is that most faculty do not have the time to continuously engage with individual students, even their own advisees. Doctoral students are expected to be self-directed and independent with all of their research endeavors (Austin, 2002; Golde, 2000; Tierney & Bensimon, 1996; Turner & Thompson, 1993; Weidman, et al., 2001).

For Kendall, the research experience in the McNair Program afforded her the opportunity to become more knowledgeable in an area affecting her personal life. She

was able to conduct research with a faculty member that had expertise in developmental disorders. Kendall's son has a developmental disorder, so for her the research allowed her to connect her personal struggles to a potential career field.

When I got into the McNair Program, I absolutely loved research. My research project gave me access to a faculty member in the school psychology program. My faculty mentor let me do research for a couple of years on pervasive developmental disorders. This allowed me to advocate for my son and learn about his disorders. I could look at what the research said about it and determine the best accommodations for him in school. That's all it took. I was just fascinated with research. McNair let me do that.

Kendall was able to capitalize on her research experience and pursue a doctoral degree in psychology. Her ability to personalize her research project confirmed her commitment to attaining the Ph.D. For several participants, exposure to research helped shape their interests and refine their goals while giving them a window into the graduate school experience.

Jason entered his undergraduate institution with an interest in science. The McNair Program provided him the ability to expand this interest and gain the skills sets and experience needed to work in a lab as a graduate student. During his progress through the McNair Program, Jason recognized that his research experience was the same experience that he would encounter in a graduate school research lab.

As an undergraduate student, I was as equal to the graduate students in the research lab. This was because of the amount of time I spent on research work and what I had been doing in my undergraduate research lab. I was equal to the graduate students. My undergraduate mentor treated me and saw me that way as well.

Finding comfort in the academic environment is part and parcel to the socialization process. Being exposed to a research lab and learning the right and wrong ways to conduct research in this setting prior to enrolling in a graduate program is helpful

to doctoral students. This foundation in research allows students to acquire the technical skills necessary and learn the nuances of research environments. This foundation in turn frees the student from having to navigate these issues in addition to other barriers that may surface within this stage.

Ernesto recognized that his research experience as an undergraduate student allowed him to peek into the graduate student experience. “The McNair Program allowed me to do research with a professor as an undergraduate. My research experience showed me what it would be like when I went to graduate school. That was really helpful.” Demystifying the research process is beneficial to students preparing for graduate school. This is especially true for low income, first generation students, and students of color. Unless students from these backgrounds are engaged in a program such as the McNair Program, it is highly unlikely they would be exposed to research environments. These experiences need to be an essential component of professional development (Austin, 2002; Gardner, 2010; Gardner & Mendoza, 2010; Golde, 1998; Golde, 2005; Kahlenberg, 2010; Lovitts, 1996; Tinto, 1993).

Both Ernesto and Jason pursued degrees in the sciences where laboratory research is an integral part of their doctoral studies and preparation for careers as faculty. The impact felt through the research experience is related to the ability to complete high quality research on an on-going basis. Similar to assistantships that are awarded in graduate school, the McNair Scholars Program is able to pay participants while actively engaged in research. The freedom to focus on strengthening research skills in lieu of working outside of the academic setting was perceived by study participant as being

impactful. Jason's undergraduate experience included a large amount of hands-on experience in a research lab.

As an undergraduate I spent probably 30 to 40 hours in a lab doing research in addition to my undergrad studies, which I never could have done if I needed the money that I was getting from McNair during that time.

The continuous exposure allowed Jason to grow academic, personal and professional skills that aid him in his doctoral journey. "Not only did I have the time spent in the lab, but I also completed a number of research publications as an undergraduate."

The transition from student into professional began for Jason well before his application process to graduate schools. Conducting and publishing research as an undergraduate confirmed this confidence and commitment to pursuing his Ph.D. "I knew that I had the capability to complete the doctorate because of the opportunities I was given through the McNair Program to pursue high quality research."

For participants in this study, the transition from student to professional, as prescribed by the final stage of graduate school socialization (Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001), was inclusive of their research experience, publications, and presentations. In addition, they were aware of the prestige associated with these accomplishments prior to enrollment in doctoral programs. Professional development for these participants included the establishment of academic reputations that spanned graduate school and crossed into professional organizations. The McNair Program standards for scholars invoked respect and anticipation of the high academic quality and preparation for research and faculty training. As a result of the reputation of the program and the rigorous standards of participation, many of the participants in this study indicated a feeling of heightened respect from the academic arena.

Clinical psychology is a highly competitive field that includes a highly selective graduate enrollment process. Having established herself as a quality research through her experiences with the CDC, Tina was able to gain admission into a top tier school. She utilized her participation in the McNair Scholars Program as an avenue to gain the competitive edge she needed to be successful in her graduate school application process.

I just didn't have the experiences that I needed to compete with the people for the programs that I wanted to apply to. Programs in my field are very selective and very competitive. My program receives over eighty applications every year and only accepts twelve people. I never would have made the cut if I wasn't a McNair scholar. My field is very research driven, and I didn't have any research experiences prior to going into McNair.

The same experience was true for Kendall. Although her area of interest was not quite as competitive as Tina, Kendall felt her participation in McNair had an impact on her status in academia. "I was known at the university for my involvement in the McNair Program. I was known as a strong researcher because of the McNair Program." Having an established reputation of being prepared to enter doctoral study allowed the participants to be selective about programs as well. The competitive edge of exposure to graduate school elements equalized the balance of power that can often shape the graduate school application process (Lovitts, 2001). Instead of asking "Where will I be accepted to graduate school?", the question becomes "which graduate school will I select to attend?" Kendall elaborates on this shift in perception.

Professors look at you a little differently when you are in the McNair Program. They see you as up and coming and peer-type material. You are easily groomed for the profession. Knowing that really bumped me up several notches. Being a McNair Scholar exposed me to a totally different class of people and opportunities in life.

Graduate school faculty has limited time to groom students for the professoriate. Time available to interact with doctoral students is often spent on process and procedural issues and not preparation for the entering the faculty ranks (Austin, 2002; Gardner, 2010; Lovitts, 2001; Tierney & Bensimon, 1996). The opportunity to truly mentor an incoming doctoral student that will not require time spent on basic skill sets can be very attractive. This attraction was not lost on Nathaniel. He viewed his experience as a McNair Scholar as on the job training, directly relating the activities to developing him for graduate school as well as the professoriate.

A lot of what I learned in McNair has carried me in my career. I began to learn lessons for my career as a McNair Scholars at research conferences and through supported summer research. Coming into graduate school I believe that I was an attractive candidate because I had so much research experience and preparation through the McNair Scholars Program. I already had on the job training. A major part of graduate school is your research. If you've already got a ton of it, and you've done a lot of writing, than your graduate program isn't going to have to do much molding of you. It makes you much more attractive.

Nathaniel directly connected his experiences in the McNair Program with attributes that continued to support his career in academia. For him, the program was able to impact the final stage of graduate school socialization as well as the socialization process that occurs beyond conferral of the Ph.D. and into career selection and placement.

The final stage of the graduate school socialization process reflects the transition from being a student to becoming a professional in the academic field. Through individual research, publications, presentation, and introduction to professionals in the field of study outside the specific graduate program, doctoral students successfully moved through their programs and into the next phase of their journey. The culmination of training, relationships, and research contributions to the academic field leads to



successful attainment of the doctorate and access to professions in academia (Austin, 2002; Gardner, 2010; Golde, 2005; Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001). For the participants in this study, exposure to research during their participation in the McNair Program provided the opportunity to gain and refine the skills necessary to navigate the research process. The duration and quality of these research experiences afforded the participants the opportunity to successfully publish and present their work to professionals in their field. While research is not an unusual preparation experience for graduate school (Lovitts, 2001), the rigor and intensity of the McNair Program research experiences were. As a result, many of the study participants recalled a sense of prestige that was attached to being recognized as a McNair scholar. This prestige allowed participants to become more competitive in the graduate school selection process and be viewed as better mentees for faculty.

### *Summary*

This chapter explores the impact of the McNair Program on the stages of graduate school socialization presented by Tinto (1993), Lovitts (2001), and Weidman, et al. (2001). In the theories of graduate school socialization offered by the researcher listed, each stage represents a specific period of time in the doctoral program. The Pre-entry Stage refers to the recruitment and selection period. The Entry Stage reflects the initial experience of the doctoral student, the first year of study. The Knowledge Attainment Stage includes the second year of doctoral study through candidacy and includes the coursework that students engage. The final stage of graduate school socialization is research/professional development, which can be the most independent, isolating stage of

the doctoral socialization process. It is at this stage that doctoral students make the transformation from student to professional in final preparation for professions in academia.

The stages of socialization have been explored and determined to provide opportunities for intervention that supports the successful completion of the doctorate.

Components to success have been identified to include

- 1) Pre-enrollment preparation,
- 2) Funding,
- 3) Relationship building,
- 4) Departmental environment,
- 5) Process and procedure, and
- 6) Professional development (Astin, 1999; Bieber & Worley, 2006; Breneman, 1977; Golde & Dore, 2001; Grimmett, et al., 1998; Lovitts, 1996; Lovitts, 2001; Nelson & Lovitts, 2001; Parker, 2003; Perna, 2004; Tierney, 1997; Tinto, 1993; Vaquera, 2004; Vaquera, 2008; Zwick, 1991).

In an effort to impact the successful completion of doctoral students, these components have been adapted into services provided through support programs such as the McNair Program.

The McNair Program seeks to increase the number of low income, first generation, and students of color that successfully complete the doctorate and pursue careers as faculty. Chapter II outlines the low persistence and completion rates among this population, which demonstrates the need for the McNair Program as well as support services that assist in preparing student from these backgrounds for doctoral programs.

Program services support this outcome by aligning with the component outlined above that reflect the stages of socialization. Data collected in this study reflect the ability of the McNair Program to impact several stages of graduate school socialization and contribute to the overall success of study participants. These stages include the first two stages (pre-entry and entry) and the final stage (research/professional development). The knowledge attainment stage (Stage Three) includes coursework and the ability of doctoral students to demonstrate high quality in academic work. The unique nature of program curriculum does not account for the ability of components or services to directly impact this stage. Therefore, it is not included in this discussion.

As discussed earlier, the Pre-entry Stage is the time prior to enrollment in graduate school that aspiring students are recruited to graduate programs and complete the selection process. This period is when the most direct point of impact occurs through the McNair Program. Study participants indicated that choice of graduate schools was determined through participation in the program. Program services such as campus visits, faculty mentoring, conference presentations, and peer networking opportunities contributed to finding the best “fit” for graduate school. This process is consistent with those explained by Weidman. et al. (2001) and Lovitts (2001). The McNair Program provided guidance in navigating this process through regular interaction with program staff, faculty mentors, and a network of peers. This support engaged the participants in active discussion regarding the rationale behind program selection and interactions with other McNair Scholars enrolled at various institutions. These additional resources were instrumental in the graduate school selection process for study participants.

The impact of the training and resources made available through the McNair Program are emphasized in the stories told by Donna and Jason. Both students engaged in the graduate school selection process through the McNair Program but did not select graduate programs based on overall fit. Instead, Donna pursued a program that was close to home and provided her the financial means to attend, and Jason selected his program based on faculty reputation and referral from his faculty mentor. Neither Donna nor Jason was able to complete their initial graduate programs due to poor fit. However, both successfully re-engaged in the pre-entry stage. Utilizing the training and resources available through their participation in the McNair Program, they were able to identify doctoral programs that were a “two-way” fit that contributed to their successful completion (Lovitts, 2001).

Once a doctoral student selects a graduate program that is a “good fit,” they enter the second stage of graduate school socialization that occurs during the first year of study. This stage maintains a primary focus of gaining membership into the department and program. This is generally accomplished through a commitment by the student to membership within the academic program and a career in academia, as well as relationship building with faculty and peers (Gardner, 2010; Golde, 1998; Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001). While the McNair Program is limited in the ability to affect relationships within academic departments and programs, data shows that the program did impact the commitment level of the study participants, as well as their ability to formulate relationships that impacted their overall success.

Making a commitment to pursue a doctoral degree can be overwhelming for students from low income, first generation backgrounds, and student of color. This is the

result of limited diversity in academia, lack of role models, and lack of resources to access opportunities for doctoral education (Kahlenberg, 2010; Turner & Thompson, 1993). The McNair Program is designed to expand the diversity of academia by supporting, encouraging, and empowering low income, first generation, and students of color to pursue the Ph.D. and assume positions in academia. Utilizing characteristics of goal setting attainment (Locke & Latham, 2001), the McNair Program was successful in shaping, encouraging, and reinforcing the goals of the participants in this study and promoting self-efficacy. Study participants acknowledged the program as providing the confidence necessary to commit to graduate school and reinforcing the importance of their goal of attaining the doctorate. Whether due to goal alignment, goal shaping, or goal reinforcement, the participants in this study valued the shared commitment of pursuing a Ph.D. and a profession in academia. This joint investment and public recognition of goals elevated the responsibility of the program to actively support the goals and the study participants to achieve them.

Commitment to graduate school and entering the professoriate is not the only component that lends to gaining membership within the department and the program. Entering graduate students must formulate and navigate relationships with faculty, peers and staff. These localized relationships often determine the success or failure of doctoral students (Austin, 2002; Gardner, 2010; Golde, 1998; Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001). Due to the unique nature of each individual department and program, the McNair Program is limited in the ability to directly affect these relationships. Instead, the program strived to expose participants to opportunities to establish similar relationships as a means of learning how to engage with various types of

individuals from a variety of different background. Additionally, the McNair Program provides an extended network of peers, faculty, and institutions that participants were encouraged to access. By establishing relationships within this network, several study participants created solid support structures prior to entering their graduate programs. These support structures, such as the one described by Ernesto, helped to ease the process of gaining membership into graduate departments and programs. This is especially true for peer relationships in graduate school (Austin, 2002; Gardner, 2010; Golde, 1998; Lovitts, 2001; Tinto, 1993; Turner & Thompson, 1993). The ability to have pre-established support structures in place relinquishes doctoral students from this process upon entry. While it is recognized that any pre-established relationship groups are not exclusive to those that need to be created while in a doctoral program, it is suggested that they lessen need to actively seek out relationships in all areas. This allows students the time to focus on faculty relationships and navigating other barriers that may be present during the first year of study.

The final stage of graduate school socialization is the research/professional development stage, which represents the period of time from candidacy through the completion of the dissertation. According to research, this stage is when students begin to transition from knowledge consumers to knowledge creators or from student to professional (Gardner, 2010; Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001).

Engaging in activities that prepare students for graduate school, such as exposure to research at the undergraduate level, have been identified as beneficial for increasing student persistence and completion at the doctoral level (Lovitts, 1996; Tinto, 1993). Therefore, it is not surprising that the McNair Scholars Program is designed to include

undergraduate research as a large component of programming. Scholars participating in this study identified the research component of their McNair Scholars Program as being impactful in their successful completion of the doctorate degree. For some participants, these opportunities were their first exposure to research. For others, the experience reinforced their desire to expand their education and pursue doctoral studies. All had recognition of the McNair Scholars Program creating vital opportunities to engage in research at various levels which contributed to their success in their doctoral journey.

