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Undergraduate Research and Metropolitan Commuter University Student Involvement: Exploring the Narratives of Five Female Undergraduate Students

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Undergraduate Research and Metropolitan Commuter University Student Involvement:

Exploring the Narratives of Five Female Undergraduate Students

by

Jolina Jade Kwong Caputo

A dissertation submitted in partial fulfillment of the
requirements for the degree of

Doctor of Education

in

Educational Leadership: Postsecondary Education

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Abstract

This study sought to explore the lived experiences of five female, first-generation, low-income students who attend a metropolitan commuter university, and investigate how a structured undergraduate research experience exerts influence on the women's academic and social involvement. A qualitative case study with a narrative and grounded theory analysis was selected as the most appropriate approach for exploring this topic and addressing the guiding research questions. Interview and journal data were collected and analyzed to identify significant themes. The importance of finding an academic home, the significance of interacting with faculty and peers, and the validation of a metropolitan commuter university education through a scholar development process emerged as significant findings. Implications and recommendations on programmatic and institutional levels are included, as well as suggestions for future research.

Dedication

For my boys

Acknowledgements

First and foremost, I would like to thank my parents for their never-ending support and free food. They have given me every resource I have ever needed to be successful and for that I am truly thankful. They have also given me an inflated confidence and strong self-esteem that outweighs my actual abilities, knowledge, or looks. Managing to keep this illusion up for so long, my parents somewhere along the way tricked me into thinking that I could do and could be anything I wanted to be. That is good parenting.

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The participants in this study are really the centerpiece of my doctoral work. My dissertation revolves around their stories. I am so grateful for their willingness to share their experiences with me. I pray that I have reflected them accurately in my work and

that they understanding how much I truly appreciate them. I also want to thank the students I work with every day, they are the best inspiration and motivation ever.

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Undergraduate Research and Metropolitan Commuter University Student Involvement:
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Chapter 1

Introduction

The Problem of Involvement for Metropolitan Commuter University Students

Scattered across the bulletin boards and walls of any given college or university in America you will find posters encouraging undergraduates to “get involved.” Whether it is through student government, academic or interest clubs, sororities and fraternities, or athletics, “involvement” seems to be a necessary component of the college experience. However, what exactly is student involvement and is it experienced the same way by all students? For this dissertation I explore the lived experiences of five female, first-generation, low-income students who attend a *Metropolitan Commuter University* or *MCU*¹. I investigate the five women’s academic and social involvement before and after they participated in a structured undergraduate research experience called The West Scholars Program. Ultimately, I wanted to understand the influence, if any, the undergraduate research experience had on the participant’s academic and social involvement. A qualitative case study with a narrative and grounded theory analysis was selected as the most appropriate approach to exploring this topic and addressing the following guiding research questions:

¹ The term “Metropolitan Commuter University” or “MCU” will be used in this dissertation to describe American urban four year universities, a group from which 60+ institutions are a member of the “Coalition of Urban Metropolitan Universities” or CUMU.

- 1) How effectively does the West Scholars program engage PNMCU female, first-generation, low-income undergraduates in the academic life of this institution?
- 2) Secondly, what are the specific ways in which the West Scholars program engages female, first-generation, low-income college students through research?
- 3) What are some of the issues that inhibit a female first-generation, low-income college student's ability to fully engage in the experience of research and are these barriers to participation produced by the program, PNMCU, the metropolitan area, or dynamics from their own lives?

Previous research shows that student involvement varies depending upon two factors, namely the kind of higher education institution considered and student characteristics of the college or university. Additionally, previous studies indicate that students who attend a metropolitan commuter university experience student involvement differently than their traditional residential college or university counterparts. Such diversity in experiences is not surprising given that metropolitan commuter universities have distinct educational missions, instructional approaches, faculty composition, and student populations whose experiences are quite different from those who attend residential public and private four-year colleges and universities. Such institutional differences should cause us to question how MCU students develop compared to their counterparts at residential institutions.

In this chapter, I will present an overview of the connections between college student success and student involvement. Given the differences in experiences between residential student experiences and MCU student experiences, I will examine student involvement models from both perspectives, while giving particular attention to the unique dilemma presented by metropolitan commuter university student involvement. Building on previous research, I will examine how undergraduate research experiences can be one strategy for effectively involving students on MCU campuses. Finally, I will re-state my research questions which seek to examine how an undergraduate research experience as a method for encouraging student involvement is manifested in the specific setting of a Pacific Northwest MCU.

Following this introductory chapter, Chapter 2 reviews relevant literature regarding the metropolitan campus and student populations. Chapter 3 provides a detailed description of the research design for this dissertation. Participant narratives and stories are detailed in Chapter 4, while Chapter 5 and 6 discuss the results as they relate to the literature, as well as provide implications for practice and suggestions for future research.

Student Involvement and Student Success

Higher education research on the link between college student success and involvement provides a foundation for defining student involvement as we begin to explore how it may differ among different institutions and student populations. Empirical data on students enrolled in American four-year colleges and universities consistently produce findings that show “engagement” leading to persistence in both academic and social areas. Student engagement is often expressed in these studies as

“involvement” or “development.” Involvement can mean frequent and purposeful interaction with faculty and academic professionals along with significant and educationally purposeful interactions with peers (Astin 1993a & 1993b; Attinasi, 1989; Terenzini, Pascarella & Blimling, 1996). Development refers to the importance of integrating in-classroom and out-of-classroom experiences including access to services that result in students successfully negotiating higher education systems and moving along a range of psycho-social developmental stages (Astin, 1993a; Attinasi, 1989; Yazedjian, Toews, Sevin & Purswell, 2008). Scholars have found that any experiences that help students connect socially and academically, whether or not they live on or off-campus, are critical factors in their involvement, development and overall engagement (Astin, 1984; Braxton, Vesper & Hossler, 1995; Tinto, 1993). While these factors describe the experiences of many college students they are far from being inclusive of all four-year college students. More specifically, in non-traditional academic settings such as with metropolitan commuter universities, there exist unique mixtures of factors that change the quality and quantity of opportunities available for students to become involved, to develop, and to be otherwise engaged as four-year college students. Two distinct areas of inquiry have addressed contributions to the state-of-art knowledge about involvement, development, and engagement from: 1) the perspective of the residential college and 2) the perspective of metropolitan commuter universities. These will be discussed in detail in the following sections.

Undergraduate Student Involvement: Models from the Residential Experience

The definition of involvement used in this dissertation proposal is based on Astin's (1985) conceptualization that outlines a theory of "involvement," which includes the physical and psychological energy a student devotes to academic experiences, studying, spending time on campus, participating in student organizations, and interacting with faculty and peers. He states that "students learn by becoming involved" (Astin, 1985; p. 133) and goes on to assert that if students fully participate in the life of their college they are more likely to achieve the goal of degree completion.

Closely associated with Astin but theoretically different is the work of Tinto (1993) whose "theory of departure" defines involvement in another way. He posited that involvement is connected to "academic and social integration." According to Tinto, both academic and social integration contribute to persistence to graduation or departure from college. Engagement is the by-product of academic and social integration which can occur with on-campus services, clubs, student governance, study groups, art and music organizations, faculty, lecture attendance as well as access and contact with school administrators (Tinto, 1993). Extraordinarily strong academic and social integration to college produces exceptionally strong commitment to the college and dramatically increased probability of graduation. Conversely, low academic and social engagement to college results in lowered commitment to college and increased possibility of dropout or departure (Tinto, 1993). This point was emphasized by Harper & Quaye (2009) who stated that, "Students who are actively engaged in educationally purposeful activities and experiences, both inside and outside the classroom, are more likely than their disengaged

peers to persist through graduation” (p. 4). It should be noted that Astin (1985) and Tinto (1993) typically conducted their studies with traditional college students who attend full-time and reside on-campus.

Undergraduate Student Involvement: MCU Differences

Since the majority of the studies in the section above were completed with data from students at traditional, residential four-year colleges and universities, the findings do not accurately represent the needs and experiences for MCU students. As noted earlier, MCUs differ from their traditional, residential counterparts in several ways (Hathaway, Mulholland & White, 1990; Lynton, 1995; McNamara Horvat & Shaw, 1999; Riposa, 2003; Seaberry & Davis, 1997). First, they tend to have more democratic institutional missions that promote open access and encourage contact with their surrounding urban communities (Seaberry & Davis, 1997). Proximity to urban centers and metropolitan populations means a closer connection to their city’s day-to-day life (Riposa, 2003). Secondly, metropolitan commuter universities tend to enroll first-generation college students who are more likely to: 1) be female; 2) come from low-income homes; 3) work full-time; 4) commute to campus; 5) post lower scores on entrance exams (Seaberry & Davis, 1997). While gender may not represent a significant profile departure from the overall undergraduate population, low-income status and full-time work status are significant differences from traditional residential four-year colleges and universities. These factors dramatically change students’ ability to succeed while altering the ways in which campuses support student persistence. Given their differences from traditional, residential four-year colleges and universities, what constitutes the on-

campus experience for MCU students is shaped by institutional mission, open access, proximity to the day-to-day life of their city, and a perspective on curricular and co-curricular life contoured by their largely non-traditional student populations. Institutional context may shape undergraduate student involvement, development, and ultimately the manner in which they are engaged with their four-year college experience. It is clear from other empirical work that “involvement” looks very different for the student population who typically attend metropolitan commuter universities. For example, Walpole (2003) found that first-generation students from lower income backgrounds and of non-traditional age. Specifically she claims that first-generation, low-income students differ from students with multiple generations of college graduates in their families since they work more hours per week outside of curricular areas, study less and are less involved in campus activities due to work and family responsibilities. The end result, according to Walpole (2003) is a lower grade point average. Commuting to campus also points to lower involvement for MCU students.

Undergraduate Student Involvement: The MCU Dilemma

Research suggests that metropolitan commuter university students are significantly less likely than residential students to be involved in the cultural or intellectual life of their colleges. They have fewer opportunities to explore the many avenues for social involvement or engagement, and have fewer interactions with institutional agents (Chickering, 1974; Pascarella & Chapman, 1983). Through my own experience as a student enrolled in a Pacific Northwest Metropolitan Commuter University and also as an employee at this same institution, I can attest to a disconnection

between student and university. My assumption is that this lack of connection stems not only from a lack of involvement and engagement, but also from underutilized or misunderstood resources and services that contribute to low retention and low graduation rates. For example, at the institution I attended and now work for, our five year retention rate in 2010 for first-time, full-time students was 26.4 percent and 59.8 percent for sophomore or junior year transfer students (Institutional Website, retrieved 2011).

Compared to students at traditional, residential four-year universities, the student population at the MCU I attended had non-academic and extra-college pressures impeding their involvement on campus including full or part-time work, children, spouses, parents, transportation issues, or even difficulties related to property and living space. These pressures taken collectively make it difficult for these students to fully commit to the role of student given the multiple roles of spouse, employee, child, extended family member or any other responsibilities that can complicate their lives. To add to these challenges is the reality that many of these students lack familiarity with the American higher education experience since most of them are the first in their families to attend college. Simply put, as first-generation students they may have not been informed by peers, teachers, administrators and families about the importance of connecting with their institution in a variety of ways outside of the classroom.

The dilemma of the metropolitan university commuter student can be articulated as a struggle to increase academic and social integration (Tinto, 1993) while fostering engagement and thereby enhancing opportunities for a successful four-year college experience. Given the differences in residential and MCU students, it becomes clear that

Metropolitan Commuter Universities must engage with students differently than with their residential counterparts.

Undergraduate Research: Overview and Elements Needed for Success

While there are multiple ways of encouraging student involvement, this dissertation focuses on a particular strategy that I believe is very effective for MCU students (and previous studies confirm this supposition): participation in undergraduate research experiences. For the purposes of this study, undergraduate research will be defined as “an inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline,” which is based on the definition established by the Council for Undergraduate Research (2010). Undergraduate research has existed in some form or another throughout the history of higher education, although the earlier iteration of undergraduate research evolved from faculty effort as opposed to coordinated institutional movement or initiative (Kinkead, 2003).

According to Hu, Scheuch, Schwartz, Gaston Gayles, and Li (2008) concerns about the quality of undergraduate education have prompted calls for reform in student learning during the undergraduate experience. The idea of engaging undergraduate students through participation in research and creative grants gained notable interest, especially after the release of the 1998 Boyer Commission Report which was supported by the Carnegie Foundation for the Advancement of Teaching and recommended the “reinvention” of undergraduate education at America’s research universities (Hu et al., 2008). The authors heavily emphasized the link between undergraduate education and the research mission of a university. More specifically, The Boyer Commission on Educating

Undergraduates in the Research University (1998) describes the need for a capstone experience “that demands the framing of a significant question or set of questions, the research or creative exploration to find answers, and the communication skills to convey the results” (p.27).