While the data collected from participants in this study was consistent with previous research that indicates exposure to research opportunities and the experience gained through those opportunities have an impact on a student's ability to successfully complete his or her doctorate (Bieber & Worley, 2006; Lovitts, 1996; Tinto, 1993), it expanded the concept of when research and professional development can occur and the impact of the McNair Program on this stage of the socialization process.

The level of exposure to research and the intensity and duration of those experiences varied from participant to participant. However, the effects of the research and professional development were consistent among the participants. Through the research component, participants expressed the ability to engage in active research with faculty mentors and foster the passion, desire, and skill set necessary for success at the doctoral level. They also credited the McNair Program with giving them the professional momentum that was required to be successful beyond the doctorate and into their careers. The participants in this study indicated significant impact of the McNair Program on three of the four stages of graduate school socialization. As an undergraduate program, the McNair Program was able to impact the Pre-entry Stage and accelerate or eliminate

certain elements of the entry and research/professional development stages. Table 7 demonstrates the stages that the McNair Scholars Program was able to impact and the depth of that impact.



Table 7

*Degrees of Impact by the McNair Program*

Impact of the McNair Program	Stage 1 Pre-Entry	Stage 2 Entry	Stage 3 Knowledge Attainment	Stage 4 Research/ Professional Development
Direct Impact	Exploration of graduate schools	Commitment to graduate program and profession		Transition from student to professional
	Recruitment to graduate programs including campus visits, faculty interactions, funding offers	Policies and Procedures		Independent research
	Selection and admissions process			
Limited Impact		Gaining membership into departments and programs academically and socially		Focused relationship with faculty advisor
No Impact			Completion of coursework Demonstration of academic competence	

Based on the linear nature of Tinto's (1993) and Lovitts (2001) theories of graduate school socialization and the correlated timelines for these stages, the McNair Program should not have successfully impacted the participants in this study. However,

this is not the case. The participants in this study clearly indicate the impact of the McNair Program on successful completion of the doctorate. It is therefore suggested that the stages of graduate school socialization for these McNair participants was not linear nor was it codependent on specific periods within the doctoral journey. While this ideology is consistent with that of Gardner (2010) and Weidman, et al. (2001), it is not suggested that the student development theory be utilized to restructure the process. Instead, consideration should be given to a multi-layered model that allows for re-engagement by the student at any point in the socialization process and that opportunities to accelerate the process through skill development, exposure to real life experiences, and stabilization of the acculturation process be promoted. This proposed model will be further discussed and illustrated in Chapter V and Chapter VI.

## Chapter V

### Navigating Culture and Advisor Relationships

Doctoral attrition and completion research largely indicates that student success relies heavily on the ability to appropriately socialize into graduate school and individual graduate programs. There are several prevalent theories of the graduate school socialization process that reflect four general stages that the graduate student completes.

These general stages include:

- 1) Pre-entry,
- 2) Entry,
- 3) Knowledge Attainment, and
- 4) Research/Professional Development (Lovitts, 2001; Tinto, 1993; Weidman et al, 2001).

According to theorists, these stages coincide with specific periods of time within a graduate program (Gardner, 2010; Golde, 1998; Lovitts, 2001; Weidman, et al., 2001).

The Pre-entry Stage occurs prior to enrollment and includes recruitment and selection of a graduate program. This is the stage at which the appropriate ‘fit’ of a student to a graduate program and vice versa is determined, a factor that is viewed as vital to overall success of doctoral students (Astin, 1999; Austin, 2002; Bieber & Worley, 2006; Gardner, 2010; Golde, 1998; Golde & Dore, 2001; Lovitts, 1996; Lovitts, 2001; Malone, Nelson, & Nelson, 2001; Nelson & Lovitts, 2001; Parker, 2003; Schmidt, 2008; Tinto, 1993; Vaquera, 2008; Weidman, et al., 2001). The Entry Stage occurs during the first year of the graduate program and is the period of time when the student gains membership into the graduate program or department and commits to being a graduate

student. The Knowledge Attainment Stage reflects the duration of time that the student is completing their course load and establishing his or her academic competence that begins at the second year and continues through the candidacy. The final stage, Research/Professional Development, is the last step of socialization into graduate school. After completion of comprehensive exams and continuing through the completion of the dissertation, students begin to transition from student to professional. This time is often very isolating and is the period at which the advisor/advisee relationship often has the most impact (Gardner, 2010; Golde, 1998; Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001). These prevalent theories of the graduate school socialization process are characterized by their linear nature and their structured timetable for transition from one stage into the next (Lovitts, 2001; Tinto, 1993).

In Chapter IV the stages of graduate school socialization are used to demonstrate how external programming, in this case, the McNair Scholars Program, can accelerate the graduate school socialization process. Through the data collected in this study, it is suggested that the McNair Scholars Program was able to impact the study participants' socialization process at the first (Pre-entry), second (Entry), and fourth (Research/Professional Development) stages. The third stage, Knowledge Attainment, was not explored for impact based on the unique nature of program curriculum. Since the McNair Scholars Program is not specific to any academic field, it would be difficult for the program to impact the establishment of academic competence while in graduate school, which is the fundamental element of Stage Three.

The examination of data collected from study participants indicated that the McNair Program impacted the socialization process by providing support with the

development of specific skill sets and refinement of these skill sets through program activities. For example, in the Pre-entry Stage several study participants indicated program impact through campus visits, meeting program faculty, assisting with the graduate school application process, peer networking, and other activities that supported the application and selection process. Study participants such as Ernesto recognized the value of interacting with faculty and graduate students from his potential graduate program prior to selecting a graduate program. This exposure to representatives of the program helped Ernesto in selecting a program that he felt was a good 'fit'. Annette also attributed the McNair Program with pushing her to explore graduate programs outside of her home town. This encouragement led to her enrollment at one of the top institutions in her field.

The second stage of graduate school socialization was impacted for study participants through the shared commitment made by both the student and the McNair Program. Participants such as Jason and Nathaniel indicated that the program gave them a larger perspective on the need to be successful in their own doctoral programs as a means of opening doors for those that may come behind them. Impact at this stage was also felt through the development of peer networks. Ernesto described the positive impact of the McNair Program's commitment to helping students develop peer networking groups with students entering or currently enrolled in their graduate programs. When Ernesto enrolled in his graduate program, he already has a strong peer support base that allowed him to gain membership within the department more easily.

Study participants spoke in depth about their research and professional development (Stage Four) experiences through the McNair Scholars Program - more

specifically, how those experiences allowed them to accelerate their skills beyond those of traditional entering graduate students. The McNair Program allowed the study participants to learn the skill sets necessary to perform high quality research and present their research at professional conferences within their field. As a result, study participants indicated a high level of confidence in their research abilities, a greater sense of professionalism within their own academic field, and a heightened level of respect and interest by graduate programs and faculty.

It is clearly presented in Chapter IV that the McNair Program was impactful in accelerating and supporting the graduate school socialization process for study participants and that this impact contributed to their overall success in doctoral study. However, the impact generated by the McNair Program in the various stages was not always equally distributed and did not represent equal depth for each stage or area of intervention.

Preparing low income, first generation students, and students of color for doctoral study through a program such as the McNair Program is often limited to developing applicable skill sets and exposing students to “real-life” situations they may encounter in their graduate programs. As outlined in Chapter IV, this was accomplished for study participants through graduate school selection support, reinforcement of their commitment to the Ph.D., exposure to high quality research experiences, the development of support networks, and exposure to professional development opportunities. While the McNair Program impacted the first (Pre-entry), second (Entry) and fourth (Research/Professional Development) stages of the graduate school socialization process by implementing these services, the depth of that impact can often be limited. This

limitation is due to the inability of external programs to account for the climate or culture within a graduate department or program and the relationships that occur between the student and the doctoral advisor. This is very concerning given the identification of these two areas as the most common causes of attrition for doctoral students (Astin, 1999; Austin, 2002; Bieber & Worley, 2006; Gardner, 2010; Golde, 1998; Golde & Dore, 2001; Lovitts, 1996; Lovitts, 2001; Malone, Nelson, & Nelson, 2001; Nelson & Lovitts, 2001; Parker, 2003; Schmidt, 2008; Tinto, 1993; Vaquera, 2008; Weideman, et al., 2001).

Due to the vast range of graduate school programming available and the unique characteristics of each department and program, external programming such as the McNair Program can only prepare students for the types of cultures they may encounter and provide them with the skills necessary to navigate turbulent situations that may surface. As students that are at the highest risk of attrition, low income, first generation, and students of color are likely to face culture shock and stumbling blocks in navigating advisor relationships (Tierney, 1997; Turner & Thompson, 1993; Winkle-Wagner, et al., 2010). Unfortunately, unlike other elements within the stages of graduate school socialization, it is impossible to directly expose students to specific departmental cultures and foster advisor relationships for each student as a means of exposing them to the possible challenges they may face.

This chapter explores aspects of the graduate school socialization process that the McNair Program is limited in impacting. The information presented examines the barriers identified by study participants in navigating the entry and research/professional development stages of the theories of socialization. More specifically, it presents the barriers faced by study participants in navigating the departmental and program culture

and the advisor/advisee relationship. These barriers include racial and socioeconomic marginalization within departments and program, as well as how the traditionally White, affluent structure of graduate school and the socialization of faculty into the professoriate can impact the advisor/advisee relationship.

This chapter is organized to provide consistency with previous chapters and the theories of graduate school socialization as presented by Lovitts (2001), Tinto (1993), and Weidman, et al. (2001). It is divided into two sections representing those components of the socialization process identified in Chapter IV as being limitedly impacted by the McNair Scholars Program: Department/Program Culture and Advisor Relationship. Participant quotes have been minimally modified to account for comprehension and fluidity. This chapter answers research question one: What factors contribute to the persistence and completion of the doctorate by McNair Scholars?

### *Department/Program Culture*

In his discussions regarding culture and socialization, William Tierney (1997) states, “Culture gets defined as the sum of activities – symbolic and instrumental – that exist in the organization and create shared meaning. The definition of socialization pertains to the successful understanding and the incorporation of those activities by the new member of the organization” (p.3). The process of socialization for graduate students relies heavily on the ability to understand, embrace, and share the culture of the department or program and successfully socialize into it. Doctoral students that are unable to embrace the culture or struggle with fitting into the culture often fall victim to attrition (Astin, 1999; Austin, 2002, Bieber & Worley, 2006; Gardner, 2010; Golde,



1998; Golde & Dore, 2001; Lovitts, 2001; Lovitts, 1996; Malone, Nelson, & Nelson, 2001; Nelson & Lovitts, 2001; Parker, 2003; Schmidt, 2008; Tinto, 1993; Turner & Thompson, 1993; 2001; Vaquera, 2008; Weidman, et al., 2001). This can be problematic for low income, first generation, and students of color due to the lack of congruence that often exists between the departmental and program cultures and that of the individual students (Tierney, 1997; Tierney & Bensimon, 1996; Turner & Thompson, 1993).

Although progress has been made in opening educational structures to be inclusive of all students, academia maintains a culture that reflects a history of affluent White ideology, which can be detrimental to attaining the goal of a Ph.D. This history is prevalent at the graduate school level where an elite mentality still exists among faculty and administrators. This culture is damaging for students that are unable to forge supportive relationships with faculty and peers that serve to help them acclimate to the department or program. It is further complicated by the lack of faculty and student diversity, especially in the representation of low income, first generation, or people of color. This lack of diversity creates a void in providing graduate students with role models that reflect success with gaining membership into the department or program (Winkle-Wagner, et al., 2010).

### *Lack of Diversity*

Lack of diversity reflected in low representation of low income, first generation, and students of color is a significant problem within higher education, especially doctoral study. As indicated in Chapter II, the numbers of low income, first generation, and students of color enrolled and successfully completing doctoral programs is low.

Similarly, the representation of faculty of color and faculty from low income or first generation backgrounds is also low (Tierney, 1997; Tierney & Bensimon, 1996; U.S. Department of Education, 2010). It is no surprise that study participants recognized the lack of diversity within their doctoral programs and identified this void as problematic.

Rachel pursued her doctorate in clinical psychology. She was the only low income, first generation student in her program and was acutely aware of the gap this difference in backgrounds created between her and her peers. This gap was greatest in relation to Rachel's status as a low income student.

A lot of people in my program talked about feeling really poor in graduate school. I really didn't feel that. In my first year, my first stipend payment for graduate school was a little over \$12,000. I did my father's taxes for him that same year. I made more money than he did that year. I could not figure out what people were complaining about

The \$12,000 stipend represented an increase in Rachel's socioeconomic status. As an individual student, she had earned more than her family, which gave perspective of the impact of her status as a low income student. This also created a gap between Rachel and her peers. While she embraced the stipend as a means of additional economic support for her and her family, cohort peers viewed it as diminishing their socioeconomic status. It could be argued that the decrease in status by her peers and the increase in her own status created a balance or equal ground within the program. However, since Rachel did not have the luxury of outside financial support through her family, this would not be reasonable. Instead, the stipend, just as other artifacts representing the department and program culture, is a symbol of the established culture that reflects an expectation of student and family affluence. Since Rachel did not represent that expectation created by

the department and program culture, she inherently is the outsider, making the process of gaining membership much more difficult.

Not having common ground to relate to peers within a graduate program can create a stumbling block for doctoral students. Quite often, doctoral students rely more heavily on their peers than on faculty or their advisors to support their socialization into their graduate programs (Gardner, 2010; Golde, 1998; Lovitts, 2001; Winkle-Wagner, et al., 2010). This ability to seek out support from peers was limited for Rachel as a result of their cultural differences grounded in her status as a low income student.

Cultural differences, including the expectation of the department and the program of students coming from high socioeconomic backgrounds, created a gap between Rachel and her peers that resulted in challenges with gaining membership into her department. Rachel did not feel that she had a starting point to develop relationships with her peers upon entering her program. While she presented her cohort peers as being inviting and friendly, the cultural norms and values reflected by the program through her peers contributed to a culture shock that she did not expect, which explained her account of casual conversations among her peers about travel that was not something that Rachel had experienced.

I felt like my graduate school program was supportive and my classmates were very inviting. I think what made graduate school difficult for me was culture shock. I remember sitting around with some of my classmates and they were talking about the summers they had spent in Europe studying abroad, family vacations, and things like that. That was so foreign to me. I had no idea what they were talking about and no idea what common ground we had to connect. A lot of the things that I value they didn't value. That was really, really hard for me.

Rachel's personal culture differed from that of her peers, department, and program. This type of conflict in cultural norms and values creates a friction point that

presents opportunities for attrition for graduate students (Turner & Thompson, 1993). Gaining membership into Rachel's graduate program and embracing the culture of her department and program meant changing, hiding, or simply losing some of her own personal culture. Although Rebecca was able to navigate these differences and successfully complete her program, it did create a sense of isolation for which she was not prepared.

What was a double whammy for me was going home. I already didn't feel like I belonged in graduate school and going home I felt like I didn't belong there anymore either. I felt stuck between two places and I didn't belong in either of them. My family would say they were supportive, but at the same time they would say that I had forgotten where I came from. That was really hurtful. The challenges I faced in graduate school was really more of an existential crisis than academic rigor. While the academics were challenging, it was easier than figuring out who am I and where do I fit.