Kuh (2008) considers undergraduate research as a “high impact educational practice.” According to Kuh (2008), high impact teaching and learning practices have been widely tested and take on different forms depending on students and institutions. High-impact activities seem to have unusually powerful effects on all students, including students from a variety of backgrounds (Kuh, 2009, p. 695). The high impact practice of undergraduate research has been linked to higher rates of student-faculty interaction; increases in critical thinking and writing skills; greater appreciation for diversity; and higher student engagement overall (Kuh, 2008 & 2009; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007).

The Council for Undergraduate Research (Council for Undergraduate Research, 2010) encourages institutionally supported undergraduate research experiences, inquiry, or investigation designed to help undergraduates make original intellectual or creative contributions to any number of academic disciplines. An undergraduate research project might result in a musical composition, a work of art, an agricultural field experiment, a laboratory science experiment, or an analysis of historical documents. All are designed to increase engagement while contributing to new knowledge. Hu et al. (2008) explain that in most undergraduate research experiences, students build the necessary skills to design and execute a project in the same manner as academics or professionals in their field

perform research or creative work. Regardless of discipline, successful undergraduate research programs are likely to have the following characteristics: 1) faculty mentors; 2) use of progressive learning theories; 3) employment of an apprenticeship dynamic; 4) strong peer mentorship; 5) socialization to life as an academic.

In all undergraduate research experiences faculty mentors provide overall guidance and coaching. Kinkead (2003) states that, “[one] hallmark of undergraduate research is the role of the mentor, a faculty member who guides the novice researcher and initiates the student into the methods of a discipline” (p. 6). Mentors help students adjust to and understand the discipline, provide advice on graduate school and career development and author recommendation letters for graduate school or employment (Merkel, 2003). For students of MCUs who are challenged to find time and opportunities to connect with their academic institution, faculty mentorship plays a pivotal role in facilitating academic engagement tailored to the schedules and comfort level of these metropolitan commuter students.

Undergraduate research programs present unique educational opportunities for students by intentionally designing a structured program with careful scaffolding that engage students while optimizing learning outcomes through the use of progressive learning theory (Hu et al., 2008). Engaging undergraduates in research and creative activities puts into practice constructivist learning theories, experiential learning models, problem-based inquiry, and service-learning approaches (Hu et al., 2008). Progressive student-centered learning approaches employed in these programs build confidence in

undergraduate researchers and inspire deeper levels of academic integration to their campus.

Undergraduate research programs employ an “apprenticeship dynamic” that encourages frequent interaction between faculty and student while simultaneously engaging in the research process (Hu et al., 2008). Apprenticeship necessitates a hands-on approach that provides students with an extremely impactful learning tool and generates experiences as a researcher-scholar of great importance for MCU students who crave the same connections, support and opportunities enjoyed by traditional residential students. This apprenticeship dynamic is the essence of a successful undergraduate research program and through this supportive, encouraging, intellectual partnership between students and other researchers students may apply knowledge gained in the classroom to new questions and problems encountered as researchers (Merkel, 2003).

Successful undergraduate research programs are dependent upon strong peer support systems. Empirical work shows us that highly structured undergraduate research programs with ample peer-mentoring from upper-class undergraduate students who serve as conduits to graduate students and research faculty mentors are the most successful (Kinhead, 2003). For MCU students involved in undergraduate research programs the connections between undergraduate students, graduate students, and research faculty represent a rich resource for students whose natural social capital tends not to include those within the research enterprise of the academy. Such networks are of critical importance to MCU students who consistently work to counter the many challenges that detract from their overall academic engagement in four-year colleges and universities.

Additionally, Hu et al. (2008) describe undergraduate research as serving a socializing function for students in the realm of higher education. Socialization is an active-learning process in which students acquire skills and knowledge to understand the workings of college life and it is an important component of a well-rounded academic experience (Hu et al., 2008). Socialization also plays a significant role in the integration of students to their academic departments and to the on-campus community. Students who are engaged in educationally purposeful activities are likely to be better integrated academically and more likely to experience positive influences toward their goal of degree completion at the institution (Hu et al., 2008). Similarly, Elrod, Husic and Kinzie (2010) have found that the advantage of doing research with a faculty member is that students are able to spend time in the company of professionals and learn firsthand how academic scholars deal with the challenges of research. As a result, students better understand the inquiry process and gain more benefits overall. Students, who may be the first in their family to go to college, will especially benefit from the socialization aspects of undergraduate research since this kind of information is not available elsewhere.

Faculty mentors, progressive learning theory, apprenticeship dynamics, peer mentors and intentional, frequent socialization to life within the academy are all essential components of undergraduate research programs. They are of critical importance to typical MCU students whose persistence is often at-risk due to numerous factors already discussed. Participation in undergraduate research activities positively impacts their degree of academic and social integration within these students chosen school and/or department. Additionally, MCU students are afforded the opportunity of additional

academic and social engagement through working with research faculty and their research group(s), which contribute to retention and ultimately to graduation (Hu et al., 2008). Finally, MCU undergraduates learn firsthand what it is like to be a graduate student before they make the commitment to years of additional study and research (Merkel, 2003), making them better prepared for further education.

Undergraduate Research: Benefits and Challenges

There are several benefits for undergraduates involved in research according to scholars. First, these students are more confident and more fully integrated into their particular campus (Krabacher, 2008); secondly, research enhances their intellectual development (Nagda, Gregerman, Jonides, von Hippel, & Lerner, 1998); thirdly, they are more likely to pursue graduate work or the professoriate; and finally, there are significant benefits for those who are first-generation college students (Hathaway, Nagda, & Gregerman, 2002). This section discusses the research behind each of these three benefits then goes on to discuss challenges inherent in undergraduate research.

A study by Krabacher (2008) found that undergraduate research experiences lead to increased academic and personal confidence while helping students feel more integrated into the life of the university in a variety of ways. Key to this integration was becoming involved in a community of researchers that provided students with a sense of a physical and metaphorical “place.” The importance of the notion of “place” was emphasized by this scholar who posited that the “research experience is impacted by much more than just a student’s discipline or general academic area” (p. 133). Students from this study felt that they had a better understanding about the comprehensive nature

of the academy. Similarly, Martinez (2009) found that through undergraduate research participation, students had increased self-confidence and a further enhanced understanding of the purpose and process of research in their fields.

Cognitive and intellectual gains are also counted as benefits of undergraduate research. A 1998 study by Nagda, Gregerman, Jonides, von Hippel and Lerner showed that undergraduate research provides students with opportunities for continued discussion of intellectual issues outside of the classroom by virtue of the tasks they shared with their faculty sponsors and student colleagues. They found that being a part of a research setting extended students' intellectual challenges in ways that the classroom did not. Research discussions in the peer research groups enabled students to look at their research from multiple perspectives while providing students with an accessible community of peers who hold similar interests. On a broader level, they found that encouraging undergraduate participation in research had implications for the quality of undergraduate education in that it was possible to streamline both the educational and research missions of a university for the benefit of undergraduate students (Nagda, Gregerman, Jonides, von Hippel, & Lerner, 1998).

Participation in undergraduate research programs also alters career trajectories towards pursuits within the academy. A study by Hathaway, Nagda, and Gregerman (2002) revealed that students who were involved in undergraduate research were more likely to pursue graduate education, pursue post undergraduate research activity, and use faculty for job recommendations than students who did not participate in undergraduate research. They also stated that undergraduate research programs can and should be

geared toward those who have faced, or could potentially face, barriers to academic opportunities and success. These impacts are shared throughout the student body regardless of level of academic performance or career motivation (Hathaway, Nagda, & Gregerman, 2002).

According to the researchers, undergraduate research and faculty-student interaction may involve students in smaller communities or may offer them closer contact with faculty not easily accessible at large public institutions. It is reasonable to assume, then, that MCUs who sponsor undergraduate research programs can intervene effectively to retain and promote the success of their students while tacitly encouraging them to pursue careers within the academy. Hathaway, Nagda, & Gregerman (2002) also noticed that underrepresented students who participated in undergraduate research were more likely to pursue graduate education and participate in further research activity than were their non-research counterparts (Hathaway, Nagda, & Gregerman, 2002). Hathaway, Nagda, and Gregerman (2002) stated that, “undergraduate research opportunities can level the playing field for students who may potentially be at a disadvantage to pursue professional education” (p. 626).

Indeed, the prospects of increased social mobility for under-represented and first-generation students from all racial and ethnic groups are part and parcel of undergraduate research program participation. Ishiyama (2002) found that early participation in collaborative research with faculty is particularly beneficial to first-generation college students. Although the number of first-generation students who participated in the study was small, the evidence suggests that early participation in collaborative research with

faculty leads to perceived improvements in the analytical skills of first-generation students, a population that is generally much less likely to integrate academically than students who have college graduates in their immediate families (Ishiyama, 2002).

Additionally, Hu et al (2008) note several collateral benefits including: more time spent with the faculty mentors; quality exposure to a variety of research activities; involvement in designing the project and decision making; and preparation for carrying out various research-related tasks. All of these benefits helped students in undergraduate research programs feel that they are doing “real” research while interacting with their mentors and peers as a part of a team and learning community. Essentially these programs work as mechanisms that pull students closer to the academic “main vein” of their campus that results in superior levels of what Tinto (1993) called academic and social commitment and ultimately to superior involvement as compared to non-research students.

In another study, Ishiyama and Hopkins (2002/2003) assessed the performance of an undergraduate research program designed to serve first-generation, low-income students by promoting their retention to, and timely graduation from, college. They found that this program provided a valuable service by promoting faculty-student and student-student interaction via collaborative research with great success. These findings were robust even as the researchers controlled for academic ability, goals/ambition along with college generation and income status (Ishiyama & Hopkins, 2002/2003). According to Ishiyama and Hopkins (2002/2003) these programs represented the ideal fusion of social and academic integrative goals, which resulted in higher retention, graduation, and

graduate school placement rates for this group of low-income, first-generation, underrepresented undergraduate students.

Previous studies have shown that non-traditional students and students from under-represented or at-risk populations have gained significant benefits from participating in undergraduate research experiences with faculty mentors (Hathaway, Nagda, & Gregerman, 2002; Hu, Scheuch, Schwartz, Gaston Gayles, & Li, 2008; Ishiyama & Hopkins, 2002/2003; Krabacher, 2008; Martinez, 2009; Nagda, Gregerman, Jonides, von Hippel & Lerner, 1998).

There are some challenging aspects of the undergraduate research experience. The literature points out the following challenges: dealing with “downtime” in between major tasks of a study, negotiating feelings about the inevitable failures that accompany the research process, learning about and having to navigate academic politics, and the fact that research is unpredictable (Hu et al, 2008). More importantly there are climate-related financial, faculty, structural and perceptual factors that can also exert negative influences on undergraduate research programs.

Not all undergraduate research programs are able to persevere in every higher education institutional climate or landscape. In unfriendly climates barriers exist that include the lack of resources necessary to bring research and labs to campus or a lack of interest and support from faculty, administration, or the students themselves (Hu et al, 2008). Faculty buy-in is not possible if the faculty do not understand the potential monetary or intrinsic rewards of work with undergraduates in research. Another challenge takes the form of weak structural support caused by the failure of

administration leaders to see the value of undergraduate research programs. These failures are manifested in not assigning space (rooms or offices), flaccid technological support, inflexibility in teaching assignments or advising hours and finally, refusals to help support the grant writing process required to fund the operation. For faculty and administrators there exists the negative perception that undergraduates lack appropriate background knowledge and training to conduct research, and are less capable of engaging in the research process.

Finally, students may not be exposed to the benefits of undergraduate research programs and, as a result, fail to show interest or willingness to participate as apprentice scholars (Hu et al., 2008). Even given these barriers to student participation, most scholars agree that students from a wide range of ability levels and life-experiences can accrue long-term benefits from participating in undergraduate research (Hathaway, Nagda, & Gregerman, 2002; Hu et al., 2008).

However, even after noting these potential drawbacks, the majority of research results show that undergraduate research program benefits outweigh the negatives, and if administrators are mindful of the particular challenges with such programs, improvement of the overall quality and impact of these research programs will likely continue.

Solving the MCU Dilemma: Research Questions

As noted in the beginning this study, MCUs have unique missions and cater to a population vastly different from traditional, residential colleges and universities. MCU students face barriers to engage with their campus due to the multiple roles and responsibilities many such students have. Could an undergraduate research program

designed in ways that are mindful of the realities of MCU students successfully engage students who have demonstrated academic potential? In an attempt to answer this question, this dissertation used case studies informed by narrative and grounded theory analysis to explore the lived experiences of female, first-generation, low-income students who attend a metropolitan commuter university and participated in a structured undergraduate research experience.

This dissertation investigated how a MCU participated in a nationally known, structured undergraduate research experience in order to increase academic and social integration for a selected group of first-generation, low-income, metropolitan commuter student by conducting a qualitative inquiry into an existing undergraduate research program at a Pacific Northwest MCU. As mentioned earlier, I explored narratives of five, female undergraduate researchers in the program called the West Scholars Program at Pacific Northwest Metropolitan Commuter University (PNMCU). The following questions guided the investigation:

- 1) How effectively does the West Scholars program engage PNMCU female, first-generation, low-income undergraduates in the academic life of this institution?
- 2) Secondly, what are the specific ways in which the West Scholars program engages female, first-generation, low-income college students through research?
- 3) What are some of the issues that inhibit a female first-generation, low-income college student's ability to fully engage in the experience of research and are

these barriers to participation produced by the program, PNMCU, the metropolitan area, or dynamics from their own lives?

Before formally introducing the site, sample, and the participants for this qualitative case study it is helpful to explore the literature that provide a context for the study and analysis that follows.

Chapter 2

Literature Review: The Metropolitan Campus and Student Population

Attempts by academics to understand the MCU along with the lives, learning styles, and ambitions of its students can be described by two broadly defined bodies of academic literature. The first strand of literature relates how urban universities came to be, followed by demographic descriptions of contemporary urban students. The second strand of literature will present the work of scholars who have built upon our understanding of the development process of first-generation, low-income, commuter undergraduates.

Emergence of the Contemporary Metropolitan University

The development of the contemporary metropolitan university began in the social shift in attitude toward higher education that coincided with the shift in American population that occurred as industrialization took hold and as urban centers grew. During two historical eras referred to as the “University Transformation Era” and “the Mass Higher Education Era” federal legislation mandated that universities and colleges devote time and resources to applied, practical research with its Morrill Land-Grant Acts of the late 19th century and G. I. Bill of the mid 20th century (Cohen, 2009; Geiger, 2005). It was at this time students began to move away from traditionally established college to more convenient locations where they could earn a degree to improve their life situations, rather than enroll in a college to experience a proverbial stepping-stone into adolescence.

However, it should be noted that not all metropolitan universities are similar, which further complicates the study of these institutions. No one definition can suffice for

these schools. They are as unique as the regions they are located in and within the urban centers they serve. The following definition is an attempt to summarize them in general terms, but is still unable to fully capture the spectrum of characteristics that are associated with urban or metropolitan universities. For the purposes of this paper, I will rely on the definition of main contributors to this field for their interpretations of the definition of metropolitan commuter universities. The following description is also the type of institution I have specifically witnessed in my schooling and in my work in higher education and that is the focus of my dissertation proposal.

Contrary to the collegiate ideal of setting oneself apart from the distractions of the city life, the metropolitan university places itself squarely in the middle of this milieu and reaches out to the community that surrounds it. It is the metropolitan university's philosophy that distinguishes it from its counterparts (Riposa, 2003). Hathaway, Mulholland and White (1990) describe it as an interactive philosophy where urban universities establish significant, symbiotic relationships with their metropolitan areas.

Many scholars agree that a metropolitan university is not defined solely by its location (Hathaway, Mulholland & White, 1990; Lynton, 1995; McNamara Horvat & Shaw, 1999; Riposa, 2003; Seaberry & Davis, 1997). While geographically they are found in the major cities, they are more specifically known for their involvement and interconnectedness as being a part *of* a city (Hathaway, Mulholland & White, 1990). The most noticeable difference from traditional colleges is the vision that a metropolitan institution develops for itself. This vision leads to a specific mission statement that tends to focus on immediate and anticipated solutions for current and evolving problems in

society (Seaberry & Davis, 1997). Also, a fundamental underlying philosophy of a metropolitan university includes democracy in education. Access to a metropolitan university is not privileged for the traditional student or the affluent but rather available to city dwellers who otherwise would not have access to formal university programs (Seaberry & Davis, 1997). By responding to the needs of society, the university has transformed itself from a small elite training ground for the ministry to a large complex system of education serving thousands of students every year; these changes due in substantial part to changes in the demographics of the country (McNamara Horvat & Shaw, 1999). More recently, access to postsecondary education is more democratized and expansion of educational opportunities across class lines has forced changes in institutional delivery systems; “foremost in this shift has been the rise of the urban university” according to Riposa (2003, p.55).

The process of urbanization itself in the US was a vigorous and varied process, but with certain recurring patterns and consequences according to Brownell (1995). Technological advances in agriculture and engineering reduced the need for farm labor. Also, increased industrialization mostly around cities demanded continually enlarging workforces, and urbanization became the “defining trend in the twentieth-century social and spatial arrangements” (Riposa, 2003, p. 55)

Brownell (1995) explains that the shaping and reshaping of urban America gained momentum after WWII, at the same time that American higher education was also transformed. He reported that “a wave of returning vets, impelled by government benefits, flooded the housing market, stimulating the constructing of millions of new

homes, most of them on the fringe of the established cities.” He continued by stating that, “they also flooded the nation’s college classrooms and brought a booming business to maternity wards” (p. 18). He added that at this time the greatest democratization of higher education in American history occurred: the expansion of the metropolitan region which resulted from migration and federal support.

Since WWII there has been an increase in the volume and the cultural and economic backgrounds among students applying to and graduating from colleges and universities (Cohen, 2009). By the 1960s, every major city in the US had at least one degree-granting institution, offering a range of programs and degrees to both traditional and non-traditional students (Riposa, 2003).

More than any other type of post-secondary institution, metropolitan universities approach the city as a vast educational laboratory from which both faculty and students can learn (McNamara Horvat & Shaw, 1999). According to this way of describing the urban college and university, the city becomes the center of learning. It is a place to foster student experience through jobs, internships and service learning, and also a laboratory to study community and city issues (McNamara Horvat & Shaw, 1999). The urban university impacts cultural, political and economic development in local areas utilizing the resources provided by their metropolitan surroundings, a unique feature of urban universities (Rhodes & Lamar, 1990/1991; Riposa, 2003).

The cultural and symbolic foundations of the metropolitan commuter university are not steeped in the organizational saga of an institution like in traditional residential schools. Rather, the culture centers on resolving the current issues of society and the

school's place within an urban center. No longer is the postsecondary experience perceived as a place for the privileged; society views higher education differently today. Not only does the metropolitan commuter university culture differ from traditional schools, so do their student populations. The next section will expand on this topic and discuss in detail the metropolitan commuter student demographic and the needs of this population.

Metropolitan Commuter University Student Characteristics

As the institutions in higher education transitioned and expanded so did the demographics of the student population. From the mid-1940s until the mid-1970s, the proportion of young people attending college tripled from 15 to 45 percent; undergraduates grew almost fivefold, graduate students almost ninefold (Geiger, 2005). In recent history, the growth in higher education is most notable with female students. According to the U.S. Department of Education, National Center for Education Statistics (2011), the number of enrolled females rose 40 percent between 1999 and 2009. Dey and Hurtado (2005) believe that a typical American college student in the twenty-first century is likely to be female, with women constituting 55 percent of first-year students pursuing a baccalaureate in 2001, compared to 44 percent in 1961.

Although creating a richer educational environment, student diversity also generates its own set of unique problems and students at metropolitan commuter universities have specific challenges (Franklin, Cranston, Perry, Purtle & Robertson, 2002). By the beginning of the twenty-first century, the increasing numbers of non-traditional, minority, female students topped the list of most significant changes in higher

education. These students have a wide and uneven background in college preparation according to Riposa (2003). Most urban universities have increased the diversity of their student populations in recent years so the students on their campuses will often reflect the increasing diversity of demographic trends in the cities served by universities (Franklin et al., 2002).

An increasing number of students with varying family backgrounds, socioeconomic classes, ages, attitudes, race and ethnicities have also enrolled in America's colleges and universities. It is expected that the demographic profile of students in higher education will continue to evolve over the next decade. Many of these students will come from low-income homes and be the first in their families to pursue postsecondary education (Terenzini et al., 1996).

In the past, definitions of "typical" university students described co-educational residents attending school great distances from home. They tended to be younger, single, not involved with work off-campus, able to make steady progression toward a four-year degree, while primarily attending daytime courses (Riposa, 2003). However, Riposa (2003) explains that metropolitan universities tapped a different market of older first-time or returning students, many supporting families, and most working part-time or full-time jobs, yet still dependent on some form of financial aid. Most of these students are place bound and desire education for career advancement at an institute within commuting distance. Their status as place-bound, commuter students is shaped by economic factors, employment obligations, family responsibilities, or other life circumstances defining where these students must attend college (Seaberry & Davis, 1997).

College is one of many competing priorities and they often need an excess of four years to finish. Metropolitan universities have a large part-time population and data indicate that most metropolitan universities do not reach a 40 percent grad rate until eight or nine years after first enrollment (Smith, Gauld, Tubbs & Correnti, 1997). Student populations often appear to be less involved at metropolitan commuter universities than at other institutions. Several factors might explain this phenomenon, especially for commuters for whom being a student is only one of many demanding roles and responsibilities (Smith et al., 1999). Apparent lack of campus involvement also could be due to the many social, cultural, and intellectual opportunities existing in the city where the university is located. With a variety of activities, students easily become much more involved in off-campus events and culture. Even though urban universities can and do have large student populations, the number is relatively small compared with the total number of people in an urban environment (Smith et al., 1997).

Metropolitan commuter universities often recruit more heavily from the local communities than outside their own metro sphere. Similarly, these universities face enormous pressure to admit marginally acceptable students who increasingly turn to the university to compensate for the “declining quality of urban, public education” (Moneta, 1997, p. 68). Students at metropolitan commuter universities come from such varied backgrounds that the academic community lacks a definition. As a result, institutions must work to meet very diverse sets of expectations, regardless of whether the students are residential or commuting (Hoover, 1997). According to the literature, the importance of satisfaction with the academic program is even greater in a metropolitan commuter

university where the proportion of residential students is relatively low. In the absence of all the activities associated with residential life along with traditional elements of the collegiate experience, academics “becomes even more central” according to Levitz and Noel (1990).

Through a project titled “Restructuring for Urban Student Success,” Torres, Glode, Ketcheson, and Truxillo (1999) found that students in their study reported that they planned to work at least part-time while enrolled in college and would commute to campus while living with parents or relatives. More than half of the participants in their study were first-generation college students. Additionally, while the demographics and residential status of the students was different than other students in other contexts, their expectations for college were not noticeably different. These students expected to find a traditional classroom environment with lectures, discussions, and required papers. This point is further evidence of the importance of the in-class experiences of MCU students.

Franklin, Cranston, Perry, Purtle, and Robertson (2002) report that metropolitan students desire a sense of belonging on the college campus, yet students find that professors were not available, and that their classes were too large. These students regret the lack of time they have for course preparation and out-of-class activities. These factors result in students feeling disconnected from their universities.

One of the reasons urban students may feel disconnected from the metropolitan commuter university community is because they are not familiar with the collegiate culture. Students who are the first in their families to attend college may not know the rules or traditions in higher education, or the strategies to complete college. Additionally,

those students who are low-income or commuters also face challenges that could result in disconnection from school; these students will be discussed in the following section.

First-Generation and Low-Income College Students. The literature on first-generation students, or students whose natural or adoptive parents did not complete a baccalaureate degree, and low-income students, or students whose family income does not exceed 150 percent of poverty level established by US Census Bureau (United States Department of Education, 2010), notes that these individuals face different challenges in higher education compared to their multi-generational and high-income peers. First-generation and low-income students' expectations for college, knowledge of the culture of higher education, and success in the classroom may be different due to their experiences prior to college (Terenzini et al., 1996; Walpole, 2003). Literature describe first-generation, low-income students as having sparse academic preparation, and that these students complete significantly fewer credit hours across three years of study, worked significantly more hours per week, and were significantly less likely to live on campus than other students (Terenzini et al., 1996; Walpole, 2003). They are more likely to delay entry into postsecondary education, to begin college at two-year institutions, to commute to campus, to take classes part-time while working full-time, to stop in and out of college, and to need remedial coursework (Engle, Bermeo & O'Brien, 2006). For many students graduation occurs six to ten years after the date of matriculation. (Seaberry & Davis, 1997).

Low-income students have lower incomes and lower levels of educational attainment upon matriculation into a four-year college. After earning their baccalaureates,

they are more likely to work full-time than attend graduate school, and they demonstrate lower educational aspirations nine years after college entry (Douglass & Thomson, 2008; Walpole, 2003; Zusman, 2005). According to Terenzini et al. (1996), first-generation and low-income students are also less likely to experience many of the conditions that research indicates are positively related to persistence, performance, and learning such as the theoretically-established factors that lead to successful student involvement and development. Compared to their high-income counterparts, low-income students were more likely to be a member of a historically underrepresented racial and or ethnic group, have parents with a high school diploma or less, come from a single-mother home, and make the decision to attend college without consulting a parent (Terenzini, Cabrera & Bernal, 2001).