Gaining membership into Rebecca's department and program required that she alter her own personal cultural norms and values that resulted in a sense of isolation from her family. According to Tierney (1997), a lack of cultural congruence can result in a process of assimilation and not one of socialization into graduate school. As a White student, Rachel was afforded the opportunity to change herself and/or hide her socioeconomic status as a means of gaining membership into her department and program. However, for students of color this is not always the case. The need to surrender personal culture to embrace departmental and program cultures in an effort to gain membership into a graduate program is not limited to issues related to low income and first generational status and can be much more difficult for students whose skin color is in direct conflict with the culture within the department and program.

As discussed previously, educational institutions maintain structures that do not promote successful completion of students of color. Grounded in White ideology, graduate programs were traditionally reserved for those students that reflected the White, affluent male population of the institutions' founding. As a result, the structures and systems that remain reflect a culture that is predominantly White. Since the students, administration, and faculty remain predominantly White, the culture that represents various departments and programs continues to reflect that of White society, and in many fields, that of affluence and male drive values. It is not surprising that students of color regularly report challenges with cultural congruence within departments and programs. This struggle with cultural congruence is often discussed as a sense of culture shock that resulted from their transition to graduate programs (Tierney, 1997; Turner & Thompson, 1993; Winkle-Wagner, et al., 2010).

Sonia's experience is similar to that of Rachel. Although the culture shock was related to her relocation from an undergraduate institution in the Southwest to a graduate program in the Midwest, her transition from a small private institution to a large public one was the first of many changes, or more accurately, Sonia's realization that graduate schools maintain racial disparity that does not recognize or value the cultural contributions of students of color.

I had gone from a very small private school, which was a very supportive, nurturing environment, very small classes, and more of a familial setting to a Research I institution. That was really difficult for me for the first few years. The new setting was difficult for me.

The larger institutional setting was complicated by the lack of diversity in the city, at the university, and within Sonia's graduate program.

Going from a predominately Hispanic Serving Institution (HSI) to a university and a city with a very small Hispanic population and then to a graduate program that had very few Hispanic students at the graduate and undergraduate level was a difficult transition.

As a neuroscience student, Sonia already faced challenges with gender and race in her academic field, which was further compounded by the lack of diversity within the larger institution and the city. The culture of Sonia's program reflected that of a predominately White institution. It is not surprising that Sonia expressed feelings of being isolated and confused. She did not see herself or her own culture reflected within her graduate program, department, university or city. Furthermore, she did not feel that her culture was valued at any level. This lack of diversity and role modeling made it difficult for Sonia to feel supported at her institution.

Lack of support as a result of a lack of diversity was also experienced by Nathaniel. As an African American male in the clinical psychology department of his East Coast institution, Nathaniel's cultural norms were not always embraced, and the culture of his program kept him from pursuing a research topic that reflected his passion for social justice. He acknowledged that when the cultural discrepancies between his personal culture and that of the department were evident, the faculty members were less supportive.

I felt that some of the professors just didn't know what to do with me when I initially got there. I didn't feel that they were racist necessarily. I felt that they were uncomfortable with the kinds of questions that I was asking. As a result there were times I didn't feel as if I was really being supported by all of the professors in the program.

As a result of his own experiences, Nathaniel offers this recommendation to graduate school programs.

I think graduate schools have to be better about looking at the needs of some of their truly unique students. An African American or Hispanic student coming into a program isn't in the same psychological or emotional head space as a White or Asian students, so I think that programs really have to spend time getting to know their students.

Nathaniel recognized the racial barriers presented within his graduate department and program. He indicated his feelings that racism was not the catalyst for the faculty discomfort with his interests in exploring research grounded in racial issues. However, it was clear that the department and program reflected a predominately White culture that did not accept or promote contributions to the culture that challenged the White structure. While faculty did not state the cause of their discomfort, it is evident that the distance created between Nathaniel and the faculty represented an unwillingness to change the departmental and program culture and embrace that of his own background.

Nathaniel's cautious approach to attributing faculty resistance to racial prejudice is consistent with research conducted by Turner and Thompson (1996), which indicates that graduate students of color regularly discuss inequities between White students and students of color related to funding, professional development opportunities, and faculty interaction time. However, none attributed these inequities to racism. Instead it is attributed to individual faculty interests.

Nathaniel, Rachel, and Sonia's experiences of being isolated, experiencing racial and socioeconomic barriers or "culture shock," and feeling unsupported are consistent with research conducted by Winkle-Wagner, Johnson, Morelon-Quainoo, Santiago (2010). In their research several graduate students of color indicated feeling a sense of 'shock' when transitioning into graduate programs that is seemingly more common when transitioning into predominately White institutions such as in the Midwest. The shock

experienced is attributed to the lack of diversity within the institution and a culture that reflects predominately White norms and values. According to Winkle-Wagner, et al. (2010), culture shock “was a prevalent issue for many of the participants because the lack of diversity led to a feeling of shock that ultimately made the institutional environment feel less supportive” (p. 187). This ‘less than supportive’ environment is described as competitive by the participants in the study presented by Turner & Thompson (1993). The findings of the this study indicate that women of color viewed their departments at a Midwest university as competitive and concur with the Winkle-Wagner, et al. (2010) study in stating that access to faculty and peers of color is limited. Sonia shared a similar perception of her graduate program.

Sonia’s experience of transitioning from a small, private, Hispanic Serving Institution to a large, predominately White, public institution was shocking. She never alludes to experiencing racial barriers while in her graduate program. However, as the only Hispanic female in her program in the Midwest, Sonia’s department and program clearly maintain an environment and culture that largely embraces White students while anticipating students of color as being less than prepared or capable of success. This manifested as a competitive environment that is actively encouraged by the faculty.

The faculty members at the university were different, the students were different, and it was much more competitive. The faculty members were there to make you feel as if you don’t know very much and make you feel, at times, inferior or that you didn’t belong there.

This approach by the faculty within Sonia’s department is not unique. In fact, cloaking racist structures in terms such as “culture shock” and “competitive” has long been an acceptable way to thin out students of color.



Another doctoral student in the Midwest, Annette, attended a prestigious institution in clinical psychology. As the only African American student in her program that maintained an all-White faculty, she was aware of the incongruence between her own personal culture and that of her department. She felt racially isolated from her peers and the faculty within her program, and this isolation was enhanced by the competitive culture that was present in her program. Annette was aware of the racial barriers she faced in her program and the importance of academic success.

I think doctoral programs should promote collegiality among the cohort of students as opposed to competition. It was my experience that the competition came from the top down. Sometimes the professors were the ones to engender that competition with the students as opposed to the students among themselves.

The indication that competition is spawned and encouraged by the faculty within the department or program indicates that it is an acceptable part of the departmental culture. While not a large enough sample to make conclusive remarks, given the consistency of Sonia and Annette's experiences in the Midwest with those of the cited research it is arguable that the culture of the region impacts the culture of the institution and therefore the culture of the department or program. For Sonia and Annette the culture that existed in their graduate programs reflects the history of educational structures that were created to keep out students based on race, gender, and class under the cloak of competition (Tierney, 1997; Tierney & Bensimon, 1996; Turner & Thompson, 1993; Winkle-Wagner, et al., 2010).

Lack of diversity in the areas of race and class impacted Rachel, Sonia, and Annette in their pursuit of the doctorate. All of these students struggled with cultural differences represented in race and class barriers. These barriers could have easily led to

attrition (Austin, 2002; Gardner, 2010; Golde, 1998, Lovitts, 2001; Tierney, 1997; Tinto, 1993; Weidman, et al., 2001; Winkle-Wagner, et al., 2010). However, these students recognized the barriers, adapted to the department and program culture, and navigated the process of completing the doctorate. Their perseverance can be attributed to the students' ability to seek out support and congruence in alternative venues within the institution. According to Winkle-Wagner, et al. (2010), students of color who are limited in their ability to develop strong relationships within their departments often seek outside support for the socialization process. Participants in this study indicated that they sought out peer support, community support, and institutional support that allowed for more interaction with a diverse population not found within the department or program.

One avenue through which participants in this study sought out additional support and connections with other students from similar backgrounds was through graduate school support programs. Annette found that her participation in a fellowship program lead to expanded connections with other low income, first generation, and students of color. She participated in the Spencer Foundation program, which was called the Advanced Opportunity Fellowship at her institution. According to Annette, this fellowship was designed to increase the racial and ethnic diversity of the graduate student population, as well as to support economically disadvantaged and first generation college students.

The Advanced Opportunity Fellowship was similar to the McNair Program. There was a group of people from similar backgrounds who were supportive that I could access. There was a director, and there was an office associated with it, so I had a place to go if I needed something.

In addition to her participation in this fellowship program, Annette also sought out support from other graduate school students of color. During the focus group

discussions, Annette expressed the importance of seeking out support from other African American graduate students within the institution.

Because I attended a highly ranked program in my field and was the only African American student in my department, seeking out other African American students on campus was vital for me. I became part of various graduate student and community groups for support.

Having the opportunity to make connections with doctoral students from similar backgrounds was important for Annette, especially since she did not have access to this type of support structure within her own graduate program. Jason, an African American chemistry student, expressed a similar experience.

Being a student of color in the sciences was challenging for Jason given the lack of diversity among the student population. Having already completed several years in a doctoral program, Jason's first experience as a student of color in a doctoral program resulted in his departure from his program. Upon returning to graduate school, Jason realized that in order to be successful in a doctoral program, he needed to surround himself with students from similar backgrounds. He needed to connect with other students of color that were also pursuing doctoral studies.

When Jason enrolled in his second doctoral program at a new institution, he was able to find a support network of doctoral students of color from across the institution through the Alliance for Graduate Education and the Professoriate (AGEP). This program is also similar to the McNair Program, as it provides doctoral students financial, social, and academic support for the purpose of increasing the number of students of color completing doctoral degrees and pursuing careers in academia in the fields of Science, Technology, Engineering, and Mathematics (STEM).

I joined a lot of graduate student groups to find the support I was looking for. There was support at my institution for minority graduate students that I hadn't seen before through an AGEP program. I joined AGEP the first summer when I went into my program. I had my own funding through the chemistry department and through other research areas, so I didn't need funding from AGEP, but I stayed involved with AGEP throughout my doctoral program. It was an opportunity to interact with a lot of very highly regarded minority students minorities. Having this interaction carried me through my program.

As with Annette, Jason viewed his involvement with AGEP as a way to connect with students from similar backgrounds that was not possible within his own program. Both shared a desire to connect with other students that shared cultural norms and values that were not represented in their graduate programs. Creating safe, comfortable spaces for students of color to freely engage in conversation, enhance and develop individual identity, and celebrate cultural norms and values not reflected in graduate programs and departments is necessary for success in education (Hill-Collins, 1990; Tatum, 1999). Fortunately Annette and Jason were able to find these spaces already in place within their institutions when they were not present in their programs. This was not the case for Ernesto.

As a low income, first generation Hispanic doctoral student in the field of genetics, Ernesto understood the importance of connecting with other students for support. Since he was not able to find the type of support he needed within his graduate program, Ernesto created his own support group for himself and other students of color within the sciences.

When I was at the university, I formed a program called MINDS, Mentoring Inspired Diversity in Science. It was a peer-mentor support group for graduate students and post-doctoral students from similar racial and socioeconomic backgrounds in the sciences. We got together and talked about the graduate programs in the sciences and the problems with being a graduate student and post-doctoral student of color. We gave each other advice on how to get money, where to find money, how to access support from former students, and how to find help with issues that came up.

When a doctoral student's personal culture does not match with that of the program or department, it is important that opportunities exist to address those gaps and enhance the doctoral experience (Hill-Collins, 1990; Tatum, 1999; Winkle-Wagner et al., 2010). For Annette, Jason and Ernesto, these opportunities were found with groups of students from similar backgrounds outside of their programs. For other study participants, this support was provided through individual relationships with others on campus.

Connecting with groups of students was impactful for several study participants when addressing the lack of cultural congruence within their own departments. However, for students such as Tina, connecting with groups of students from similar backgrounds is not always an option. In these instances, study participants indicated a connection with particular individuals on campus that provided similar support on a one-on-one basis.

Tina, a low income, first generation African American female, was also the only student of color enrolled in her program. While she recognizes the support she felt from her cohort peers, she also credits a faculty member within her department as being a main source of support while in her doctoral program.

I had a faculty member that served as a mentor to me. She was not my advisor; she was another faculty member on staff there. She actually sought me out my first year. We were the same ethnicity, and my program was not diverse at all. She was the only minority faculty in the department and one of only two women. She had just been hired on the semester before I got there. It was her goal to make a connection with other women and minority student that joined the program. She sought me out and started a mentoring relationship with me. She helped me through the program.

Tina did not maintain a close relationship with her cohort peers. As with other study participants, she indicated that her doctoral experience was an isolated one. Tina was able to connect with an individual that understood the challenges of navigating a program culture that was not inclusive of her own norms and values. It could be suggested that the relationship between Tina and her faculty mentor was mutually beneficial. Faculty new to academic departments and programs are navigating professional socialization that includes similar challenges regarding lack of diversity that is experienced by doctoral students (Austin, 2002; Gardner, 2010; Golde, 1998; Golde & Dore, 2001; Lovitts, 1996; Lovitts, 2001; Tierney, 1997; Tierney & Bensimon, 1996; Tinto, 1993; Weidman, et al., 2001; Turner & Thompson, 1993). Seeking out other faculty of color and supporting students of color within the institution, department, and program can create a network that provides an opportunity to connect with their own culture that may not be represented otherwise. By connecting with Tina, the mentor was able to support Tina's academic pursuits while finding comfort in sharing cultural similarities.

This practice of developing relationships with faculty or other institutional representatives outside of the official program advisor was common among the participants in this study. The relationship that Kendall fostered with her boss while in

graduate school resulted in an informed confidant that could provide much needed advice on how to navigate the culture within her program. While working in an office on campus, Kendall discovered that her boss was highly connected throughout the institution and very knowledgeable regarding the culture of her graduate program. Their close working relationship created space for her to seek advice regarding challenges with her faculty advisor. When Kendall confided in her boss about wanting to change advisors near the end of her dissertation process, he shared insight to program politics that ultimately supported her successful completion in a timely manner.

I pulled my boss aside and talked to him. I told him that I couldn't work like this anymore and that I was thinking about switching advisors. My boss had been the director of one of the programs at the institution for a very long time and knew the people very well. He told me that my advisor needed me to graduate every bit as much as I needed him to graduate. That kind of shifted the power a little bit.

Kendall continued to describe how her connections with her boss gave her the insight necessary to address the issues with her advisor in a way that would yield the results she was looking for. Without her boss's input, Kendall is confident that she would not have finished in the timeframe she did. Kendall's boss had a strong understanding of the departmental and program culture and was able to give her the direction necessary to successfully navigate the final stages of her journey. For first generation students, this access to the ins and outs of the culture is key to overall success (Gardner, 2010; Golde, 1998; Lovitts, 2001; Tierney, 1997; Tinto, 1993). Kendall recognized that her ability to approach her boss with these issues was the result of his status as being removed from her program. Developing this relationship outside of the departmental culture with someone who understood the department culture allowed Kendall access to the information and advice she needed to be successful. Additionally, garnering support outside her

department allowed Kendall to create a safe space to discuss sensitive issues with her boss without the fear of retaliation or negative consequence. Accessing someone knowledgeable outside the watchful eyes of the department was also discussed by Hana.