Pascarella, Pierson, Wolniak, & Terenzini (2004) analyzed longitudinal data from 18 four-year colleges to better understand differences between first-generation and other college students and found that level of parental postsecondary education has a significant unique influence on the academic selectivity of the institution a student attends. According to their data, first-generation students tended to be enrolled in institutions that, on average, were less selective than institutions where students, whose parents held high levels postsecondary education, attended (Pascarella et al., 2004). First-generation students are more likely to list being able to work while attending college and being able to stay close to home as very important reasons for their choice of institution (Engle, Bermeo & O'Brien, 2006).

On the surface, the educational transition for first-generation students may seem much like that of traditional students transitioning into “traditional schools.” However, first-generation students not only face barriers to their academic and social integration, they also confront obstacles with respect to cultural adaptation due to discontinuities between the culture of their families and the culture of the academy (Engle, Bermeo & O’Brien, 2006). Oldfield (2001) notes that for first-generation poor and working-class college students, surviving the social challenges of higher learning can be as demanding as academic success.

First-generation and low-income students have lower levels of extracurricular involvement and interaction with peers in non-course contexts (Pascarella et al., 2004). Supportive of these findings, a study by Wood-Wyatt (2008) revealed non-traditional student participation in campus life was limited to interactions and engagement with faculty about classes, assignments, and academic issues. Interaction and engagement with other students was most often the result of classroom discussions.

Wood-Wyatt (2008) writes:

Participants in this study confirmed the need to be able to interact and engage with warm, friendly, supportive faculty and staff. However, findings of this study revealed that they felt detached and had difficulty dealing with staff members resulting in further disengagement with the institution and overall dissatisfaction with the college (p. 111).

Typically first-generation, low-income students are forced to work full-time, or very close to it, in order to pay for tuition. This time at work causes them to spend decreased

time on campus and causes them to lose valuable opportunities to engage with students, faculty, campus staff (Gupton, Castelo-Rodriguez, Martinez & Quintanar, 2009). Yet, when afforded the opportunity to engage, first-generation students experience greater benefits from extracurricular involvement and peer interaction than other students, even though they were significantly less likely to be engaged in these activities during college (Gupton et al., 2009).

According to Pike & Kuh (2005), students may be less engaged because they know less about the importance of engagement and about how to become engaged compared to second or multi-generation college students. First-generation students have sparse knowledge of and almost no prior experience with college curricular, co-curricular and extracurricular activities due to the absence of practical exposure through family members and other role models (Pike & Kuh, 2005).

In regard to low-income students, social-class differences in college enrollment patterns may be attributable to several opportunities and constraints that are introduced both prior to and during college enrollment (Goldrick-Rab, 2006). Students from disadvantaged family backgrounds and those with poorer high school preparation are following pathways in college that are unlikely to lead to successful completion of degrees, according to Goldrick-Rab (2006). First-generation students were twice as likely to leave college without earning a degree compared to students whose parents had college degrees, 43 versus 20 percent respectively (Engle, Bermeo & O'Brien, 2006).

Furthermore, Gianoutsos (2011) found that students of lower socioeconomic status are more likely to be commuter students. He goes on to explain that both first-

generation students and low-income students often times cannot afford to live on-campus, face many obstacles pertaining to financial aid, and have to pursue employment to fund their college expenses. The following section describes in detail the characteristics of metropolitan commuter students—another layer of the metropolitan commuter university population.

Commuter Students. First off, it is important to note that not all commuter students are the same; there are dimensions within the group itself that adds to the dynamic experience of students who commute ((Dugan, Garland, Jacoby & Gasiorski, 2008). Yet, no matter what the educational goals are of commuter students or where they live, or what type of institution they attend, the fact that they commute influences their collegiate experience. Since the end of what Cohen (2009) called the “Emergent Nation Era” which includes time from the end of the Revolutionary War to the end of the Civil War, residence halls have been an important aspect of campus life. Smith et al. (1997) explain that even at predominantly commuter schools, the tradition of residential life has been responsible for developing attitudes, policies, and practices. As previously discussed, residence halls and the greater involvement in campus life created by living on-campus are influential socializing and educative agents.

Pascarella and Terenzini (1991) point out that commuter institutions present students with a substantially different social-psychological environment than residential institutions. They explain that a major implication of this is that the commuter institutions’ social system may “simply not be potent enough to play more than a relatively trivial role in the persistence of educational attainment process” (p. 402). The

significance of this inequality becomes all the more apparent since more than half of America's college students commute, and even more are likely to do so in the future (Pascarella, 2006; Pascarella & Terenzini, 1991). In agreement, Jacoby (1995) predicted that the vast majority of the students in the fastest growing college-going demographic will continue to be commuters, for reasons of age, lifestyle, family circumstances, and financial necessity. Yet despite large number of commuters on college campuses, the dominant residential tradition of higher education remains intact and unresponsive to commuter needs. Jacoby and Garland (2004/2005) argue that the unique needs of commuter students have been "neither adequately understood nor appropriately incorporated into policies, programs, or practices" (p. 70).

Commuter students are defined as those who do not live in institution-owned housing (Jacoby, 1995). The time that commuting students have available to them for campus involvement is limited (Schuh et al., 1991/1992). For residential students, home and campus are one in the same. For commuter students, the campus is a place to visit, sometimes for very short periods of time (Jacoby, 1995; Jacoby & Garland, 2004/2005).

Jacoby (1995 & 2004) and Jacoby and Garland (2004/2005) identified four common concerns of metropolitan commuter students which include the following: transportation issues, multiple life roles, integrating support systems, and developing a sense of belonging. Each involves a complex set of problems for the student and indicates how institutions must adapt from the old residential model. According to Jacoby (1995 & 2004), institutional responses to the student-as-commuter generally have been fragmented

attempts to deal with immediate, specific problems rather than long-range and comprehensive issues.

Educators have assumed that commuters are like resident students except that they live off-campus and that similar social and academic offerings are equally appropriate for all students (Jacoby & Garland, 2004/2005; Krause, 2007; Silverman, Aliabadi & Stiles, 2009). This assumption has not served commuter students well, according to Jacoby (1994). She argues that her research and other major studies have identified commuters as being at greater risk of attrition, and that there is a need to improve the quality of the education experience for commuter students at all types of institutions.

In her study, Clark (2006) found that metropolitan commuter students' college experience consists of negotiating a series of obstacles, accepting opportunities, and dealing with changes. An individual student may experience and make meaning of college in different ways from his or her peers at the same school. As a result, commuter student success strategies can be highly inventive. The lesson from Clark's study is that metropolitan commuter students do not always behave in ways the educators may expect them to; "they do what they feel they have to in order to succeed" (p. 4).

Clark (2006) writes that metropolitan commuter students may be isolated as evidenced by students who were surrounded by few people they could talk to about their experiences in college. Commuter students also have to "start over each semester," explains Clark (2006) who wrote that "the messy reality is that students adapt repeatedly throughout college" (p. 5). This is especially true for metropolitan commuters for whom

there is limited continuity from one semester to the next semester (Clark, 2006). Because they lack a common ongoing experience such as might be found on residential campuses, they found it difficult to sustain classroom-based friendships from one semester to the next, when class schedules changed.

In a study focused on 14 female commuter students at a large, urban institution, Chung-Joo Masse (2009) found that the role of “classroom” in creating a welcoming environment to commuters cannot be overstated since it may be the only way commuters can be connected to campus. She emphasizes that the value of the classroom experience exceeds the mere transmission of knowledge. Peer and faculty interaction in the classroom can offer multiple points of connection for otherwise disengaged students (Chung-Joo Masse, 2009).

Moreover, traditional campus activities and events can make it challenging for commuter students to integrate their already established off-campus support system: families, friends, co-workers. Therefore students feel like they need to further divide their time between multiple priorities (Silverman et al., 2009).

Without doubt, the topic of enhancing the involvement and persistence of commuter students is complex. Commuting is negatively linked to the attainment of the bachelor’s degree and enrollment in graduate and professional school due to its perceived negatives effects (Jacoby & Garland, 2004/2005). This perception, coupled with the prevailing residential traditions of American higher education, makes reform or improvements in this area difficult.

In 1994, Pacheco called for the reexamination of the Astin's notion of the "involved student" and following four elements in Astin's definition: the student devotes considerable energy to studying, spends a lot of time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students. Pacheco's request should be reiterated today as reform is needed at metropolitan universities if we are to be successful in involving commuting, working, first-generation, and low-income students with limited free-time and discomforting feelings about the culture of the academy. In agreement, Longwell-Grice and Longwell-Grice (2007-2008), suggest that colleges need to "be more strategic and systematic in finding ways to develop faculty-student interactions for first-generation, working class students."

The factors and characteristics of successful student involvement as outlined by Astin (1977) and Tinto (1975) may be widely agreed upon within the field of higher education, but they are not easily attained on all American college campuses, specifically metropolitan commuter universities. The need for innovative involvement practices for metropolitan institutions is apparent and I propose that undergraduate research may be an effective vehicle for metropolitan commuter student involvement.

Undergraduate Research and Metropolitan Commuter Student Involvement

As mentioned earlier, existing literature supports the idea that undergraduate research experiences provides all students with a collaborative peer community, increased faculty interaction in the form of mentorship or apprenticeship, progressive learning experiences, and socialization into the culture of the academy (Hathaway, Nagda & Gregerman, 2002; Ishiyama & Hopkins, 2003; Lancy, 2003; Merkel, 2003).

Similarly, Jacoby (2004) believes that there have been steps in the right direction for the inclusion of metropolitan, commuter students and that one area of improvement could occur with undergraduate research opportunities. Jacoby (2004) believes that all students, but especially commuter students, should have a faculty advisor or mentor to work with closely and that working with a faculty mentor in conducting research is one of the most stimulating and rewarding undergraduate experiences. Undergraduate students can assist faculty with basic tasks while experiencing the excitement of working on the creation of new knowledge.

Many higher education institutions are establishing centers that promote and support undergraduate research. Such support includes training faculty to involve undergraduates in research, small grants for research projects that include undergraduates, and seminars that educate students about research techniques (Jacoby, 2004). Developing opportunities for metropolitan students to interact with their college peers and faculty and experience a sense of community is particularly important on commuter campuses. Undergraduate research can be one of the ways to make this happen.

Encouraging metropolitan, commuter students to participate in structured undergraduate research experience such as the West Scholars Program at PNMCU is a particularly effective strategy to increase involvement in a more direct way. As mentioned in chapter 1, undergraduate research has been beneficial to the types of student populations that predominantly attend urban universities such as first-generation, low-income, and non-traditional college students (Hathaway, Nagda, & Gregerman, 2002;

Hu, Scheuch, Schwartz, Gaston Gayles, & Li, 2008; Ishiyama & Hopkins, 2002/2003; Krabacher, 2008; Martinez, 2009; Nagda, Gregerman, Jonides, von Hippel & Lerner, 1998). Specifically, the West Post-baccalaureate Achievement program seeks to provide first-generation, low-income, and underrepresented students with the opportunity to conduct undergraduate research with a faculty partner during a summer research internship. Other program objectives include improving these students' graduation rates and encouraging first-generation, low-income students to enroll in and successfully complete doctoral degrees.

Chapter 3 outlines the study which sought to explore the lived experiences of female, first-generation, low-income students who attend a metropolitan commuter university. This study investigated a structured undergraduate research experience called the West Scholars Program, and how the program exerts influence on their academic and social involvement. A qualitative case study with a narrative and grounded theory analysis was selected as the most appropriate approach to exploring this topic and addressing the guiding research questions.

Chapter 3

The West Scholars Program:

A Qualitative Study of Five Female Undergraduate Researchers

Introduction & Topic Selection

When I was an undergraduate at a metropolitan commuter university I would often walk by the aforementioned billboards and walls covered with signs that encouraged me to “Get Involved!” It was an exciting prospect, to be fully engaged in my university as a member of the student government or as a president of an academic group. However, like many metropolitan commuter students, I did not know when or how I would fit such activities into my already busy life which I felt belonged in two spheres: on-campus and off-campus. I felt like I had been disconnected from a large, very valuable part of college because I had to divide my time among off-campus responsibilities such as work and family life, and on-campus student life such as networking, socializing, meeting with professors, attending class and studying. In hindsight, this disconnection between my real world and my academic/student life fills me with regret and serves as inspiration for this research proposal. During my undergraduate years I did not realize how on-campus student life could have had such a profound impact on life in the future.