During her first doctoral program, Hana experienced issues of trust in her relationship with her doctoral advisor. Throughout the duration of her enrollment in her initial program, Hana felt that her advisor was deceptive in her interactions and retaliatory in her actions. This initial experience with graduate school advisement left Hana cautious and reserved in her relationship with her advisor in her second doctoral program. It also interrupted her ability to embrace the culture of the department that meant letting down her guard, which she was not willing, and to some degree, able to do.

As a result of her first doctoral advisor relationship, Hana found herself seeking support outside of the departmental structure during her second doctoral program. Similar to Kendall, Hana found respite in her relationship with her on campus boss and relied on this individual for on-going support in her doctoral program.

I definitely leaned on my supervisor who was not my advisor. She was not a faculty member either, but she had several grants with the university and the State Department of Health Services. I leaned on my supervisor at work more than anybody else. She came from that perspective of having been a student in my same program. She was also a person who actually finished the program and was still somewhat connected to the department and the faculty members, so she knew the faculty, but she also knew the students and she knew what it was like to be a student. So on days or in moments when I was questioning why I was still in school, whether or not I wanted to finish or drop out of school, she was always the first person that I would call. I would basically say that she would talk me off the ledge some days.

The lack of trust that Hana experienced in her initial advisor relationship led to a need to distance herself from her program during her second doctoral program. Seeking support through her boss, a former student and someone still connected to the program,



allowed Hana to navigate the program culture without the fear of having her trust violated. Hana's boss served was able to serve as a link to the department that allowed Hana to be successful.

The experiences of maintaining individual relationships outside of the department, program, or advising role were beneficial to these study participants. According to Winkle-Wagner, et al. (2010), it is critical for students in graduate programs that lack diversity to have access to supportive faculty, administrators, and professionals within the institution. Being able to connect with individuals that understand the culture of a department and program and can provide guidance and support in navigating the membership process was paramount to Tina, Kendall, and Hana's overall success.

Participants in this study indicated that relationships with peers, faculty, and other individuals helped support their process of gaining membership into the department and program. Lack of racial, economic, and educational diversity resulted in culture incongruence that led study participants to seek out alternate relationships. However, as study participants continued to proceed through the graduate school socialization process, there was a more focused relationship that needed to be developed in order to fully transform from student to professional as dictated by Stage Four (Research/Professional Development). This relationship was with their faculty advisor.

### *Advisor Relationship*

Stage Four of the graduate school socialization process, Research/Professional Development, centers on the transition of a doctoral student from being a student to becoming a professional in the field (Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001),

a transition that is highly dependent on the mentorship and guidance of the faculty advisor. The relationship between a doctoral student and their advisor has been identified as being a strong indicator of the completion of the Ph.D. (Ferreira, 2000; Golde, 2001; Golde, 2005; Lovitts, 1996, Lovitts, 2001; Tinto, 1993; Zhao, Golde, McCormick, 2007). No student can complete the doctoral process without participating in an advisor/advisee relationship. All dissertations require approval of the advisor along with the dissertation committee before a degree can be earned. Advisors serve as the liaison between the student and the dissertation committee, as well as the student and a profession in academia (Austin, 2002; Gardner, 2010; Golde, 1998; Lovitts, 2001; Tierney, 1997; Tierney& Benismon, 1996; Tinto, 1993; Weidman, et al., 2001). As such, doctoral advisors serve as the gatekeeper for the student from the completion of the doctorate through his/her entry into the faculty ranks. Success in the final stage of the socialization process and the continuation of the process into the profession is highly depended on this relationship. It also is dependent on the degree to which the advisor provides guidance through the research process and exposure to the academic field through professional development. In short, this relationship can make or break the chances for the student to complete their degree and gain entry into the academic profession.

In its best form, the advisor/advisee relationship lasts a lifetime and propels the student into professional stardom. In its weakest form, this relationship prevents the student from ever reaching their fullest potential. As presented by Zhao, Golde, and McCormick (2007), “The advising relationship not only affects the quality of the doctoral experience, there are also material implications...the impact of the advising relationship can last far beyond the years of doctoral study” (p. 265). Research demonstrates that

doctoral student attrition is directly attributed to failed advisor/advisee relationships (Austin, 2002; Ferreira, 2000; Gardner, 2010; Golde, 1998; Golde, 2001; Golde, 2005; Lovitts, 2001; Tierney, 1997; Tierney & Benismon, 1996; Tinto, 1993; Weidman, et al., 2001; Zhao, et al., 2007). Whether due to unmatched expectations, personal conflict, cultural incongruence, or lack of appropriate interaction time, doctoral faculty and students often struggle to find balance with the advisor/advisee relationship. In this area of graduate school socialization, great relationships generally yield great success in relation to degree completion and placement in the profession (Austin, 2002; Gardner, 2010; Golde, 1998; Golde, 2001; Golde, 2005; Weidman, et al., 2001).

As indicated in Chapter IV, the McNair Program was viewed as impacting Stage Four (Research/Professional Development) for the study participants. More specifically, the program provided the opportunity for participants to learn skills sets necessary to perform high quality research and engage in professional development opportunities such as research presentations and professional publications. However, the program was unable to predict or completely prepare students for interactions with their individual faculty advisors. The program was limited to providing guidance in selecting a faculty advisor, teaching skills sets necessary to interact with faculty advisors, and providing opportunities to work with faculty mentors. Although this exposure prior to enrollment in graduate school was impactful to the study participants, it does not provide for the specific situations that may surface.

For participants in this study, the process of selecting an advisor or a dissertation chair varied by individual and academic field. While most were provided the opportunity to select their own advisor, others were not given a voice in the decision. They were

simply assigned a faculty advisor. For those that were afforded the opportunity to choose their faculty advisor, they implemented a strategic process to ensure the same type of ‘fit’ that was outlined as crucial in the graduate program selection process (Golde, 1998; Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001). Study participants such as Nathaniel described a process of selecting an advisor that included researching academic interests of the program faculty, engaging in conversations with the faculty to determine personal comfort, and enrolling in courses with the potential advisor.

I talked with my advisor a lot. I researched him and the work that he had done. I thought the research he was doing was interesting and it was in line with what I wanted to do. I started our relationship by e-mailing him, and he would e-mail me back. I asked him questions about general things at first and then started to talk with him about his work and research that I had done. We had a really good relationship even before I came to campus.

Through the McNair Program, Nathaniel was able to develop a strong foundation with his advisor prior to entering his doctoral program. Ideally, this approach would yield a positive, strong relationship between an advisor and the student. However, as Lovitts (2001) indicates, graduate programs, including faculty, do not always represent themselves in an accurate manner to prospective students. On the surface Nathaniel described his relationship with his advisor as being supportive, friendly, and encouraging. But when he spoke about challenges in his doctoral program, his advisor was the focus of the discussion.

A small part of why I wanted to get out of graduate school so quickly is that I really hated that guy some months. Not days, months. I despised him sometimes. If he sent revisions to me at 9 a.m. on Tuesday, he would expect corrections before midnight. He wasn’t asking me if I had to work or if I had other things to do. He believed that since he put it in my hands that day I should have it back to him that same day.

Nathaniel recognized the friction within his relationship with his advisor. He credited his advisor's actions with the improvement of his own time management skills and acknowledged that his advisor did validate his work. "He could be a bit of a dictator, but he was also the first in line to celebrate my work when it was great." Nathaniel's relationship with his advisor was a mixture of hard-nose approach and praise, and it generally lacked understanding of or concern for Nathaniel's personal life and responsibilities. This relationship was not a source of personal support for program completion but one that focused solely on the academic output that was expected of Nathaniel as a doctoral student. This lack of personal support within the advisor/advisee relationship was discussed by several members of this study, including Hana and Jason.

Poor advisor/advisee relationships led to attrition for Hana and Jason in their initial programs. Both participants indicated that the lack of personal interest and support by their advisors ultimately resulted in program departure. Lack of personal connection with the advisor is one of the most common causes of attrition at the doctoral level (Austin, 2002; Ferreira, 2000; Gardner, 2010; Golde, 1998; Golde, 2001; Golde, 2005; Lovitts, 2001; Tinto, 1993; Tierney, 1997; Tierney & Benismon, 1996; Weidman, et al., 2001; Zhao, et al., 2007). But these conflicts and experiences are not always realized at the beginning of the relationship. This was the case for both Hana and Jason who had invested several years in their programs before making the decision to leave based on poor advisor/advisee relationships.

Hana selected her advisor based on similar research interests and described her relationship with her advisor as being very friendly - kind, supportive, and available. It wasn't until Hana began to seek out mentorship with another faculty member with similar

research interests that the relationship began to crumble. Each year in her program Hana received a progress letter from faculty within her department. Prior to this occasion, those letters were always very supportive and instructive regarding what she needed to do or continue to do to make progress in her program. This was not the case with the letter she received in her final semester in the program, the letter that ultimately led to her decision to leave.

Each year we got a review. It generally reflected publications, conference attendance, and things like teaching reports. In this particular year none of my accomplishments were mentioned in my review. Instead I felt it was a personal attack. It said very personal things like I lacked self-confidence and I didn't finish what I start. The purpose of that letter was to review our teaching, our research, our publications, and our conference appearances, but yet my letter didn't talk about any of those things. It was really hurtful.

The impact of this letter was hit hard when she learned that it was largely written by her own advisor. Although a faculty committee was supposed to draft the letter collectively, Hana believed that her advisor was the one that crafted the document.

I know that particular year the letter came from my advisor. I received that letter in May, and I left my program the following December. That letter pretty much solidified my decision to leave. I didn't feel comfortable asking my advisor questions anymore. I learned a lot about the type of advisor that I would not like to become if I'm ever working in academia, if I ever have the chance to mentor students.

This letter represented a violation of trust on behalf of Hana's advisor. She felt that her advisor should be the faculty member that supported her in situations with other faculty. Hana expressed disappointment that her advisor did not talk directly to her about her concerns, and she felt betrayed that her advisor chose to publically degrade her. Hana felt that her advisor failed her, which is something that Jason felt as well.

Jason also maintained a positive relationship with his advisor in the initial semesters of his program. Through extensive research prior to applying to his graduate

program, Jason had identified his advisor's interests and determined that he shared common ground. He also took the initiative to contact his advisor prior to arriving on campus to foster a positive relationship, which appeared to be supportive and encouraging until Jason began to branch out into his own research work. The relationship with his advisor began to change until Jason felt no other choice but to leave his program.

My research advisor loved the work I was doing, or at least I thought he did. But as I became more independent, trying to solve problems on my own, our relationship went south pretty quickly. After about six months my advisor didn't think that I was making suitable progress. He had these research deadlines that he expected to be met. The deadlines were difficult to meet from my perspective as the person doing the work. I couldn't get them done. I ended up being taken off research dollars and was asked to start doing a teaching assistantship. I started to think that I wasn't up to snuff in his eyes. My advisor was kind of reevaluating me and tried to make me think that I was a borderline student. I was being asked to leave his group. I had no other choice but to do the best I could to change my advisor's opinion of me or find something else. Ultimately, it got to the point that I didn't think I could make it. For my own sanity, it was better to be done with it.

Hana and Jason experienced the unequal balance of power within the advisor/advisee relationship. Having entered the relationship with the expectations of gaining support, knowledge, and mentorship from their advisor, they were faced with disinterest and betrayal that ultimately led to their departure. Unfortunately, this experience is not unique. What is most concerning about this point of departure for doctoral students is that it often occurs late in the doctoral program.

For most doctoral students, the process of regularly interacting with faculty advisors does not occur until Stage Four (Research/Professional Development), which is after comprehensive exams. While doctoral students do take courses with faculty in their programs, multiple demands on time restrict access to faculty on a regular basis (Austin, 2002; Gardner, 2010; Golde, 1998; Lovitts, 2001; Tierney, 1997; Tierney & Benismon,

1996; Turner & Thompson, 1993). This lack of intimate contact prior to Stage Four increases the opportunity of ill-fitting advisor/advisee relationships to be discovered later in the program cycle. Like all relationships, the advisor/advisee relationship takes time to foster and flush out incompatibilities in personality. Since this time is not always available, most doctoral students select advisors based on research interests as demonstrated by Hana, Jason, and Nathaniel.

Fortunately, Hana and Jason capitalized on the experiences gained through their first attempt at doctoral study and subsequently enrolled in and completed doctoral programs. Both utilized different approaches with advisor selection the second time that included interviewing potential advisors, seeking advice from seasoned graduate students, and engaging in regular conversations about topics outside research interests.

Hana focused her advisor search in her second program on those areas that she felt caused challenges with her first advisor. Finding an advisor that she could trust was important as well as finding one that was open to her seeking outside support if needed.

My new advisor seemed very open to my areas of interest and she was very honest. She would say things like ‘if you are interested in something and I cannot help you, I support you finding somebody else that can or finding someone that is an expert in that field.’ She knew that no one can be an expert in everything. Just knowing that she was open to the idea of me working with other people if I needed to was important to me.

In his second search, Jason realized that he needed to find an advisor that saw him as a person, not just a worker in the research lab.

I was interested in working for somebody that had a strong research record and that could be a mentor to me. I needed somebody that I could approach collegially and feel like they were hearing my side of things. I needed someone that valued my opinion as a researcher and a scientist. I also felt like I needed to know my advisor would see me as a person, he didn’t have to be a friend, but I could be considered a person.



As with Nathaniel, finding 'fit' with an advisor required attrition for Hana and Jason to truly understand what they needed in an advisor. While all three of these students approached the advisor selection process similar to that of selecting their graduate program, only Nathaniel was successful. The challenges faced with his advisor resulted in an expedited timeline for completion as a means of ending the relationship.

Hana and Jason's first advisor relationship failed to meet their expectations and left them stranded in their programs without any perceived options. Often this type of situation is the result of mismatched expectations between advisors and advisees as well as the lack of time available to truly mentor doctoral students (Austin, 2002; Ferreira, 2000; Golde, 1998; Lovitts, 2001; Zhao, et al., 2007). Due to demands placed on faculty, they do not always have the time to foster true mentor relationships with their advisees. Advisors maintain expectations of independence that are not always realistic. Conversely, students' expectations of intensive support from the faculty advisor in completing the doctorate and preparing for the professoriate are not always possible. When the student does not meet the expectations of the faculty advisor, the result can be a perception of incompetence (Austin, 2002; Tierney, 1997; Turner & Thompson, 1993). Similarly, the inability of the faculty advisor to meet the expectation of the student can result in a sense of disinterest or being unsupportive. In both instances, the result is generally one of student departure and is attributed to lack of fit versus the failure to establish mutual expectations for completion and transition into the professoriate.

For the participants in this study, the ability to identify advisors that provided the type of support necessary for successful completion was vital to overall success. Hana and Jason's experience demonstrated the need to thoroughly examine options for advisor

relationships to meet individual needs of the student. Additionally, their experiences show how failed relationships give student's little opportunity to recover due to the imbalance of power within the relationship.

When advisee/advisor relationships are not grounded in mutual expectations, the results can be devastating for the student. This is especially evident in departments and programs that lack diversity. Research indicates that doctoral students of color report having fewer opportunities to engage in professional development and receive guidance from their faculty advisors than their White peers (Austin, 2002; Tierney, 1997; Tierney & Benismon, 1996; Turner & Thompson, 1993; Winkle-Wagner, et al., 2010). This is not the result of overt racism but rather a traditional structure that defines promise, ability, and dedication in terms established by White culture - the same culture that was created as a White supremacist structure designed to educate the White population while explicitly denying educational opportunities for people of color. Since massive overhauls of the education system have not occurred, it is unreasonable to believe that any superficial changes have resulted in shifts related to departmental and program cultures. Therefore, when the advisee/advisor relationship occurs within a culture that does not reflect the student's norms and values, it is difficult to maintain balance in the relationship.

For low income, first generation, and students of color, the power differential that already exists within educational structures is greatly intensified. This differential is heightened in advisor/advisee relationships that do not reflect mutual respect, consideration, and understanding of these cultural differences and promote racial and class barriers. Fortunately, all of the study participants were able to ultimately navigate

advisor/advisee relationships with outside support for successful completion of the doctorate.

### *Summary*

Analysis presented in Chapter IV demonstrates how the stages of the graduate school socialization process 1) Pre-entry, 2) Entry, 3) Knowledge Attainment, and 4) Research/Professional Development can be impacted by external programming such as the McNair Program. However, those components of the process that include gaining membership into departments and programs and navigating advisor/advisee relationships are difficult to affect. These elements rely on personal experience and vary greatly from program to program. There is simply no way to anticipate situations that doctoral students may encounter during their journey.

The purpose of the McNair Scholars Program is to increase the diversity of faculty in relation to educational, socioeconomic, and racial status. This requires continuous focus, support, and understanding regarding the barriers that individuals from these backgrounds are likely to face while navigating the doctorate. While the McNair Program provides a variety of tools and exposes students to similar relationships in an effort to prepare students for potential challenges, there is limited opportunity to truly impact the racist and classist structures that continue to thrive. As a result, the need for the program continues and the race and class struggles of the participants in the program continue to occur.

One of the greatest challenges that low income, first generation, and students of color face in the transition into doctoral programs is the lack of diversity among faculty,

peers, and cultural perspectives (Tierney, 1997; Turner & Thompson, 1993; Winkle-Wagner, et al., 2010). The process of gaining membership into a department or program includes the ability of doctoral students to embrace and identify with the culture (Gardner, 2010; Golde, 1998; Lovitts, 2001; Tierney, 1997; Tinto, 1993; Turner & Thompson, 1993; Weidman, et al., 2001; Winkle-Wagner, et al., 2010).

Instances of culture shock were described by several participants in this study. Rachel recalled feeling disconnected from her program peers as a result of economic differences, Annette recognized challenges with being the only African American student in her program, and Sonia experienced multiple layers of shock when transitioning from a small Hispanic Serving Institution to a large Midwestern university with very limited diversity. All of these participants felt isolated in their transitions and struggled to find their place within their department and program cultures. More specifically, they all felt the racial and socioeconomic barriers that exist in the education system.

When cultural incongruence occurred with study participants or they were faced with race or class barriers, they actively sought out alternative support structures that included other students from similar backgrounds that validated their own personal cultures. This practice was consistent with research conducted by Winkle-Wagner, et al. (2010) and Turner & Thompson (1993). In this study several students such as Jason and Annette gained support through participation in institutional programming designed to support students of color pursuing doctoral study. In lieu of an existing program, Ernesto formed his own support group MINDS that connected students of color in science fields. These groups provided safe, comfortable spaces for the study participants to celebrate their personal cultures, discuss issues related to being a student of color, and connect with

other students from similar backgrounds. This type of support network is crucial to the success of students when they not represented in the dominate culture of the program or department (Hill-Collins, 1990; Tatum, 1999; Tierney, 1997; Tierney & Benismon, 1996; Tinto, 1993; Winkle-Wagner, et al., 2010).

Those students who were unable to connect to a group network sought out individuals on campus that understood the culture within their departments. These individualized relationships served a similar purpose as the group networks and provided space to openly discuss struggles within the program structure without fear of retaliation. This safe space was created with Kendall and Hana's bosses through employment on campus. These individuals represented knowledgeable, trustworthy resources for both participants that could provide insight to navigating the departmental culture more smoothly. Tina connected with a junior faculty that was experiencing a similar socialization process as the only African American female faculty member within the program.

The ability for study participants to seek support outside their departments and programs for the purpose of navigating the existing culture and preserving their own was vital to overall success. This is particularly significant given the theories of graduate school socialization that indicate that attrition is eminent unless doctoral students are able to gain membership into the department or program (Austin, 2002 Gardner, 2010; Golde, 1998; Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001). These students clearly identified significant issues with relating to department and program culture. However, they were able to gain membership within the department while maintaining their own cultural identities that were not recognized or valued within the department or program

culture. Based on their background as low income, first generation, and students of color, they did not ‘fit’ into the mold created by the White dominated department or program, yet they were able to succeed in spite of their many challenges.

As study participants moved into the final stage (Research/Professional Development) of the graduate school socialization process, they engaged in the period of moving through the completion of the doctorate and gaining status as a professional in the field (Austin, 2002; Gardner, 2010; Golde, 1998; Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001). This juncture is heavily reliant on a positive advisor/advisee relationship. Study participants concurred that the advisor/advisee relationship presents challenges even under the best circumstances. The balance of power and control in the relationship lies with the advisor and as a result there is little that doctoral students can do if there are disagreements, personality conflicts, or struggles with race and class.

As seen with Hana and Jason, advisors that are not clear or realistic with their expectations often develop perceptions of students as being unfit for doctoral level work. Within the traditional doctoral structure, this “weeding out” process is an acceptable way of determining which students maintain the academic rigor to “make it” in doctoral education. It is this same mindset that has led to the acceptance of high attrition rates as a badge of honor (Breneman, 1977, Smallwood, 2004). The unspoken reality is that interactions between students and advisors reflect the often racist and classist culture of the department that does not generally value anything outside of the White norms and values on which it was established. As a result, students of color have regularly identified a lack of strong advisor interaction and professional opportunities as challenges in graduate school. Furthermore, research has demonstrated a perception of unbalanced

opportunity for White students (Turner & Thompson, 1993; Winkle-Wagner, et al., 2010).

In the case of Hana and Jason, the advisors clearly viewed them as disposable and unable to complete the program. Neither were appropriately mentored or supported by their advisor. As a result neither student felt welcome in the program or able to continue pursuing their degree at their institutions. Fortunately they sought out other programs at new locations. Whether the result of a lack of advisor compatibility, departmental culture, or institutional racism or classism, these students were determined to be a ‘poor fit’ for their initial programs after several years of enrollment. The cost of this delayed recognition of fit was great to the institution in relation to lost financial investments and to the student in lost time and confidence. This unnecessary cost leads to the realization that departments and programs share in the responsibility to change the culture to meet the changing student needs (Tierney, 1997).

The education system maintains a long, rich history of racism, sexism, and classism that is reflected in the attrition and completion rates of low income, first generation, and students of color at the doctoral level (Austin, 2002; Tierney, 1997; Tinto, 1993). For most institutions, doctoral level cultures continue to reflect the ideology of an affluent White society due in part to the process of socializing doctoral students into graduate school. According to prevalent theories of graduate school socialization (Lovitts, 2001; Tinto, 1993; Weidman, et al., 2001), successful completion of the doctorate relies on a student’s ability to effectively gain membership into the departmental or program culture. It is suggested that when department and program cultures largely represents affluent White culture, the expectation is one of assimilation

and not socialization (Tierney, 1997). Low income, first generation, and students of color cannot gain entry without sacrificing their own cultural beliefs or at the very least, appearing to. They are forced to seek out alternative venues to embrace their own cultures and celebrate them with others from similar backgrounds.

Since the process of socialization into graduate school could be viewed as one of assimilation, there is little indication of a true desire to alter departmental cultures and embrace cultures of the students entering the program. Therefore, any change identified by the department and program is superficial and does not impact the exclusive nature of the environment.

As indicated in Chapter IV, the process of socialization into graduate school is largely impactful through the implementation of external program services such as those provided through the McNair Program. This ability to impact several stages in the process (Stage One - Pre-entry, Stage Two - Entry, and Stage Four - Research/Professional Development) challenges the belief that the process of socialization is a linear one that coincides with specific timelines determined through the doctoral cycle. It also challenges the basic understanding of the process being one of socialization and not assimilation. Since the McNair Program can impact the majority of elements within the graduate school socialization process, it is arguable that those remaining elements are uncontrollable due to long-standing traditions related to access. By removing the controllable elements from the process through participation in the McNair Program, study participants were able to focus time and attention on navigating the more challenging elements of department and program culture and advisor



relationships. Even in those instances where students were unsuccessful in gaining membership, they altered their approach to allow for eventual completion of the Ph.D.

As with data presented in Chapter IV, this chapter suggests that the graduate school socialization process is not a linear process (Gardner, 2010; Gardner & Mendoza, 2010; Weidman, et al., 2001;) but one that can be largely impacted prior to enrollment in doctoral programs and reduced to a focus on gaining membership into the department or program and preparation for the profession through research and professional development. While challenging, as indicated by study participants, gaining membership can be accomplished by establishing outside support networks that help maintain personal culture. Some of this outside support can be garnered through the McNair Program, as was the case with Ernesto, or through similar programming offered through the institution. Efforts to prepare for the profession can be strengthened through a more intensive advisor selection process and clear communication regarding shared expectations.

While the theories of graduate school socialization are inclusive of all of the transitional points within the doctoral cycle, little consideration is given to those students that are able to exit and re-enter the process. The flat, linear structure of the process does not account for the impact demonstrated through the McNair Program or the struggles of navigating elements such as gaining membership into departments. Instead, it is suggested that a multi-layered model be considered that allows for re-engagement by the student at any point in the socialization process and provides opportunities to accelerate the process through skill development and exposure to real life experiences. The model reflects the need to stabilize the acculturation process through the development of cultural

support networks and affirmation of the commitment by the doctoral student and the McNair Scholars Program to the achievement of the Ph.D. This proposed model will be further discussed and illustrated in Chapter VI.

## Chapter VI Conclusion and Implications

This dissertation examined the factors contributing to persistence and completion of doctoral programs by McNair scholars. More specifically, the objective of this study was to describe the participants' experiences during their pursuit of the doctorate and identify self-reported influences, motivations, and contributing factors that resulted in the completion of the Ph.D. Theories of the graduate school socialization process as presented by Lovitts (2001), Tinto (1993), and Weidman, et al. (2001) were utilized as a framework to explore 1) contributing factors for persistence and completion of the doctorate by McNair scholars, 2) impact of McNair Program services on completion of the doctoral degree, and 3) impact of the institutional structure of doctoral programs on the success of low income, first generation, and underrepresented students.

The doctoral completion among all students is staggeringly low. The Doctoral Completion Project (2008) indicates that students complete doctoral programs at a rate of 54% over a ten-year period. Attrition and completion is more concerning when discussing low income, first generation, and students of color. Rates among these populations are reflected at levels that are significantly lower than their White, affluent peers (Chen, 2005; Choy, 2001; Engle & Tinto, 2008; National Center for Educational Statistics, 2009; Nunez & Cuccaro-Alamin, 1998; Zwick, 1991;). These low levels are not simply an indication of the academic rigor of programs and are no longer viewed as an indication of institutional or program prestige. Elevated attrition rates come at a high cost for stakeholders at every level. For the institution, the cost is that of a lost return on the investment made through recruitment, funding, and resources for the scholars. Students pay the cost of lost time and potential to excel in their field, as well as an

emotional cost that is realized as a result of attrition. The highest cost is also felt by society that loses homegrown talent in the area of research and potential diversification of academia and other high-level research professions that continue to struggle with issues of diversification (Astin, 1999; Lovitts, 1996; Nelson & Lovitts, 2001; Tinto, 1993; Smallwood, 2004). This widespread cost has increased the need and interest for investigation.

Research in the field of doctoral persistence and completion has indicated that success in doctoral study relies heavily on the students' ability to socialize into their graduate department and program (Austin, 2002; Gardner, 2007; Golde, 1998; Lovitts, 2001; Tierney, 1997; Tinto, 1993; Turner & Thompson, 1993; Weidman, et al., 2001; Winkle-Wagner, et al., 2010). As a result, several theories of graduate school socialization have emerged that attempt to explain the process through which graduate students gain entry and membership into doctoral programs, attain the knowledge and training necessary to demonstrate academic promise, and transition into the profession through independent research and professional development. Some of the most prevalent theories of graduate school socialization include those by Lovitts (2001), Tinto (1993), and Weidman, et al. (2001). While each of these theories has unique characteristics, they can be generalized to include four major stages.

Table 8

*Degrees of Impact by the McNair Program*

<i>Stage</i>	Pre-Entry	Entry	Knowledge Attainment	Research/ Professional Development
<i>Timeline</i>	Prior to Enrollment	1 <sup>st</sup> Year	2 <sup>nd</sup> Year through Candidacy	Candidacy through Completion of Dissertation
<i>Description</i>	<p>Exploration of graduate schools</p> <p>Recruitment to graduate programs including campus visits, faculty interactions, funding offers</p> <p>Selection and admissions process</p>	<p>Gaining membership into departments and programs academically and socially</p> <p>Moving from outsider to insider status</p> <p>Commitment to graduate program and profession</p>	<p>Completion of coursework</p> <p>Demonstration of academic competence</p>	<p>Transition from student to professional</p> <p>Independent research</p> <p>Focused relationship with faculty advisor</p>

As displayed in Table 8, the four stages coincide with distinct time periods within the doctoral study cycle. Theories presented by Lovitts (2001) and Tinto (1993) present absolute timelines for each stage of the socialization process that provides distinct transition points. While Weidman, et al. (2001) presented a theory that reflects more overlap and flexibility with transition timing, there is agreement that the route begins with the selection process and ends with the completion of the dissertation. There is also consensus that the majority of the socialization process occurs within the time that the student is enrolled in the doctoral program.

Utilizing theories of graduate school socialization, researchers have also identified several components for each stage that, if focused on, can increase success at the doctoral level. These components present opportunities for intervention that can be targeted in an effort to improve persistence and completion rates for doctoral students (Astin, 1999; Bieber & Worley, 2006; Breneman, 1977; Golde & Dore, 2001; Grimmett, et al., 1998; Lovitts, 1996; Lovitts, 2001; Nelson & Lovitts, 2001; Parker, 2003; Perna, 2004; Tierney, 1997; Tinto, 1993; Vaquera, 2004; Vaquera, 2008; Zwick, 1991). The components include:

- 1) Pre-enrollment preparation,
- 2) Funding,
- 3) Relationship building,
- 4) Departmental environment,
- 5) Process and procedure (proposal, dissertation defense, committee structure, exams, etc.), and
- 6) Professional development.

The table below outlines the correlation between the stages of graduate school socialization and these components. Please note the process and procedure component can be included in either Stage Two or Stage Three.

Table 9

*Stages of Graduate School Socialization and Corresponding Components*

Stage #1 Pre-Entry	Stage #2 Entry Stage	Stage #3 Knowledge Attainment	Stage #4 Research/Professional Development
Pre-enrollment preparation	Relationship Building	Process and Procedure	Professional Development
Funding	Departmental Environment		
	Process and Procedure		

In an effort to address the attrition and completion rates of doctoral students and encourage more students to pursue doctoral study, external programming began to surface. One such program is the Ronald E. McNair Postbaccalaureate Achievement Program. Known as the McNair Scholars Program or simply the McNair Program, this initiative began in 1980s to support undergraduate low income, first generation, and underrepresented students prepare for the pursuit of doctoral education and careers as faculty in higher education. The overall intent of the program is to increase diversity among faculty within higher education.