Now as a program administrator standing in the other corner of the academic halls, I am the one encouraging students to be involved on campus. Since it is now a part of my job, I feel obligated to encourage students to do the very thing that I had such difficulty with as a metropolitan commuter student. Yet, I am torn between encouraging

MCU students to drastically increase their on-campus involvement in order to maximize their undergraduate experience and tempering my encouragement for their involvement knowing the importance of the multiple responsibilities they try to meet every day outside the walls of academia. Simply put the conundrum was this: shall I blindly encourage students to “get involved” because doing so within colleges and universities is the norm, or should I make a conscious effort to understand MCU student involvement and investigate strategies that could maximize the engagement of these students while acknowledging the importance of their off-campus obligations? I decided to do the latter, and as part of my Master’s degree culminating examination I conducted a pilot qualitative study that sought to understand how first-generation, low-income female undergraduates benefited from undergraduate research opportunities designed to encourage them to enroll in graduate study. The principle lesson I learned from this pilot study is that the participants of the study believed that their involvement in an undergraduate research program increased their understanding of the academy’s culture. Attached to this new cultural knowledge, the undergraduate research program increased their confidence for applying to and being accepted into graduate school after completing their undergraduate degrees. But, I still was curious about how specifically the program worked to simultaneously acculturate and empower these students. The findings from this pilot study lead me to further inquire about a broader question regarding the degree to which undergraduate research programs specifically shape MCU student involvement.

In this study I explore a specific sub-group of students selected for an undergraduate research program experience. Specifically, I was concerned with how

female first-generation, low-income undergraduates at a metropolitan commuter university negotiate their involvement within this metropolitan commuter university context and how a structured undergraduate research program exerts an influence on their experience.

The research questions that guide my study are:

- 1) How effectively does the West Scholars program engage PNMCU female, first-generation, low-income undergraduates in the academic life of this institution?
- 2) Secondly, what are the specific ways in which the West Scholars program engages female, first-generation, low-income college students through research?
- 3) What are some of the issues that inhibit a female first-generation, low-income college student's ability to fully engage in the experience of research and are these barriers to participation produced by the program, PNMCU, the metropolitan area, or dynamics from their own lives?

The following sections outline the research design for this study, by describing the MCU from which the data were collected, the undergraduate research program that the study participants were enrolled in, and the research method employed, including sample selection, data collection strategies and analysis. Also included in this chapter will be an explanation of how a special exemption for data collection was granted by the MCU Institutional Review Board that allowed for an expedited process, as well as a statement of positionality for the researcher. Finally, the limitations present in this

proposal will be explained along with techniques used to increase the study's rigor and validity.

The findings from this study will not only advance knowledge in the area of student involvement, undergraduate research, and metropolitan commuter universities; the results are especially important to my role within the undergraduate research program. Long term implications of this study will also help inform the work of undergraduate research programs both locally, regionally and nationally.

Pacific Northwest Metropolitan Commuter University (PNMCU)

Pacific Northwest Metropolitan Commuter University (PNMCU) was selected as the setting for this study. The campus is located in the heart of a Pacific Northwest urban environment which is the largest and most diverse such environment in the state. Within its residing state, PNMCU is known for its diverse student population and contains the largest number of graduate and undergraduate students within the public university system to which it belongs. The Carnegie Foundation for the Advancement of Teaching categorizes PNMCU as a "large four-year university with high research activity" that is primarily non-residential and has a high transfer-in rate (The Carnegie Foundation for the Advancement of Teaching, 2011).

During the academic year used for this study, the institution recorded an enrollment of 20,515 undergraduate students for the Fall of 2008 with 12,904 (62.9 percent) enrolled full-time and 7,611 (37.1 percent) enrolled part-time. The average age of a PNMCU undergraduate was 25.2 years. During the year there were 10,939 (53.3 percent) females enrolled compared to 9,576 (46.7 percent) males (Institutional Website,

retrieved 2011).

PNMCU is situated geographically in an urban environment, and primarily serves commuter students from the metropolitan region, as well as communities strewn throughout the state and neighboring states. Its geographic layout features a seamless relationship between the institution and the surrounding metropolitan area where citizens consistently intermingle with PNMCU students, staff, and faculty.

Characteristics of the PNMCU Student Population

According to a study of the PNMCU entering class of 2000, one third of the student population were low-income, first-generation college students. Roughly 76 percent planned to work [36 percent work 16 to 25 hours weekly]; 43 percent planned to earn a Master's degree as highest degree, and 27 percent planned to seek only a Bachelor's degree (PNMCU Entering Student Survey, 2000). Students who work full-time correspondingly have less time to spend studying, yet students at PNMCU are working, often jeopardizing their academic standing because of their need for money. Results from this study of entering students at PNMCU in fall 2000 found that paying for education was of prime concern to such an extent that academic performance was secondary. This trend of financial concern is on the rise; data show that in Fall 2011 of exactly 1,040 of the new entering PNMCU students enrolled in the required first-year general education program, 482 or 46 percent were first-generation college students. Additionally, 54 percent of these entering students will work 20 hours or less while attending school, and 30 percent planned to earn a Master's degree as highest degree, 10 percent planned to earn a PhD, and 31 percent planned to seek only a Bachelor's degree

(Unpublished PNMCU Prior Learning Survey, 2011).

The Dr. Henry Avery West Post-Baccalaureate Achievement Program

In 2003, the metropolitan commuter university was awarded the Dr. Henry Avery West Post-baccalaureate Achievement program through the US Department of Education. The program is designed to inspire urban, first-generation, low-income students to succeed at the undergraduate level and proceed to graduate study ideally culminating in a Ph.D.

For 40 years Dr. Henry A. West worked as an inventor and professor at a well-known research university. Concerned about equality and representation of minorities in higher education, The West Program is designed to encourage, nurture, and train talented low-income, first-generation, women and minorities students in ways that will help them not only succeed at PNMCU but send them on a trajectory towards graduate study. PNMCU was an ideal site for the West Program. Students at PNMCU are working, often jeopardizing their academic standing because of their need for money. Thus far the program has proven effective at giving these first-generation students the kind of support needed to excel.

In a study done to compare academic performances between 2006 West students and their peers at PNMCU, the West scholars had a higher graduation rate than their peers. As recently as winter 2006, the cumulative graduation rate for the West Scholars was 90 percent while the rate for their peer group graduation rate was 41 percent. Regarding term-to-term retention, in winter 2006 the retention rate for the West Scholars was 60 percent while the retention rate for their PNMCU peers was 56 percent.

(Unpublished PNMCCU research study, 2006). What does the West Scholars Program do to produce this kind of documented excellence?

The West Scholars Program has academic-year activities and a full-time summer research internship including academic and skills-building seminars and workshops during the year. Each scholar works closely with a faculty mentor on original research in the summer and then presents their research findings at the West Scholars Summer Symposium and at other conferences. Additionally, these students are encouraged to publish their research. The bulk of the program is delivered through a three-term community cohort academic seminar for a total of 10 elective university credits and including a summer research internship. Students also receive a research stipend for participating in the program. Activities and opportunities provided by the program focus on building a positive academic community for the scholars while they are undergraduates at PNMCCU. Academic research is quintessentially linked with higher education, and as a West Scholar Program Administrator, I believe that research affords the experience of fully engaging in the academic life. Next, I will discuss the methodology and research design of this study which investigates the impact of undergraduate research experiences on five female, first-generation, low-income students.

Method: A Qualitative Case Study with Narrative and Grounded Theory Analysis

Qualitative research allows the investigator to focus on the view of study participant, an approach that produces data that are naturalistic, descriptive, inductive, concerned with process rather than outcomes, focused on meaning, and fully accepting of

the multiple “truths” of those questioned (Bogdan & Biklen, 2007; Gay, Mills, & Airasian, 2006). Qualitative research is both phenomenological and ethnographic in nature since it endeavors to focus on particular sites that provide the researcher with a context in which to study both the setting, the phenomena, and the participants connected to a natural setting (Gay, Mills & Airasian, 2006). The study implemented a qualitative case study research design that employed both narrative and grounded theory analysis. Narrative analysis makes sense of participant’s stories, and grounded theory was applied to all data to gain a nuanced and theoretical understanding of the experiences and perceptions of participants. Before describing the design further, it is critical to acknowledge that because of unusual circumstances this proposal for a qualitative case study will use narrative analysis and grounded theory in an analysis of already collected data.

Special Exemption for Secondary Analysis of Previously Collected Data

The analysis conducted for this study will be applied on data collected in 2009 for reasons related to the tenuous nature of federally funded programs such as the West Scholars Program. Methodologically, analysis of previously collected data “is a research strategy which makes use of pre-existing quantitative data or pre-existing qualitative research data for the purposes of investigating new questions or verifying previous studies” (Heaton, 2004, p. 110). The case of this study was one of those extraordinary circumstances where the Pacific Northwest Metropolitan Commuter University Institutional Review Board decided to accept a petition put forth by my advisor on my behalf to have a human subjects research application review prior to my committee’s

approval of the dissertation proposal (C. Gal, personal correspondence, May 24, 2011). This is only done on a case-by-case basis and was only accepted for this study because my advisor assured that there was a justified rationale for this exception and along with assurances for the protection of human research subjects. My proposal defense was not anticipated until after the timeframe in which I could collect baseline data due to the very real possibility that the West Scholars Program would have been shut down immediately due to lack of federal funding. Shutting down the program would have resulted in loss of access to potential participants. On December 30, 2008, the Pacific Northwest Metropolitan Commuter University Institutional Review Board approved both the 1) Petition for a review prior to dissertation proposal, and 2) the Completed Human Subjects Research Review Application (see Appendix A). I will now discuss the specific details of this qualitative case study.

Qualitative Case Study

A case study design is recommended for researchers interested in: 1) exploring a single case or multiple cases; 2) using multiple data sources pulled from one setting or system in order to understand the dynamics within a single setting; 3) providing deep, rich, fully described themes and patterns; 4) reporting the fully described themes and patterns along with lessons learned (Eisenhardt, 2002; Emerson, 2001; Plano-Clark & Cresswell, 2010). As such the present study's qualitative case study design helped me understand complexities of the real-world experiences of individuals (who represent the cases explored) within a specific higher education context or system (undergraduate research programs in MCU's) in order to gain specific insights and meanings about their

experiences (Plano-Clark & Creswell, 2010; Yin, 2009). According to Eisenhardt (2002), this method “relies on continuous comparison of data and theory, beginning with data collection, and emphasizes both the emergence of theoretical categories solely from evidence and an incremental approach to case selection and data gathering” (p. 8).

Individuals, social groups, programs, events, or any activities involving individuals may be the focal point of a case study with data collected in the form of interviews, participant observation, observations, field notes, archival data, documents, reports, publications, physical artifacts or written narrative or accounts in electronic, auditory or visual media (Yin, 2011). Plano Clark and Creswell (2010) note that “providing an in-depth understanding requires that only a few cases be studied, because for each additional case examined, the researcher has less time to devote to exploring the depths of any one case” (p. 243). As a result, this study includes a dense description of the cases, present thematic results, and interprets the lessons learned that can be applied to higher education practice within MCUs and beyond. Data were analyzed using two techniques nested within the qualitative research tradition: 1) narrative analysis; 2) grounded theory.

Narrative Analysis

Narrative analysis is an interdisciplinary approach that endeavors to describe the meaning behind experiences of individuals (particularly those who are socially oppressed or marginalized) as they reconstruct their experiences in the form of storytelling or “narratives” (Marshall & Rossman, 2011). Storytelling is an important part of understanding an individual since people use narratives to construct or reconstruct their own identities (Sfard & Prusak, 2005). Narratives explore the ways in which identity is

an essentially relational and dynamic process that shifts and grows in many directions at once over short or lengthy periods of time (Sfard & Prusak, 2005). Additionally, Creswell (2005) states that by communicating storytelling the researcher “provides a causal link among ideas” (p. 482).

Particular attention has been paid to the influence of the setting of PNMCU on both the participants and the West Scholars Program and in chapter 4 I will describe in detail the setting in which the individual experiences the central phenomenon per the conventions of narrative research and analysis (Creswell, 2005). Additionally, participants in this study reviewed all of their interview and journal transcripts, as well as their participant narrative (provided in chapter 4) in order to lessen the gap between the narrative told by the participant and the narrative reported by the researcher. This type of “member-check” helps increase interpretive validity of the findings while clarifying the meanings, intentions, actions and experiences of these participants being studied (Johnson, 1999; Maxwell, 2002). Other ways in which validity was protected are discussed in this chapter’s concluding section.