The McNair Program offers a variety of services and activities that align with the components and stages outlined above. These services include:

- 1) Research Opportunities under the supervision of a faculty mentor;
- 2) Doctoral Preparation Seminars that provide participants the skill sets necessary to complete a research proposal, attend dissertation defense meetings, prepare poster presentations, prepare scholarly publication, etc.;

- 3) Internships with faculty mentors to continue high quality research in an environment that is similar to that found at the graduate level;
- 4) Securing Admissions and Financial Aid for graduate programs through campus visits and other selection activities;
- 5) Mentoring from a faculty member in the field of interest;
- 6) Academic Counseling that supports the progression of the participant through the completion of the undergraduate degree; and
- 7) Tutoring to support the academic needs of the participants while in undergraduate studies.

The table below outlines each component of intervention discussed above and the alignment of the McNair Program service to these components.



Table 10

*Stages of Graduate School Socialization, Components, and McNair Services*

STAGE	COMPONENT		
Stage#1 Pre-Entry	<u>Pre-Enrollment Preparation</u> Research Opportunities Doctoral Preparation Seminars Tutoring Academic Counseling Securing Admissions and Financial Aid	<u>Funding</u> Internships Securing Admissions and Financial Aid	
Stage#2 Entry	<u>Relationship Building</u> Research Opportunities Mentoring Internships	<u>Department Environment</u> Research Opportunities Mentoring Internships	<u>Process and Procedure</u> Research Opportunities Doctoral Preparation Seminars
Stage#3 Knowledge Attainment	<u>Process and Procedure</u> Research Opportunities Doctoral Preparation Seminars		
Stage#4 Research/Professional Development	<u>Professional Development</u> Research Opportunities Doctoral Preparation Seminars Internships		

The result of the McNair Program providing services and activities designed to support the preparation for, enrollment in, and completion of the doctorate has been mixed. While McNair participants enroll in graduate school at a rate much higher than their peers, they fall victim to attrition more often and complete at rates much lower than the general doctoral population (Seburn, et al., 2005). Similar to other studies related to doctoral persistence and completion, reasons for McNair scholar attrition have also been explored. However, qualitative research in the area of McNair scholar completion at the doctoral level is extremely limited. By using the existing structure of the McNair Scholars Program, it is possible to explore the persistence and completion of low income, first generation, and/or underrepresented doctoral students that have received similar levels of preparation training for graduate school. Moreover, exploring the experiences of McNair scholars that share similar backgrounds and similar preparation experiences for doctoral student that have all successfully completed their doctoral degrees allows inquiry to factors that contributed to overall success.

Utilizing prevalent theories of graduate school socialization as a framework, it is possible to offer insight to the impact of external programming on the socialization process and intervention strategies that can be implemented to support overall success. Additionally, understanding the motivations of doctoral students and factors contributing to the successful completion can inform graduate programs and offer assistance to institutions, faculty, and administrators in ways to support students more effectively.

Given the high cost of doctoral attrition among McNair scholars to the federal government, the student, and the institution, as well as the recognized need to diversify faculty ranks nationally, there is a need to maximize the potential success in doctoral study for low income, first generation, and students of color. This study is the first step

toward protecting the investment being made in participants of the McNair Program.

This study included nine individuals that participated in the McNair Scholars Program in their undergraduate studies. Data was collected through two interviews, a virtual focus group, and document review from the participants McNair Scholars Program. Three research questions were presented in an effort to increase the understanding of the impact of the McNair Scholars Program and other factors on doctoral completion, as well as the perceived impact of McNair Program services on completion and the barriers faced in doctoral programs that presented challenges in completing the Ph.D. This chapter summarizes the findings of these questions as reflected in Chapter IV and Chapter V. These findings are explored in relation to current literature in the field of doctoral persistence and completion. Recommendations for the McNair Scholars Program and doctoral programs are discussed, as well as limitations of the study and future research.

### *Findings*

The study findings are divided into two sections representing Chapter IV and Chapter V including 1) Impact of the McNair Program and 2) Departmental Culture and Advisor Relationships. Each section is presented below and includes further discussion.

#### *Impact of the McNair Program*

Chapter IV explores the research question: How did program services impact the success of the scholars in their progression through the doctoral process? To answer this question more effectively, the McNair Program services discussed by study participants were examined through the structure of the theories of graduate school socialization

presented earlier in this chapter.

Data indicated that the study participants identified five services and activities provided through the McNair Program that impacted their successful completion of the doctoral degree:

- 1) Research opportunities,
- 2) Mentoring,
- 3) Doctoral studies preparation,
- 4) Paid research internships, and
- 5) Assisting in securing admission and financial aid for graduate school.

Utilizing the framework of the graduate school socialization process presented by Lovitts (2001), Tinto (1993), and Weidman, et al. (2001), it was demonstrated that the McNair Program positively impacted stages one (Pre-entry), two (Entry), and four (Research/Professional Development) of the process prior to enrollment in graduate programs. These findings challenge the prevalent theories of graduate school socialization by demonstrating that for these study participants the process was accelerated, and the McNair Program impacted the success of doctoral students prior to enrollment in graduate programs. More specifically, study participants indicated that the tools and direct experiences provided through the McNair Program supported their ability to find a good 'fit' with a graduate program (Pre-Entry stage), elevated their understanding of the doctoral process (Entry stage), increased their commitment to graduate school and the profession (Entry stage), strengthened their understanding to engage in independent research (Research/Professional Development stage), and provided opportunities to present research at conferences and in professional publications (Research/Professional Development stage). These tools and experiences afforded the

study participants the opportunity to maintain high levels of confidence in their abilities to complete their program workload, focus their attention on gaining membership in the department, and forge a strong relationship with their advisor - all of which are much more difficult to impact through external programming prior to enrollment.

The data presented in Chapter IV suggests that the impact felt through participation in the McNair Program study participants was multi-layered and non-linear. As indicated, some elements of the stages of graduate school socialization were directly impacted through the development of specific skill sets. Examples include instruction and guidance in selecting a graduate program, selecting a graduate advisor, developing support networks, conducting research, completing a research proposal, presenting research, research publication, and doctoral process and procedures. Once these skill sets were established and developed, they maintain lasting effects that could be utilized if a student departs a program and seeks re-entry. This is an aspect of the graduate school socialization process that current theories presented did not take into account. As demonstrated with Hana and Jason, departure from a graduate program does not have to result in abandonment of the pursuit of the Ph.D. Implementation of the skill sets learned through the McNair Program afforded these participants the opportunity to re-engage in the graduate school socialization process at another institution.

The chart below outlines those aspects of the stages of graduate school socialization process that the McNair Program had direct, limited, or no impact on according to program participants.

Table 11

*Degrees of Impact by the McNair Program*

McNair Program	Pre-Entry	Entry	Knowledge Attainment	Research/ Professional Development
Direct Impact	<p>Exploration of graduate schools</p> <p>Recruitment to graduate programs including campus visits, faculty interactions, funding offers</p> <p>Selection and admissions process</p>	<p>Commitment to graduate program and profession</p> <p>Policies and Procedures</p>		<p>Transition from student to professional</p> <p>Independent research</p>
Limited Impact		<p>Gaining membership into departments and programs academically and socially</p>		<p>Focused relationship with faculty advisor</p>
No Impact			<p>Completion of coursework</p> <p>Demonstration of academic competence</p>	

Study participants clearly indicated that the McNair Program directly impacted their selection of graduate programs (Stage 1 Pre-entry), their ability to be competitive in applying for rigorous programs, the availability of funding, and their ability to be seen as

attractive advisees for potential faculty advisors. There was also direct impact in Stage 2 (Entry) on the commitment of the student to doctoral study and professions in academia. Maintaining a shared, public goal of attaining the Ph.D. provided the support necessary to achieve the goal. Several student participants also attributed the McNair Program with helping to develop the self-confidence needed to pursue doctoral education and successfully complete the programs. Stage 4 (Research/Professional Development) was directly impacted for study participants by the program through the high quality, intensive research experiences students engaged in while in the program. Study participants also indicated direct impact through research presentations at professional conferences, research publications, and networking opportunities with professionals in their field of study.

The target impact of the McNair Program on these stages of the graduate school socialization process removed potential barriers of the doctoral journey for study participants. As low income, first generation, and students of color, the ability to remove potential barriers to successful completion allows time and energy to be focused on those stage elements in which there was limited ability of the program to impact. These areas of limited impact by the program include gaining membership in the department, more specifically departmental culture, and advisor relationships.

#### *Department Culture / Advisor Relationships*

Department culture and advisor relationships as elements within the stages of graduate school socialization are highly unpredictable. Factors such as discipline, regional location of program, program diversity, and institutional commitment to success can shape the experience of gaining membership in a doctoral department and program,

as well as the relationship between an advisor and advisee. Participants in this study indicated challenges with gaining membership in their programs and departments largely due to the lack of diversity among faculty and students within the programs and the stagnant nature of the culture that overwhelmingly reflected affluent White norms and values. Struggles with racial and socioeconomic barriers were also common place for study participants. For example, Rachel recalled her first several years as difficult due to the socioeconomic differences between her and her peers, which created barriers when attempting to establish relationships with her peers. She felt that there was no common ground from which to initiate the relationships. The situation was complicated when Rachel began to sacrifice her own personal culture in an effort to embrace that of the program. The outcome was a sense of isolation with her family who felt she had forgotten her roots.

Sonia experienced similar struggles with gaining membership in her department. When she transitioned from a small, highly diverse institution into a large, predominately White university, Sonia experienced culture shock that lasted until she began to work more independently with her program advisor. The lack of diversity created racial barriers for Sonia that manifested as a high level of competition within her department.

Study participants indicated a lack of diversity that resulted in racial and socioeconomic barriers within their programs and departments, which prompted the study participants to seek support structures that reflected their personal cultural norms and values that were not reflected within the program or department. For some participants, this support was gained through existing programs that supported students of color within the institution such as the AGEP program. For others, the support was found in individual relationships with members of the institutional community that were connected to the



programs or departments. The lack of cultural support and racial diversity led Ernesto to establish a campus-wide program designed to support students of color in the sciences. These participants were able to seek out support when the department and program could not provide it for them.

Low income, first generation, and students of color enter doctoral departments and programs with their own set of cultural norms and values that are not always compatible with those of the existing culture. As a result of the inability of the department and program cultures to embrace the cultural differences that come with this population, students are often forced to simply assimilate to the dominate White culture or seek out alternative environments that ensure the comfort and support of their personal cultures. For the study participants, the ability to seek out these support networks led to the successful completion of the doctorate.

Department and program culture, or the racial and socioeconomic barriers that exist in graduate school, also affects the relationship between the advisor and the advisee. Issues such as lack of diversity, time availability, and institutional tradition often shape the way in which the advisor and advisee interact. Both Hana and Jason described failed relationships with advisors in their first programs. Each experienced issues with their advisor perceiving them as not meeting the standards of the doctoral program. While not an issue of academic progress in coursework, these advisors indicated that Hana and Jason did not have what it takes to succeed in their particular programs. When they reflected on their experiences, both recalled the situation as being one of mismatched expectations with their advisor. The tension with Hanna's advisor stemmed from Hana seeking out support from another faculty member in the department. Jason's friction with his advisor surfaced when he began to explore independent research outside of the lab.

These deviations from the department and program norm created a clash between the advisor and the advisee that resulted in a portrayal of Hana and Jason as not being capable of doctoral level work. Straying from the norm, the White dominate culture of the department and program labeled them as different and eventually led to their departure from the program. In their second doctoral programs, Hana and Jason were intentional about finding programs and advisors that reflected their needs as students, which resulted in successful completion of the Ph.D.

### *Recommendations*

The recommendations offered are from study participants and the result of data analysis. This section is divided into three parts to accurately represent the targeted audience. These are recommendations for McNair Programs, Doctoral Programs/Institutions, and Potential Doctoral Students.

#### *McNair Programs*

- Reinforce the commitment made by program participants to complete the Ph.D., such as implementing a public ceremony to solidify the commitment made by the program to the student and the student to the program. Implement a mandatory credit course that includes the history of educational structures, introduces elements of Critical Race Theory, and demonstrates how the McNair Program is designed to contribute to changing the educational structure. Continue to remind participants of their commitment to the Ph.D. and the McNair Program through the completion of the degree.
- Mandate participation in all program activities. Participation in all aspects of

programming results in a more refined skill set to accelerate the graduate school socialization process. Participants should not be allowed to pick and choose which elements are important to their journey. Program staff should enforce participation as a means to fully develop the students' skill sets prior to enrollment in graduate school.

- Develop peer support networks with the participants prior to their enrollment in graduate school. By assisting participants in developing a peer support network at those institutions they are applying to, the program can support the students' process of selection by providing an inside perspective of program and department culture as well as faculty interactions. Additionally, this type of support network will be highly impactful for the student in gaining membership into the department and program once enrolled.
- Reach out to participants regularly through the completion of the doctorate. By continuing to reach out to participants while they are enrolled in their doctoral studies, the program can provide on-going support to the student as they establish relationships in their departments, programs, and institutions. Staff should provide information on support network structures available and encourage participants to engage with those structures. Students that do not see their own culture reflected in that of the department or program often seek outside support from individuals from similar backgrounds. When those relationships are not available, students will seek individual relationships for similar support. Maintaining contact with participants while in their doctoral programs and referring students to support networks already in place provides the student with an additional support structure in difficult times.

- Ensure high quality research experiences while participating in the program. Research experiences should reflect those that will be encountered at the graduate school level. Research opportunities that do not meet this standard should be avoided, as they will not expose the students to the rigor and real life experiences to be successful in doctoral programs.
- Recognize and embrace the role of the McNair Program in changing the culture of graduate school for low income, first generation, and students of color by educating participants in the racial and socioeconomic barriers that exist in education, creating strong commitment between participants and program for the completion of the Ph.D., engaging the participants in on-going support structures, and encouraging participants to pursue careers in the professoriate.

*Doctoral Programs / Institutions*

- Allocate institutional funds and solicit state-level funding sources to implement McNair-type services that will impact the graduate school socialization process for all undergraduate students.
- Encourage collegial, supportive relationships between program peers. Support should be fostered between program peers as a means of providing the social and academic support necessary to be successful.
- Develop opportunities for students, faculty, and staff to engage in conversations regarding the limited representation of department and program culture. By recognizing that department and program cultures do not represent

all students entering doctoral programs, a supportive environment can begin to surface for this population. Creating a fluid culture that embraces the unique perspectives of the diverse population entering graduate school is not something that can be accomplished immediately. However, steps can be taken to increase awareness within departments and programs regarding racial and socioeconomic barriers that continue to exist. These include holding faculty and student in-service activities that engage former low income, first generation, and students of color to discuss challenges and barriers faced while navigating the program. While it is recognized that program cultures do not change quickly, opportunities to engage all stakeholders in these conversations will assist in gaining support for changing existing cultures. Work with the institution to identify and connect students to existing support structures that have been established to support the success of students from similar backgrounds.

- Provide opportunities for students, peers, and faculty to engage in social and academic arenas outside the classroom.
- Structure graduate school funding and professional development opportunities so that they are distributed in a fair and consistent manner.
- Promote regular and on-going interactions between students and their faculty advisors through the development of relationship guidelines that are mutual expectations for the faculty and the students.
- Restructure the tenure and faculty review processes to account for meaningful interaction and mentorship of doctoral students.

- Provide meaningful, ample opportunities for students from similar backgrounds to engage in social, academic, and emotional support services with each other and gain mentorship for the professoriate.
- Develop White faculty members as advocates and mentors for low income, first generation, and students of color.
- Recruit, hire, and retain more diverse faculty to support the diverse population of doctoral students.

#### *Potential Doctoral Students*

- When selecting your doctoral program, talk to current and former students in the program from similar backgrounds. Seek their advice regarding potential faculty advisors, departmental culture, and available support networks.
- Develop a peer support network prior to enrolling in a doctoral program. Establishing these relationships prior to enrolling will aid in gaining membership into the department and program.
- Acquire as many skill sets prior to going into graduate school as possible. Learn how to conduct research, what a proposal is, and what a dissertation looks like. Develop research presentation and publications skills. Knowing these skills prior to enrollment will allow you to focus on other intangible issues you may face in your doctoral program.
- Seek out support networks of students from similar backgrounds both in and outside of your department and program. Maintain a high level of engagement throughout your program, especially in the latter years that tend to be more

isolating.

- Continue to connect with your undergraduate support structures such as the McNair Program.

### *Research Contributions*

Current research in the area of doctoral persistence and completion include several theories of graduate school socialization. Those most prevalent (Lovitts, 2001; Tinto, 1993; and Weidman, et al., 2001) demonstrate a process of socialization that is linear, predominately occurs once the student enrolls, and is a one-size-fits-all approach in relation to student backgrounds. While a student development theory exists that reflects a continuous process of self-discovery and navigation (Gardner, 2010), it does not account for a variety of student backgrounds or address the stagnant nature of department and program cultures. Additionally, neither the student development theories nor the graduate school socialization theories explain the differences between socialization into graduate departments and program and traditional assimilation. For White students whose culture is represented, socialization is more likely to occur. However, for low income, first generation, and students of color, socializing into a culture that lacks diversity often results in assimilation (Tierney, 1997; Tierney & Bensimon, 1993).

Successful completion is often limited to those low income, first generation, and students of color that can find outside support that allows them to gain membership into their departments and programs while engaging in networks that reflect and encourage the development of their own personal culture. Addressing issues of cultural incongruence while navigating all other aspects of the socialization process can be

overwhelming and lead to increased attrition (Gardner, 2007; Teirney, 1997; Turner & Thompson, 1993; Winkle-Wagner, et al., 2010).

This study provides the opportunity to present an alternative model of intervention for McNair programs that can be used in conjunction with the theories of graduate school socialization. This model is intended to accelerate the socialization process and provide opportunity for low income, first generation students of color participating in the McNair Program to master skill sets, engage in support structures, and solidify the commitment necessary to be successful at the doctoral level. It is suggested that by accelerating teachable aspects of the process, doctoral students will be afforded the opportunity to navigate the more challenging aspects of gaining membership, cultural incongruence, and advisor relationships more effectively. These areas of difficulty are among those most common cited in the literature by doctoral students as the cause of attrition (Austin, 2002; Ferreira, 2000; Gardner, 2010; Golde, 1998; Golde, 2001; Golde, 2005; Lovitts, 2001; Tierney, 1997; Tinto, 1993; Weidman, et al., 2001; Zhao, et al., 2007).

As a result of this study's findings, a Model of Graduate School Intervention for McNair programs has been created. In this multilayer approach, the outer layer represents those aspects of doctoral socialization that are teachable prior to enrollment in a department or program:

- Graduate School Selection,
- Professional Development,
- High Quality Research, and
- Process and Procedure.



Demonstrated as the four outer bubbles on the model, these four teachable skill sets provide the foundation to begin the process of successful socialization into graduate school. Additionally, each of these four elements can be acquired and refined prior to enrollment in a graduate program. Most importantly, once students master these skill sets, they are able to continuously access them for re-entry into the doctoral process, if necessary. This was demonstrated in this study by Hana and Jason who capitalized on the skills sets learned in their first attempt at doctoral study to be successful in their subsequent attempts.

Once the outer layer of skill sets is acquired, students move into the inner space of the model. Since the skill sets are permanent, students that have penetrated the outer layer never return to a status that is outside the model. At the very least, all students that have entered the inner area through mastery of the four skill sets will always have access to them as a means of gaining entry into graduate school and accelerating the graduate school socialization process. Invoking those skills sets may require some refreshing, but they will never be completely lost.

Acceleration of the socialization process through the attainment of these skill sets was demonstrated by several participants in this study. Nathaniel, Jason, and Kendall described having research abilities upon entering graduate school that mirror, or in some cases, exceeded those of their graduate program peers. Ernesto and Hana entered their graduate programs with professional, scholarly publications, and all had participated in professional-grade research conference presentations. Study participants did not need to learn these skill sets after entry into graduate school. Instead, by acquiring these skills prior to entry, they were able to focus efforts on those aspects of the graduate school socialization process that are less tangible and most challenging for low income, first

generation, and students of color. In essence, the out layer represents the “background noise” of graduate school that often crowds the task list of graduate students entering programs. By removing this background noise, doctoral students are able to focus on navigating departmental and program cultures and advisor relationships more effectively.

The inner layer of the Model of Graduate School Intervention for McNair programs represents those aspects of the graduate school socialization process that are more challenging to impact. Efforts can be made to inform and expose students to similar situations that may be encountered during graduate school. However, there are few teachable skill sets that account for cultural incongruence and the impact of race and class barriers on advisor/advisee relationships. What can be implemented are solid structures of on-going support for and commitment to the completion of the doctorate by low income, first generation, and students of color.

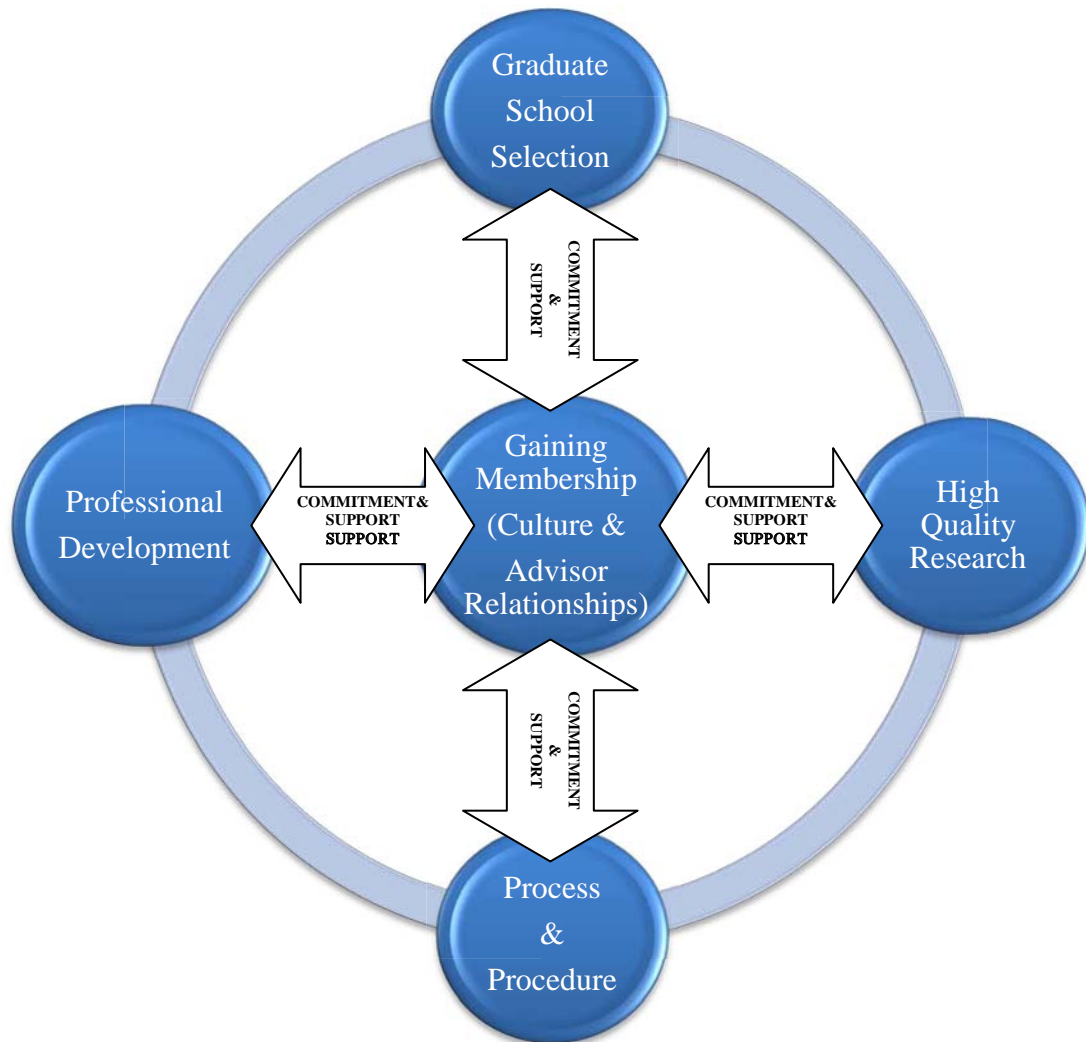
The two-way arrows in the following model demonstrate the stabilizing effect of continuous support and commitment that drives the completion of the doctoral process in spite of department and program culture and advisor relationships. For instance, in his discussions regarding the completion of his doctorate, Jason clearly indicates that his commitment to the McNair Program impacted his motivation to complete. He attributes this commitment and the support received by the McNair Program staff, fellow students of color, and the AGEP program as contributing to his overall success in completing the Ph.D. The same is true for Hana and Kendall. Both study participants attribute their success to the commitment made to and by the McNair Program and the support received by McNair staff and their on-campus employment supervisors to successful completion of the doctorate.

While the McNair Program cannot directly impact the unstable nature of

department and program culture or advisor relationships, it can implement structures of support and reinforce the commitment to the completion of the Ph.D. The outer layer skill sets and on-going, solid support structures (peers from similar backgrounds, institutional allies, McNair Program staff, community organizations, etc.) and commitment to the goal of the doctorate and to the McNair Program provide a stabilizing effect in an otherwise unstable aspect of the graduate school socialization process. This is vital when low income, first generation, and students of color encounter unstable experiences with cultural incongruence and advisor relationships that can often derail the journey to the doctorate. Since the teachable skills have long-term effect on the McNair Program participants, once the student breaks through the outer layer of the model, they never leave. The potential to pursue doctoral study is ever-present, and the ability to re-engage after an initial or even multiple attempts is possible through renewed support and commitment to the process. This is not reflected by other theories or models.

Figure 1

*Model of Graduate School Intervention for McNair Programs*



It is recognized that this model is limited in application to similar populations as those included in this study. Additionally, given the unique structure of the McNair Program, it is understood that the model would have limited effect on those students outside this structured environment of the program. The Model of Graduate School Intervention for McNair Programs is not intended to replace the theories of graduate

school socialization as presented by Lovitts (2001), Tinto (1993), or Weidman, et al. (2001) but to expand the scope of how these theories are navigated by low income, first generation, and students of color that participated in the McNair Scholars Program.

### *Future Research*

This study examined the experiences of nine doctoral degree completers that had participated in the McNair Scholars Program. While this group of participants represented a similar demographic as that of the McNair Program nationally, it cannot be considered an adequate population for general comparisons. Therefore, to make comparisons for this population, it is appropriate that a longitudinal study be completed that includes a larger population of participants over a longer period of time.

In addition, future research is recommended regarding the transition of this population from doctoral study into the professoriate. According to research, the process of socialization into the faculty is similar to that of doctoral students (Austin, 2002; Gardner, 2010; Golde, 1998; Golde, 2001; Teirney, 1997; Tierney & Benismon, 1993;). Therefore, exploring the process through which faculty socializes into the ranks and how that process is experienced by low income, first generation, and faculty of color may provide insight regarding the ability to affect change within department and program cultures. Additionally, it would be helpful to explore the correlation of the faculty socialization process on the advisor/advise relationship, particularly for this population. More specifically, does the socialization process of low income, first generation, and faculty of color into departments and program allow for the type of mentoring that is necessary for low income, first generation, and students of color to be more successful at the doctoral and professional level, or is the process structured to prevent this from

occurring? Future research is needed to thoroughly explore issues related to the transition from doctoral student into faculty ranks for low income, first generation, and individuals of color.

### *Reflections*

Doctoral persistence and completion continues to be an issue that plagues the education system. While focus has been placed on changing the structure to allow access and opportunity at all levels, tradition and process have a strong hold at the doctoral level. Credit should be given to institutions that are actively taking steps to improve persistence and completion of doctoral students, but progress is slow and not wide spread. The false assumption that student attrition is a reflection of academic rigor and program prestige is still perpetuated. Programs continue nationally to encourage peer competition, student isolation, and faculty research over student performance. Little is done institutionally to prevent attrition and ensure the promotion of doctoral students through the process and into the professoriate, particularly low income, first generation, and students of color.

As the national conversation continues around the global competitiveness of the United States, more must be done to protect our investments. The intellectual promise that is lost in a doctoral student who drops out due to advisor conflict or lack of cultural congruence is devastating to all involved. Academia needs to embrace a new process of doctoral completion that reflects the need to protect academic rigor while promoting the promise of doctoral students from diverse backgrounds. Additionally, there needs to be honesty in recognizing the disparity that exists between privileged White populations and

those from low income, first generation, and underrepresented populations in relation to access, opportunity, persistence, and completion.

Experiences of students at all levels shape their needs in education. This does not cease at the graduate school level. In fact, the higher the level, the less diverse the population becomes. Educators and administrators need to actively acknowledge this lack of diversity and take steps to honestly and appropriately address issues of cultural incongruence that devalue diverse student and faculty populations and prevent low income, first generation, and students of color from successfully completing the doctoral degree.

## APPENDIX A: PARTICIPANT SCREENING SURVEY

### 1. Survey Introduction

Doctoral programs continue to experience low rates of persistence and completion especially among low income, first generation, and underrepresented populations. One solution to this on-going problem was the creation of the Ronald E. McNair Postbaccalaureate Achievement Program. The McNair Program has proven successful in enrolling Scholars in graduate programs; however, the persistence and completion rates continue to remain low.

This research study has been undertaken as my dissertation research and is designed to explore the factors contributing to the successful completion of the doctorate by McNair Scholars.

The survey below is a screening survey that asks questions about your degree, host McNair institution, program eligibility information, and verification of contact information. The survey represents the first step in the participant selection process and your cooperation will provide the necessary information to continue this research study.

Your name will never be associated with any of your responses and you may be assured of complete confidentiality. No one, but me, will have access to the survey responses and any surveys completed for participants not eligible for the full research study will be destroyed. Data collected from participants eligible for participation in the full student will be used in the data analysis process. All stored surveys will be secured in a locked cabinet and kept for a period of five years after the end of the research project. All individuals responding to this survey will receive a summary of the project findings.