The stories collected from the MCU students of this study are the product of both the researcher’s interpretation of the participants’ experiences and by using direct quotes and passages from participant interviews, student journals and other materials provided by the participants. Given the narrative structure of stories, the use of a rigorous and well-organized approach of thematic code generation, code reduction and constant comparison produced fully described and robust findings (Glaser & Strauss, 1967).

Grounded Theory Analysis

Grounded theory is the description for a system of conducting qualitative studies and or analyzing qualitative data first developed in the 1960s by sociologists Glaser and Strauss (1967) whose work on dying hospital patients was founded on the philosophy of symbolic interaction. A significant characteristic of grounded theory consists of deriving analytic categories and codes directly from the data with coding representing the pivotal link between data collection and developing or emergent theory to explain these data (Charmaz, 2001 & 2006). This method of deriving codes, emergent theory, and reporting findings are “grounded” in the data by way of a “constant comparison.”

The proposed research used the constant comparative method in order to identify themes and patterns present in the narratives of MCU participants that describe their experience in the West Scholars program (Cresswell, 1994; Glaser & Strauss, 1967). Using the constant comparative method involves (Glaser & Strauss, 1967): 1) creating categories or themes and then comparing incidents for each category or theme; 2) integrating categories and themes with like qualities; 3) delimiting the data or collapsing it into more robust themes; 4) writing about the findings “...in a reasonably accurate statement of the matters studied” (Glaser & Strauss, 1967, p. 113).

The process of comparing incidents began by applying “open coding” to the narratives provided by the West Scholar participants along with an integration of field notes, in process memos, analytical memos, and integrative memos, and observer comments from transcripts. These “open codes” were represented in the form of categories and themes that were then integrated and compared for similarities or

differences. This comparison produced “axial codes” that described causal conditions, identified phenomenon, and established context while determining the intervening conditions that lead to action or strategy (Strauss & Corbin, 1998). Once understanding of the categories and themes reached a point of saturation, the resulting “selective codes” or “story lines” became the final analysis of this study’s exploration into the cases of West Scholar students enrolled in PNMCU (Strauss & Corbin, 1998).

Participant Selection

Pascarella (2006) warns that researchers can no longer base their research agendas on the assumption that the American undergraduates are predominantly white, middle or upper-middle class, age 18-22, attending college full-time at residential four-year institutions, and who have few responsibilities outside of college. Instead he recommends that college impact studies be conducted and expanded to include additional and alternative student groups and types of institutions.

As stated earlier, students in metropolitan institutions tend to be first-generation female college students, who are older than students attending residential campuses, who have lower scores on entrance exams, and who are typically from low-socioeconomic groups. A first-generation college student in this study is defined as a student neither of whose natural or adoptive parents received a baccalaureate degree; or a student who, prior to the age of 18 regularly resided with and received support from only one parent, and whose supporting parent did not receive a baccalaureate degree; or an individual who, prior to the age of 18, did not regularly reside with or receive support from a natural or an adoptive parent (United States Department of Education, 2010). A low-income

student in this study is defined as an individual whose family's or individual taxable income does not exceed 150 percent of the poverty level. Poverty level income is determined by using criteria of poverty established by the Bureau of the Census of the U.S. Department of Commerce (US Department of Education, 2011).

Additionally, the majority of the students who have participated in the in the PNMCU West Scholars Program from 2003 to 2008 were women (a total of 84 females and 29 males). At PNMCU during the 2008-2009 academic year a total of 7,902 female and 6687 males students were enrolled full-time in graduate study. Since the majority of the students participating in the West Scholars Program, as well as the majority of students enrolled in graduate programs at PNMCU during 2008-2009 was women, I chose to focus my study on the female experience, which also parallels the student population I focused on for my prior pilot study.

It should be noted that with the influx of female, first-generation, low-SES students at all levels of higher education there is a tremendous pool of potential future female faculty and researchers. Yet, as Aquirre (2000) points out, despite the increased enrollment of women in college, the number of women who enter faculty and research ranks remain relatively unchanged.

Participants were chosen using a purposeful criterion sample that considered convenience in the effort to include cases that typified the "normal" West Scholar while at the same time included those from low-income, first-generation families who were women (Miles & Huberman, 1994, p. 28). With purposeful sampling the researcher selects individuals for study because they can "purposefully inform an understanding of

the research problem and central phenomenon in the study” (Creswell, 2007, p.125).

Purposeful criterion sample selection allowed me to control for gender in order to focus on participants’ experience and follow up on the findings of my pilot study.

Additionally, the participants met the eligibility requirements and were accepted into the 2008-2009 cohort of the West Scholars Program. In order to be eligible for the program, a student must be full-time, have desire to enter into graduate work upon graduation from PNMCU, and must have completed at least 90 undergraduate credits upon entrance into the program with no less than a 3.0 grade point average. Finally, convenience was a factor since my employment with the program gave me insider information about which students would meet the criteria and would be most likely to participate in the study. The opportunity to participate was extended to the ten female, first-generation, low-income students in the program and five agreed to participate in the entire study. Those who declined to participate either did not provide a reason why they did not want to join the study, or stated that it was because of the time commitment for the interviews and personal journals.

Description of Participants

Data was collected from five female students who were accepted into the undergraduate research program during the 2008-2009 academic year (see Appendix B). They have identified themselves as low-income, first-generation college students. All of them identify as white or Caucasian. The participants range in age from 24 to 34. During the time of the study all five of the participants were enrolled full-time at the university. Two of the participants were juniors, three were seniors, and each of the participants had

transferred to the metropolitan commuter university from other institutions. Four had transferred from community colleges in or around the city, and one had transferred from a traditional residential public university.

Two of the participants had grown up in a neighboring state but moved to the PNW city that was the site of this study; in fact, two of the participants had been raised in this city and another was from a small college town in another part of the state. Two of the participants were Community Development majors; another had a double major in Sociology and Social Science with a Business Administration minor. Another participant majored in Geography with Geology minor; and one other majored in Art History.

All of the participants worked in addition to going to school. Three worked off-campus, one student worked on-campus and another worked both on and off-campus. All of the participants currently lived off-campus; however, one participant lived briefly in campus housing. Each of them took longer than four years to complete their bachelor's degrees. Typically, each of them started their college career in the 1990's and took time off or enrolled part-time throughout their college careers. Two of the five participants were mothers, and all of them had outside obligations besides school that demanded their time.

Data Collection

Case studies, or theory building research, typically combine data collection methods that involve direct contact with those studied, particularly through archives, interviewing, or direct observation (Eisenhardt, 2002; Emerson, 2001). Three levels of

data collection were utilized in this study: 1) pre-/post-undergraduate research interviews; 2) participant journals and 3) participant observations (see Appendix C).

Participant Interviews. Participants were interviewed at the beginning of their undergraduate research program in January 2009 and at the conclusion of the program in September 2009. Interviewing allows researchers to enter into other people's perspectives to find out things we cannot directly observe, such as feelings, thoughts or intentions (Patton, 1990). Two rounds of semi-structured interviews were conducted. The interview protocol is based on the student involvement literature mentioned in Chapter 1 (Astin, 1977; Tinto, 1975) and the metropolitan commuter student literature presented in Chapter 2. The interview protocols are also guided by the research questions of the study (see Appendix D).

The pre-program interviews investigated the participant's perceptions regarding their own PNMCU involvement (based on the previously mentioned definitions of successful student involvement) prior to entering into the West Scholars Program. The post-program interviews investigated the participant's reflection upon their own involvement at a metropolitan commuter university after the completion of the West Scholars Program. Each of these interviews (a total of ten interviews) were tape-recorded and transcribed.

In accordance with the first two research questions for this study the interview protocol asks: **1) How effectively does the West Scholars program engage PNMCU female, first-generation, low-income undergraduates in the academic life of this institution? 2) Secondly, what are the specific ways in which the West Scholars**

program engages female, first-generation, low-income college students through research? The participants were asked specifically to reflect on their experience at a metropolitan commuter university and share their overall experience as a student at PNMCU. In particular, their interactions with faculty, staff, and peers, their involvement on campus, their participation in university services, their experience with out-of-classroom learning, and their general academic and social connection were examined.

The questions were derived from the theoretically established characteristics of successful student involvement which include purposeful and frequent interaction with faculty and academic professionals (Astin 1993; Terenzini, Pascarella & Blimling, 1996); significant and educationally purposeful interactions with peers (Astin, 1993; Attinasi, 1989; Terenzini, Pascarella & Blimling, 1996); experiences that integrate in-classroom and out-of-classroom experiences (Astin, 1993 & 1996); services that aid students in negotiating higher education systems (Attinasi, 1989); experiences that assist the student to connect to the institution socially and academically (Astin 1984; Braxton, Vesper & Hossler, 1995; Tinto, 1993); and the experience of living on a residential campus (Astin, 1984). In addition to questions regarding their experience and involvement, they were also asked to share their undergraduate research experience from start to finish.

Other literature used to inform the interview protocol includes the work of Clark (2006), Jacoby (1995), Jacoby and Garland (2004/2005), Krause (2007) Pascarella and Terenzini (1991), Seaberry & Davis (1997), and Silverman, Aliabadi and Stiles (2009) regarding metropolitan commuter student characteristics. Questions were also derived from the work of Douglass and Thomson (2008), Terenzini, Cabrera, and Bernal (2001),

Walpole (2003), Zusman (2005) regarding first-generation, low-income college students. This information helps inform the third goal of this research study, which is to understand

3) What are some of the issues that inhibit a female first-generation, low-income college student's ability to fully engage in the experience of research and are these barriers to participation produced by the program, PNMCU, the metropolitan area, or dynamics from their own lives?

Participant Journals. Throughout their time in the program, and as study participants, they were asked to keep a weekly journal from January 2009 to the end of September 2009. They were told to write as often as they felt comfortable in a journal provided to them in order to document their progress on research or personal thoughts regarding their experience within the West Scholars Program. The following writing prompts were suggested for the participants to address in their entries (see also Appendix D):

- 1) What task or part of your research project are you currently working on for the undergraduate research program?
- 2) With who have you interacted with about the task or your research?
- 3) How much time have you spent on campus this week?
- 4) How much time on campus have you devoted to the undergraduate research program task?

Participants were also asked to reflect on their week as a metropolitan commuter university student, and also as a researcher. They were to log time spent on campus and

interactions they had with peers, faculty or staff. The participants could also free write for as long as time allowed.

Each participant journal was collected at the end of the Winter term, Spring term, and Summer term. In total, I received five participant journals from winter term, four participant journals from spring term, and three journals from summer term. The journals were compiled and transcribed. Since writing in the journal was voluntary, not all participants contributed equally to the study through journal data. However, the data provided is a rich collection of information that further informed this study regarding the metropolitan commuter student's college experience, participation in undergraduate research, and student involvement and engagement.

According to Charmaz (2001), the rich detailed data which may be produced by student journals give the researcher explicit materials with which to work. Much can be learned about these students' experiences because of the detailed and intimate renderings of their experiences with the West Scholars Program. Additionally, providing an opportunity for the participants to informally reflect on their experience at any time and in their own words provides rich data that could not be captured within the formalized structure of an interview.

Participant Observation. Participant observation allows the fieldworker to gain privileged access to the meaning that infuses the daily lives and activities of those being studied (Emerson, 2001). In this study, participant observation occurred during the academic seminars and intensive summer research internship. Specifically, I looked for evidence of the participants' interaction with faculty, academic professionals, and peers;

actions which illustrate the integration of in and out-of-classroom experiences; negotiation of higher education systems; and the participants' connection to the institution socially and academically.

After periods of time in the field with the participants, I would memo extensively to capture the observations from the day. These memos help provide context to the interview and journal responses. Writing memos also helped me reflect on my position within the program, the potential influence I may have on the study, and the data that was being collected from the participants.

Protection of Study Participants

Regarding qualitative research reciprocity, the participants did not receive any direct benefits from taking part in this study. However, they committed to the interviews and journaling with the knowledge that their responses may contribute to the existing research and knowledge of undergraduate research at metropolitan commuter universities, as well as the first-generation, low-income female students enrolled in higher education. Participants signed consent letters upon entering the study (see Appendix E).

The potential risks for this study were minimal. It is acknowledged that subjects may have felt uncomfortable about answering questions regarding their family's educational background and their personal socioeconomic class, however, the subjects were reminded of the option to withdraw from the study without any penalty. It is likely that the study may have been therapeutic for some of the participants, as it was an

opportunity for them to talk about the experiences they had with the undergraduate research program and any personal transitional issues negotiated.

To protect the subjects' confidentiality, a letter and pseudonym was assigned to each interviewee for record keeping purposes. Records are kept in a locked filing cabinet at my home office during the course of the research. Once the study is complete the records will be kept permanently in the West Scholars Program office at Pacific Northwest Metropolitan Commuter University. Audio tapes or digital audio files of the interview are kept in the same manner as paper documents, such as participant observation notes and the study participant journals. The records will be kept for a minimum of three years.