You are making a decision whether or not to participate in this phase of the project. By completing this survey you are indicating that you have read the information provided above and have decided to participate. You may withdraw at any time without penalty or loss of benefits to which you may be entitled after completing this survey should you choose to discontinue participation in this study.

Your time and participation in this short survey is appreciated.

Respectfully,

Deborah Baness King  
Principle Investigator



**1. Contact Information**

Contact Information Name:

Email Address:

Phone Number:

**2. Gender**

Male  Female

**3. Do you currently hold a doctorate degree?**

Yes  No

**4. What type of doctorate do you hold?**

- Ph.D.
- Ed.D.
- J.D.
- Aud.D.
- Pharm.D.
- M.D.
- M.D./Ph.D.

Other (please specify)

**5. What is your program of study for your doctorate degree?**

**6. Are you an alumni of a Ronald E. Postbaccalaureate Achievement Program (McNair Scholars Program)?**

Yes  
 No

**7. At what institution did you participate in the McNair Program?**

**8. What was your eligibility status while in the McNair Program? (Select All That Apply)**

- Low Income
- First Generation
- Underrepresented Student (Black Non-Hispanic / Hispanic / American Indian / Alaskan Native)

**9. What type of services did you receive from your host McNair Scholars Program?**

- Academic Counseling / Advisement
- Mentoring
- Research Internship
- Tutoring
- Workshops / Seminars
- Campus Visits
- Assistance with Financial Aid

Other (please specify)

**10. This research study will include two interviews. Are you willing to participate in both interviews for this study? (Answering "yes" only qualifies you for participation in the study, it does not commit you to participating.)**

- Yes
- No

Other (please specify)

***11. This research study will include a focus group through the social networking site Facebook. Are you willing to participate in the focus group for this study? (Answering "yes" only qualifies you for participation in the study; it does not commit you to participating.)***

Yes

No

Other (please specify)

## APPENDIX B: CONSENT TO PARTICIPATE

### The University of New Mexico Main Campus IRB Consent to Participate in Research

#### Journey to the Doctorate: Motivating Factors for Persistence and Completion of Doctoral Programs among McNair Scholars

##### Introduction

You are being asked to participate in a research study that is being done by Deborah Baness King, who is the Principal Investigator and her associates, from the Department of Language Literacy and Socialcultural Studies. This research is studying the factors contributing to persistence and completion of doctoral programs by McNair Scholars. More specifically, the objective of this current investigation is to describe the participants' experiences during their pursuit of the doctorate and identify self-reported influences, motivations, and contributing factors resulting in persistence in, and completion of the Ph.D. This study seeks to answer the following research questions:

1. What factors contribute to the persistence and completion of the doctorate by McNair Scholars?
2. Additionally, how did program services impact the success of the Scholars in their progression through the doctoral process?
3. How can institutions utilize the successes of McNair Scholars to structure doctoral programs to meet the needs of low income, first generation and underrepresented students and increase opportunities for successful completion of the doctorate degree?.

Doctoral programs continue to experience low rates of attrition and completion especially among low income, first generation, and underrepresented populations. One solution to this on-going problem was the creation of the Ronald E. McNair Postbaccalaureate Achievement Program. The McNair Program has proven successful in enrolling Scholars in graduate programs; however, the persistence and completion rates continue to remain low. It is my hope that through this research study the education system can strengthen the opportunity for all doctoral students to be successful in their journey to the doctorate, especially those from low income, first generation, and underrepresented backgrounds.

There are several previous studies that have been conducted on doctoral students from various backgrounds. (Lovitts, 1996; Vaquero, 2008, Zwick, 1991) In fact hundreds of doctoral students have participated in studies that examine the causes of drop out or non-completion. However, none have explored the phenomena of McNair Scholars journey through the doctoral process and their successful completion of programs. This study will explore the successful completion of doctoral programs by McNair Scholars.

You are being asked to participate in this study because you participated in a McNair Scholars Program during your undergraduate education and have completed your doctoral degree. Eight to ten people will take part in this study at the University of New Mexico.

\_\_\_\_ Initials      Page 1 of 5      IRB# *Protocol #:* 09-422

Version: 10/20/09

APPROVED	10/26/09	 OFFICIAL USE ONLY Human Research Protections Office	EXPIRES	10/25/2010
The University of New Mexico Main Campus IRB				

This form will explain the research study, and will also explain the possible risks as well as the possible benefits to you. We encourage you to talk with your family and friends before you decide to take part in this research study. If you have any questions, please ask one of the study investigators.

### **What will happen if I decide to participate?**

If you agree to participate, the following things will happen:

Once eligibility for study participation is determined, you will be asked to participate in two interviews which will be audio taped and transcribed. Every effort will be made to conduct interviews face-to-face at a public location determined by the participant. However, if necessary, interviews can be conducted via telephone, and/or other remote methods. Additionally, you will be asked to participate in a virtual focus group through the social networking site Facebook.

All individuals participating in this survey will have an opportunity to review interview responses for accuracy and will receive a summary of the project findings. The results of the study will be compiled into my dissertation for presentation to the department to meet requirements for my Ph.D.

### **How long will I be in this study?**

Participation in this study will take a total of approximately 8 hours over a period of four (4) months.

### **What are the risks of being in this study?**

- There are risks of stress, emotional distress, inconvenience and possible loss of privacy and confidentiality associated with participating in a research study.

For more information about risks, ask one of the study investigators.

### **What are the benefits to being in this study?**

There may or may not be benefit to you from participating in this study. However, it is hoped that information gained from this study will contribute to our growing knowledge of how support programming impacts the persistence and completion of low income or first generation students of color at the doctoral level; will be used by institutions to improve outreach and support programs for doctoral students; and improve support systems for doctoral students, specifically low income or first generation students of color, impacts faculty diversity in higher education.

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**What other choices do I have if I do not want to be in this study?**

This study is optional and voluntary; you do not have to participate in this study.

**How will my information be kept confidential?**

We will take measures to protect your privacy and the security of all your personal information, but we cannot guarantee confidentiality of all study data.

Information contained in your study records is used by Deborah Baness King, in some cases it will be shared with the responsible faculty member. The University of New Mexico IRB that oversees human subject research, will be permitted to access your records. There may be times when we are required by law to share your information. However, your name will not be used in any published reports about this study.

Your name will never be associated with any of your responses. The virtual focus group site will be restricted to study participants only and consent forms will be filed separately from the all other information. While responses will be used in the research study, all participant names will be changed and pseudonyms will be utilized to protect confidentiality. Information collected as part of the study will be labeled with your initials and a study number; Information (without your name) will be entered into a computer database/locked file cabinet in the Principal Investigator’s office. Deborah Baness King and associates will have access to your study information. Data will be stored for five (5) years, and then will be destroyed.

**What are the costs of taking part in this study?**

There are no costs associated with your participation in this study

**Will I be paid for taking part in this study?**

You will not be paid for taking part in this study.

**How will I know if you learn something new that may change my mind about participating?**

You will be informed of any significant new findings that become available during the course of the study, such as changes in the risks or benefits resulting from participating in the research or new alternatives to participation that might change your mind about participating.

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**Can I stop being in the study once I begin?**

Your participation in this study is completely voluntary. You have the right to choose not to participate or to withdraw your participation at any point in this study without affecting any services to which you are entitled.

**Whom can I call with questions or complaints about this study?**

If you have any questions, concerns or complaints at any time about the research study, Deborah Baness King, or his/her associates, Ruth Trinidad Galvan will be glad to answer them at (505) 277-0094. If you need to contact someone after business hours or on weekends, please call (505) 277-0094 and ask for Ruth Trinidad Galvan. If you would like to speak with someone other than the research team in regards to any complaints you have about the study, you may call the UNM IRB at (505) 272-1129.

**Whom can I call with questions about my rights as a research subject?**

If you have questions regarding your rights as a research subject, you may call the UNM IRB at (505) 272-1129. The IRB is a group of people from UNM and the community who provide independent oversight of safety and ethical issues related to research involving human subjects. For more information, you may also access the IRB website at <http://hsc.unm.edu/som/research/HRRRC/maincampusirbhome.shtml>.

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<b>The University of New Mexico Main Campus IRB</b>				

**Consent**

You are making a decision whether to participate in this study. Your signature below indicates that you read the information provided (or the information was read to you). By signing this consent form, you are not waiving any of your legal rights as a research subject.

I have had an opportunity to ask questions and all questions have been answered to my satisfaction. By signing this consent form, I agree to participate in this study. A copy of this consent form will be provided to you.

\_\_\_\_\_  
Name of Adult Subject (print)

\_\_\_\_\_  
Signature of Adult Subject

\_\_\_\_\_  
Date

**INVESTIGATOR SIGNATURE**

I have explained the research to the subject or his/her legal representative and answered all of his/her questions. I believe that he/she understands the information described in this consent form and freely consents to participate.

\_\_\_\_\_  
Name of Investigator/ Research Team Member (type or print)

\_\_\_\_\_  
(Signature of Investigator/ Research Team Member)

\_\_\_\_\_  
Date

APPROVED	10/26/09	 <small>OFFICIAL USE ONLY</small> <small>Human Research Protection Office</small>	EXPIRES	10/25/2010
<b>The University of New Mexico Main Campus IRB</b>				



**APPENDIX C: RELEASE OF INFORMATION FORM**

I, \_\_\_\_\_ give permission for the McNair Scholars Program at  
(Participant's Name)

\_\_\_\_\_  
(Name of Institution)

To share information regarding my participation in the McNair Scholars Program. I understand that the information below will be solicited and shared with Deborah Baness King as a part of her research study and verify that I am a willing participant.

**\*\*FOR COMPLETION BY MCNAIR PROGRAM STAFF ONLY\*\***

Did the students regularly attend workshops/seminars?      Yes      No

List Title/Topic of Workshops \_\_\_\_\_

Did the student participate in research related activities?      Yes      No

List Research Activities \_\_\_\_\_

What was the student's research topic? \_\_\_\_\_

Did the student participate in campus visits?      Yes      No

List Campuses Visited \_\_\_\_\_

Did the student participate in academic conferences?      Yes      No

Did the student present at academic conferences?      Yes      No

    If "Yes" how many? \_\_\_\_\_

Did the student author/co-author any published research?      Yes      No

Did the student have a faculty mentor?      Yes      No

Was the student provided advisement?      Yes      No

\_\_\_\_\_  
Participant's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Participant's Contact Information (Telephone # or E-mail Address)

## APPENDIX D: IRB APPROVAL LETTERS



THE UNIVERSITY of  
NEW MEXICO

Main Campus Institutional Review Board

Human Research Protections Office

MSC 08 4560

1 University of New Mexico-Albuquerque, NM 87131-0001

<http://hsc.unm.edu/som/research/HRRC/>

26-Oct-2009

Responsible Faculty: Ruth Trinidad Galvan

Investigator: Deborah Baues King

Dept/College: Language Literacy Sociocultural LL

*SUBJECT: IRB Approval of Research - Initial Review - Modification*

*Protocol #: 09-422*

*Project Title: Journey to the Doctorate: Motivation Factors for Persistence and Completion of Doctoral Programs among McNair Scholars*

*Type of Review: Expedited Review*

*Approval Date: 26-Oct-2009*

*Expiration Date: 25-Oct-2010*

The Main Campus Institutional Review Board has reviewed and approved the above referenced protocol. It has been approved based on the review of the following:

1. HRRC expedited application dated 10/20/09
2. consent form dated 10/20/09
3. study instrument dated 10/20/09
4. recruitment letter dated 10/20/09
5. request for information form dated 10/20/09
6. release form for McNair programs dated 10/20/09

**Consent Decision:**

Requires a signed consent form

HIPAA Authorization Addendum not applicable

When consent is required, it is the responsibility of the Principal Investigator (PI) to ensure that ethical and legal informed consent has been obtained from all research participants. A date stamped original of the approved consent form(s) is attached, and copies should be used for consenting participants during the above noted approval period.

As the principal investigator of this study, you assume the following responsibilities:

**Renewal:** To comply with federal law, the IRB must conduct continuing review of this research before the expiration date noted above. It is the responsibility of the PI to submit a progress report to the IRB at least 30 days prior to the end of the approval period in order for this study to be considered for continuation.

**Adverse Events:** Any adverse events or reactions must be reported to the IRB immediately.

**Modifications:** Any changes to the protocol, such as procedures, consent/assent forms, addition of subjects, or study design must be submitted to the IRB as an Amendment for review and approval.

**Completion:** When the study is concluded and all data has been de-identified (with no link to identifiers), submit a Closure Report to close your study.

Please reference the protocol number and study title in all documents and correspondence related to this protocol.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Scott Tonigan". The signature is fluid and cursive, with a long horizontal stroke at the end.

J. Scott Tonigan, PhD  
Chair  
Main Campus IRB

\* Under the provisions of this institution's Federal Wide Assurance (FWA 00004690), the Main Campus IRB has determined that this proposal provides adequate safeguards for protecting the rights and welfare of the subjects involved in the study and is in compliance with HHS Regulations (45 CFR 46).



THE UNIVERSITY of  
NEW MEXICO

Main Campus Institutional Review Board  
Human Research Protections Office  
MSC 08 4560

1 University of New Mexico-Albuquerque, NM 87131-0001

<http://hsc.unm.edu/som/research/HRRCL/>

21-Oct-2010

Responsible Faculty: Ruth Trinidad Galvan  
Investigator: Deborah Baness King  
Dept/College: Language Literacy Sociocultural LL

**SUBJECT: IRB Approval of Research - Continuation**  
**Protocol #: 09-422**

**Project Title: Journey to the Doctorate: Motivation Factors for Persistence and Completion of Doctoral Programs among McNair Scholars**

**Type of Review: Expedited Review**

**Approval Date: 21-Oct-2010**

**Expiration Date: 25-Oct-2011**

The Main Campus Institutional Review Board has reviewed and approved the above referenced protocol. It has been approved based on the review of the following:

1. Progress Report submitted 9/22/2010;
2. Protocol v10/20/09.

Consent Decision:

Study is closed to enrollment - no consents approved.

If a consent is required, we have attached a date stamped consent that must be used for consenting participants during the above noted approval period.

If HIPAA authorization is required, the HIPAA authorization version noted above should be signed in conjunction with the consent form.


As the principal investigator of this study, you assume the following responsibilities:

- **CONSENT:** To ensure that ethical and legal informed consent has been obtained from all research participants.
- **RENEWAL:** To submit a progress report to the IRB at least 30 days prior to the end of the approval period in order for this study to be considered for continuation.
- **ADVERSE EVENTS:** To report any adverse events or reactions to the IRB immediately.
- **MODIFICATIONS:** To submit any changes to the protocol, such as procedures, consent/assent forms, addition of subjects, or study design to the IRB as an Amendment for review and approval.

- COMPLETION: To close your study when the study is concluded and all data has been de-identified (with no link to identifiers) by submitting a Closure Report.

Please reference the protocol number and study title in all documents and correspondence related to this protocol.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Scott Tonigan". The signature is fluid and cursive, with a long horizontal stroke at the end.

J. Scott Tonigan, PhD  
Chair  
Main Campus IRB

\* Under the provisions of this institution's Federal Wide Assurance (FWA00004590), the Main Campus IRB has determined that this proposal provides adequate safeguards for protecting the rights and welfare of the subjects involved in the study and is in compliance with HHS Regulations (45 CFR 46).

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