The identity of the participants has not been published or otherwise released before, during, or after data collection. In the written report, any presentations, any reproduction of the written report, or on any referential material, the subjects will be referred to or as described by pseudonyms.

Positionality: The Role of the Researcher

At the time of data collection, I was the Program Coordinator for the West Scholars Program; currently, I am the Associate Director of the Program having earned this promotion in Fall 2010. At the time the data was collected the main function of my role as an employee at the PNMCU and specifically with the West Scholar's program was to provide administrative support and oversight in all aspects of the federally funded program. This administrative capacity includes supervising graduate assistants,

coordinating the recruitment and selection of the scholar participants, maintaining accurate program performance and financial reports, and facilitating program delivery.

As a co-facilitator of the program seminar I met weekly with the undergraduate research cohort during seminar sessions and provided advising on research projects as necessary. Periodically, I provide lectures on topics regarding research methods and graduate school preparation along with the programs three graduate assistants and program director. I am not in the position of evaluating of the participants within the program nor could or can I affect the involvement of the participant in the program. Decisions regarding grades and performance evaluation are the responsibility of the program director.

In 2007, I served as a co-author of the \$1.9 million federal grant which funds the undergraduate research program. As a collaborator in the writing process, I helped craft the strategic vision for accomplishing the goals and expected outcomes for the federal program. During the course of this study I have continued to acknowledge my influence on the participants in the study and on the program. After extensively describing these potential biases, influences, and challenges, as the primary investigator I have ensured that the information collected during the interviews and through the participant journals has not affected the involvement of the participant in the undergraduate research program.

To ensure that over involvement did not occur, particularly addressing the potential for researcher bias, reflexivity or the assessment of the influence of the researcher's own background, perceptions and interests in the qualitative process was

done through extensive personal memoing and through recognition of the researcher within the study (Krefting, 1999). Reflexivity also helps promote interpretive and internal validity (more about validity below).

Limitations and Establishing Validity, Trustworthiness & Rigor

While a qualitative ethnographic methodology using grounded theory analysis has been determined to be the most efficient way to study this research topic, there are limitations to these approaches. Specifically, ethnographies and grounded theory can yield theory that is overly complex, or lacking overall perspective, despite the volume of rich data (Eisenhardt, 2002). As is inherent to ethnographic, qualitative designs the sample size for this study is small and limited to the population available at the time of the data was collected. Therefore the results from this study are necessarily narrow and specific because it is based on only a collection of cases within the PNMCU West Scholars program which is a particular setting (Eisenhardt, 2002). Also, as described in detail, I, the researcher is professionally involved with the West Scholars Program and could bring in bias to the study based on her position within the program.

However, this study addressed these limitations by utilizing strategies that promote validity and establish trustworthiness and rigor (see Appendix F). Credibility, transferability, dependability, and confirmability strategies to establish trustworthiness and rigor were exercised through the following:

- 1) Multiple data sources, as mentioned earlier, the data were collected through participant interviews, participant journals and participant observations;

- 2) The code-recode process, the analysis processes previously described;
- 3) Reflexivity, which was mentioned earlier in the Positionality: Role of the Researcher;
- 4) Member checking, as described earlier, which utilized the review of interview and journal transcripts and narratives by the study's participants;
- 5) Peer examination; which was conducted throughout the analysis process. A line-by-line discussion of a participant's transcriptions was thoroughly conducted with my dissertation advisor. This examination helped establish open-codes and axial codes, as well as ensured consistency among the coding process. This examination also increases descriptive validity in the study by ensuring the account as reported by the researcher is accurate (Johnson, 1999; Maxwell, 2002).
- 6) Extended field experience and utilizing the period after an interview or observation which is critical to establishing the rigor and validity of qualitative inquiry. This extended stay and this critical period for reflection both are important to guaranteeing the quality of data (Krefting, 1999; Patton, 1990).
- 7) Writing dense description of extended time in the field, which helped improve the theoretical validity of this study and also aided in the interpretation and understanding of the participants' experiences.

The narratives of the five, female, first-generation, low-income undergraduate researchers at the Pacific Northwest Metropolitan Commuter University are presented next in chapter 4.

Chapter 4

Findings: Participants Narratives

Introduction

The following chapter includes complete narratives of all five participants in this study. However, before the narratives are introduced, I will briefly review key aspects of this qualitative case study that utilized narrative and grounded theory analysis. I will also revisit the three levels of data collection which included interviews, journals and observations. Additionally, an overview of the West Scholars Program is provided, along with a description of characteristics of successful undergraduate research programs. A brief explanation of participant selection and a summary of participant profiles lead into the detailed descriptions regarding each participant's pathway to PNMCU, metropolitan commuter student experience, and undergraduate research experience.

Method: A Qualitative Case Study with Narrative and Grounded Theory Analysis

As described in detail in chapter 3, this study implemented a qualitative case study research design that employs both narrative and grounded theory analysis on the collected data. While narrative analysis made sense of participant's stories and provided meaning behind their individual experiences; grounded theory helped gain a nuanced and theoretical understanding of the experiences and perceptions of participants.

Grounded theory is the description for a system of conducting qualitative studies and or analyzing qualitative data first developed in the 1960s by sociologists Glaser and Strauss (1967). "Open coding" was first applied to the interview and journals provided by the West Scholar participants along with an integration of my field notes, in-process

memos, analytical memos, and integrative memos, and observer comments from transcripts. These “open codes,” represented in the form of categories and themes, were integrated and compared for similarities or differences.

This comparison produced “axial codes” that describe causal conditions, identify phenomena, establish context while determining the intervening conditions which lead to action or strategy (Strauss & Corbin, 1998). Once my understanding of the categories and themes reached a point of saturation, the resulting “selective codes” or “story lines,” became the final analysis of this study’s exploration into the case(s) of West Scholar students enrolled in PNMCU (Strauss & Corbin, 1998).

Data Collection

Case studies, or theory building research, typically combine data collection methods that involve direct contact with those studied, particularly through archives, interviewing, or direct observation (Eisenhardt, 2002; Emerson, 2001). Three levels of data collection were utilized in this study: 1) pre-/post-undergraduate research interviews; 2) participant journals, and 3) participant observations (see Appendix C).

Participant Interviews

Participants were interviewed at the beginning of their undergraduate research program in January 2009 and at the conclusion of the program in September 2009. Two rounds of semi-structured interviews were conducted. The interview protocol was based on student involvement literature mentioned in Chapter 1 (Astin, 1977; Tinto, 1975) and the metropolitan commuter student literature presented in Chapter 2. The interview protocols were also guided by the research questions of the study (see Appendix D).

The pre-program interviews investigated the participant's perceptions regarding their own PNMCU involvement (based on the previously mentioned definitions of successful student involvement) prior to entering the West Scholars Program. The post-program interviews investigated the participant's reflection upon their own involvement at a metropolitan commuter university after the completion of the West Scholars Program. Each of these interviews (a total of ten interviews) were tape-recorded and transcribed.

During the interviews participants were asked specifically to reflect on their experience at an urban university. They shared their overall experiences as a student at PNMCU, more specifically; they discussed their interactions with faculty, staff, and peers, their involvement on campus, their participation in university services, and their general academic and social connection, if any. In addition to questions regarding their experience and involvement, they were also asked to share their undergraduate research experience from start to finish. Information regarding their research topics and mentor relationships was also requested.

During the interviews all of the participants were prompted to define a "college student," and the "college experience." They also reflected on how each of those terms related to their own lives and situations at PNMCU. This set of questions in particular helped establish a baseline understanding of the perceived and lived experiences of college students, which helped interpret both the experience of "metropolitan commuter student" and "metropolitan commuter undergraduate researcher."

Participant Journals

Throughout their time in the program, and as study participants, they were asked to keep a weekly journal from January 2009 to the end of September 2009. In a journal provided to them, they were told to write as often as they felt comfortable in order to document their progress on research or personal thoughts regarding their experience within the West Scholars Program. Several optional prompts were suggested for the participants to address in their entries. In addition, participants were asked to reflect on their week as a metropolitan commuter university student, and also as a researcher. They were to log time spent on campus and the interactions they had with peers, faculty or staff. The participants could also free-write for as long as time allowed. Writing in the journal was voluntary, and as a result, participant journal contributions varied.

Participant Observations

In this study participant observation occurred during the academic seminars and intensive summer research internship. After periods of time in the field with the participants, I would memo extensively to capture the observations from the day. These memos helped to provide context to the interview and journal responses. Writing memos also helped me reflect on my position within the program, the potential influence I may have on the study, and the data that was being collected from the participants.

Reliability

As mentioned in chapter 3, at the time of data collection I was the Program Coordinator for the West Scholars Program; currently, I am the Associate Director of the Program having earned this promotion in Fall 2010. At the time the data was collected

the main function of my role as an employee at the PNMCU, and specifically with the West Scholar's program my role was to provide administrative support and oversight in all aspects of the federally funded program. This administrative capacity includes supervising graduate assistants, coordinating the recruitment and selection of the scholar participants, maintaining accurate program performance and financial reports, and facilitating program delivery.

Throughout this research I have acknowledged my influence on the participants in the study and on the program. After extensively describing these potential biases, influences, and challenges as the primary investigator, I have ensured that the information collected during the interviews will in no way affect, or has affected, the involvement of the participant in the undergraduate research program.

To ensure that over involvement did not occur, and to acknowledge the potential for researcher bias, member checks were utilized with all five participants. In addition, extensive peer checks were conducted with my dissertation advisor whose background in qualitative research was an instructional form of triangulation.

Overview of the West Scholars Program Offerings

As stated previously in Chapter 1, successful undergraduate research programs typically have the following characteristics: 1) faculty mentors; 2) an apprenticeship dynamic; 3) use of progressive learning theories; 4) strong peer mentorship; and 5) socialization to the academic life. The West Scholars Program also includes these characteristics. The following provides an overview of the program, and then discusses the program in relation to the five previously mentioned characteristics.

The bulk of the program is delivered through a three-term academic seminar which totals 10 elective university credits and includes a summer research internship. The academic seminars prepare the program participants to conduct undergraduate research projects; introduce scholars to the culture of the academy; prepare participants for graduate school and the graduate admissions process; and create a community of scholars. Scholars typically enter into the program as juniors or senior undergraduates.

Each scholar is expected to work closely with a faculty mentor on an original research project. Participants present their research findings at the West Summer Symposium and are encouraged to publish their papers in the West Journal; the online publication hosted by the PNM CU West Scholars Program. In addition to presenting at the program host-symposium, it is also recommended that scholars present their work at local, regional, or national discipline specific conferences and publications. There is allotted financial support for such endeavors through the program as well.

Both scholars and mentors receive stipends from the program. Since scholars completing summer research projects are expected to spend at least 40 hours every week during summer quarter on their research projects, the stipend helps ease financial hardships to the scholars. The scholar accepts the stipend and agrees to complete an original research project. Faculty mentors receive their stipends as summer wages in addition to their academic year contracts.

Faculty Mentors

The student-centered approach of the program relies heavily on faculty commitment. Faculty mentors are responsible for giving students clear directions about

the research process, and for helping to prepare them for the challenges of graduate studies. They assist the program by emphasizing research skill development, critical thinking, and writing and learning opportunities that foster academic excellence and engagement in rigorous research. Faculty mentors are actively involved in every stage of the research projects. For some first-generation, low-income commuter students, this may be the first time they have ever worked closely with a faculty member on campus.

Scholars are encouraged to find mentors on their own, so that they are active participants in their own education and research agenda. Once the scholar and mentor are paired up, they sign separate contracts that describe in-detail program expectations, their obligations, duties, responsibilities, program rules and requirements, and a commitment to complete all work on time. The contracts underscore the importance of the mentor-scholar partnership as a working relationship with clear goals and obligations.

Scholars and mentors then begin the process of conceptualizing original research projects. The mentor guides the scholar in exploring potential topics and research questions, and developing a research plan. Each scholar should have a research proposal prepared by the conclusion of winter term, the first term of the program.

Faculty mentors not only advise West scholars, they also provide additional services for the program. Often times, professors who have come from backgrounds similar to the program participants have led spring academic seminars to share their PhD stories with scholars. These personal journeys are inspiring, and they both educate and prepare scholars for the social, cultural and academic challenges of PhD and graduate programs.

An Apprenticeship Dynamic

Faculty mentors have scholarly research and publication credentials. The faculty mentors are typically conducting various research projects of their own which make them ideal role models for showing students the various steps of discipline-specific research processes, as well as the satisfaction that comes with completing a research project.

In the program there are two ways in which scholars can initiate undergraduate research opportunities. One way is to have the scholar design and implement a research project and have a faculty mentor guide to advise the research and writing. The second way requires the scholar to work on an already established research project conducted by a faculty mentor. This is typical in the STEM disciplines where students are already working in labs with their faculty mentor. The benefits of the second model are that the student has a research team that helps direct the work. The scholar can make significant contributions to a larger research project by working on an assigned segment of the work. Either way, the participants in the program work alongside their mentors in accomplishing their research goals.

Use of Progressive Learning Theories & Strong Peer Mentorship

While the main focus of the undergraduate research program is the student-faculty mentor partnership, the seminars and other program activities are designed to prepare scholars for the rigor of graduate education and to promote membership in a community of undergraduate scholars. Seminars and workshops are student-focused, intensive, practical, and designed to engage scholars in active learning. Community building activities are built into the course, as well as discussion about feelings of impostership

and confidence. Ways to negotiate higher education, and coping with stressors that are typical to first-generation, low-income students are also discussed. Together the scholars reflect on their personal and academic journeys and share with each other in their undergraduate successes and challenges. Throughout the course of the program the bonds formed within each cohort help support the scholars. Former scholars often say that the greatest benefit of the program has been the formation of the network of scholars.

Socialization to the Academic Life

In addition to discussions about ways to negotiate higher education, the program focuses on illuminating and deconstructing the “culture of the academy.” Students whose parents did not graduate from college are often less informed about academic life and how to conduct themselves within academe. The academic seminars provide a safe space for scholars to explore these new concepts and cultural artifacts, to ask questions and seek clarification about processes and attitudes within higher education.

Students are also taught to recognize that there are various “discourse communities.” More specifically, they are instructed on the appropriate means of discourse for an academic community in general. It should be noted that the new “discourse” should not replace their previous voice or culture of a student, but to illustrate how a scholar can be multifaceted and adapt to present scholarly work to different audiences. The act of conducting research itself is a process of socialization into the academy. Academic research is quintessentially linked with higher education. There really is no other way to experience academic life so fully than to conduct research.

Participant Selection

Participants were chosen using a purposeful criterion sample that considered convenience in the effort to include cases that typified the “normal” West Scholar while at the same time included those from low-income, first-generation families who were women (Miles & Huberman, 1994, p. 28). Purposeful criterion sample selection allowed me to control for gender in order to focus on their experience and follow up on the findings of my pilot study that demonstrated the impact the West Scholars program had on female participants, and their journeys to doctoral study. Additionally the participants met the eligibility requirements and were accepted into the 2008-2009 cohort of the West Scholars Program as stated in the previous chapter.

Description of Participants

Data were collected from five female students who were accepted into the undergraduate research program during the 2008-2009 academic year (see Appendix B). They have identified themselves as low-income, first-generation college students. All of them identify as white or Caucasian. The participants range in age from 24 to 34. During the time of the study all five of the participants were enrolled full-time at the university. Two of the participants were juniors, three were seniors, and each of the participants had transferred to the metropolitan commuter university from other institutions. Four had transferred from community colleges in or around the city, and one had transferred from a traditional residential public university.

Two of the participants had grown up in a neighboring state but moved to the Pacific Northwest city that was the site of this study. In fact, two of the participants had

been raised in this city and another was from a small college town in another part of the state. Two of the participants were Community Development majors; another had a double major in Sociology and Social Science with a Business Administration minor. One majored in Geography with Geology minor; and another in Art History.

All of the participants worked in addition to going to school. Three worked off-campus, one student worked on-campus and another worked both on and off-campus. All of the participants currently lived off-campus; however, one participant lived briefly in campus housing. Each of them took longer than four years to complete their bachelor's degrees. Typically, each of them started their college career in the 1990's and took time off or enrolled part-time throughout their time in college. Two of the five participants were mothers, and all of them had outside obligations besides school that demanded their time.

Summary of Data Organization

The following narratives are organized by the open codes developed as a result of the ground theory analysis process. The participant narratives include the following sections (see Appendix G for list of study codes):

- 1) Path to PNMCU and Acclimation to a Metropolitan University
- 2) Defining the College Experience from a Non-traditional student's point of view
- 3) The Specific Nature of Academic and Social Involvement
- 4) Faculty Interactions
- 5) Peer Interactions

- 6) Expectations for the Undergraduate Research Experience
- 7) Undergraduate Research Project and Experience
- 8) Reflecting on the Undergraduate Research Experience
- 9) Faculty Mentor Interactions
- 10) Undergraduate Research Program Peer Interactions
- 11) Final Thoughts on the Undergraduate Research Experience
- 12) Concluding Thoughts

Introduction to the Participants

Ava, Beverly, Camille, Darcy, and Elise are the five participants in this study. Each has had their own distinct experience as a metropolitan commuter student and undergraduate researcher.

Ava's progress through the undergraduate research experience is an ideal example of how these types of structured academic activities can benefit working metropolitan commuter students who juggle several competing priorities and obligations. A strong relationship with a supportive faculty mentor, a solid research project that was completed within the project's time frame, and positive interactions with peers within her cohort all contributed to her successful experience within the program.

Beverly's research did not produce the results she had anticipated, nor did her faculty mentor relationship develop the way she had hoped. Yet she explains that the experience of the undergraduate research process was beneficial in a way that helped her clarify her goals for graduate school and helped her to develop an idea of how to integrate her academic and social life in a productive way. Beverly also reminds us that higher

education can be bureaucratic and difficult to navigate for people who are unfamiliar with the culture of these institutions. Yet, she grows to become an advocate for herself.

Camille travels outside of the United States to conduct her undergraduate research project and in turn finds the motivation she needs to continue her graduate education once she returns home. Considering the positive experience with her mentor and the services she received from the program, Camille now considered herself finally prepared to make informed decisions about her academic future. However, despite being able to travel during the program, the distance from the peers in her cohort leaves Camille feeling disconnected from her fellow researchers and longing for more peer and social interaction from her undergraduate research experience.

Darcy's disappointment with her mentor and her own research casts a heavy cloud over the nine months she is in the program. Unable to pull herself out of the negative results of unmet expectations, Darcy regretfully believes that she never really got to be a scholar through this experience because she missed out on having a significant and beneficial relationship with her mentor. The experience Darcy has in the program prompts us to consider the ways in which we can better serve students who begin to slide out of reach from the services the program can offer.

Elise's experience illustrates just how a student might become fully integrated despite the commuter environment and disengaged perception of metropolitan universities. Her community is built around her enrollment at PNMCU and she utilizes the faculty, peers, and resources around her to maintain a balance between school, work, and family. She is a mindful student who is taking the initiative to obtain her goal of

continuing her education in graduate school. The undergraduate research program provided her with an opportunity to prepare for this goal.

For Ava, Beverly, Camille, Darcy and Elise, their pathways to PNMCU, their metropolitan student experience, and their undergraduate research experience are described in detail in the following sections.

Participant Narratives

Ava's Story: "Always, Always, Always Busy but Dedicated to the West Scholars Program"

"Keeping it local" could be a theme that runs through the Ava's life. Keeping it local can explain her path through higher education. Keeping it local is also a main component of the research she conducted in farmer's markets in the metropolitan Area. However, local in this situation is not a term that should be seen as restrictive or isolated, because through her perseverance and tenacity, Ava has reached far beyond the boundaries she lives within as a working, metropolitan student and mother.

Path to PNMCU and Acclimation to a Metropolitan University

Ava had been going to school "off and on" since 2001 and been a full-time student since 2006. She earned her Associate of Arts from a local metropolitan community college and then transferred to PNMCU. She discussed her path to PNMCU and her decision to attend the metropolitan university, and she explained that since she owns a home in the city and she has a son, PNMCU was the easiest transfer option for her at the time. Additionally, she shared that "I started at the community college and I was doing the transfer program so I have always intended to go here [PNMCU] mostly

because at that point I wasn't really sure where I wanted to go, or what I wanted to do. I really didn't put a whole lot of thought into which school am I going to apply to, I just thought I was on that path that I knew I would come here.”

She was nervous to attend PNMCU at first because of mixed reviews she had heard about the school from a friend, and consequently she revealed that during her first term she did not like the school at all. The university was a lot bigger than what Ava had been used to and she struggled to find her way, to find out about admissions, and to find advising. She felt academically frustrated.

In her experience PNMCU was difficult to navigate, especially for a student who was unsure of what they wanted or needed. She credits finding a department that she loved, Sociology, as the key reason for improving her experience at PNMCU. She also believed that meeting “great people” in Sociology also helped her acclimate to the university.

Ava said that her overall experience at PNMCU went “from bad to better.” Even with this change in attitude, Ava critiqued the social climate for commuter students at PNMCU. For example, she regretted not being able to be a part of more clubs because she worked and was too busy. She also believed that because PNMCU is a commuter school it lacks a cohort that you might have at a smaller residential school where most people live on campus. At times, she felt like she might have missed out on a residential cohort college experience while attending a metropolitan university. She thought it would definitely be beneficial if her classes were smaller and had the same people in them every term, which could lead to more feedback from peers and the ability to get to know other

students better. But because of PNMCU's involvement with sustainability and the local community, Ava felt as though she has had a good academic experience at PNMCU, aside from her first challenging term. Finding a department "home" meant everything to her eventual acclimation to PNMCU, and to her overall experience and growth in confidence.

The confidence she possessed grew out of her new-found comfort with the university. After she had been at PNMCU for a while and had met professors and peers (mostly in Sociology) she was more willing to look into the opportunities that people had suggested or recommended to her. She also felt that since it was her last year at PNMCU she wanted to get everything out of college as she could, and that pushed her to apply for more programs and learning experiences, including the West Scholars Program.

Defining the College Experience from a Non-traditional Student's Point of View

When asked to define the term "college student" in general terms Ava said that a college student is "a person who attends school to achieve a certain degree or go down a certain career path." College students, according to Ava are typically between 18 and 24, they do not work or work very little and they might live on campus. She further described college as a time for exploration, a time to grow up and a time to figure out what you like. She pointed out that the majority of college students probably do not have a lot of responsibilities, but that college is also a very busy time. However, she explains that PNMCU is "different" because it is a commuter school with a lot of student diversity. As a commuter student, scheduling was at times a nightmare for Ava since many undergraduate classes are offered in the daytime while she was working. Indeed,

navigating through the bureaucracy of PNMCU was made difficult due to her work schedule and rigid work hours.

When asked to define the “college experience” Ava thought of it as a period of trying to figure out what you want to do and who you are, and more specifically if the academic world is right for you. “There’s a lot of figuring things out and you know there’s also a lot of partying and clubs and all kinds of other things young people do. Especially at PNMCU I think that that happens but a lot less than someplace like UCLA, because people are not typical students that go here because people do work full-time people have families and stuff. But generally a time of exploration.”

When asked if she thinks she has had a true college experience at PNMCU she replied, “In the traditional sense absolutely not, but in the non-traditional sense I guess kind of. It is definitely not what I wanted it to be in a lot of ways, I wish I didn’t have to feel so stressed out all of the time. I wish that I would have had more time to do things that I had mentioned before like joining more clubs and actually going to a football game. Even though I did make a lot of friends here I definitely had a limited social experience because I had just been so busy...but I definitely had a good college experience. It is hard to not feel slightly jealous of people who get money deposited into their account every month and just sort of get to do their thing [in college].” Ava’s definition of “the college experience” for “the college student” evoked a deep yearning for all things traditional. Yet, Ava seemed perfectly comfortable with the experience she had as a student who worked and had off-campus responsibilities. Despite all the shortcomings of the

commuter student life, PNMCU was a beneficial experience after she acclimated to its environment through her Sociology major.

The Specific Nature of Academic and Social Involvement

Ava was similarly pleased with her academic experience at PNMCU that she describes as “really good” – a term she uses often to describe her time at PNMCU. She felt as though she was challenged in her classes, but added that there was nothing that felt like it was not achievable. The education in her words was “pretty well-rounded” and that she had been successful as a student, earning dean and president’s list status because of her grade point average (GPA). “I am a student who wants to be here and wants to learn so I really got as much out of it as I could,” she explained.

When describing her campus involvement at PNMCU, Ava replied with two words “pretty limited.” She had been able to become a part of an academic major department club, but otherwise her schedule did not allow for extracurricular activities or events. “[My involvement] is not anywhere near where I would have wanted it to be had I not been so busy,” confesses Ava. Also, she was only on campus when she had classes. “I am usually always going from here to work or from work to here. I am always going back and forth, always, always, always....So, fitting everything in to one day is kind of hard,” she explained.

On a typical week during her undergraduate career, Ava would take around 16 credits and would be present on campus around 20 hours per week in order to attend classes. In addition to school, Ava worked 34 hours a week and was constantly going back and forth from work and school which are on opposite ends of the downtown area.

She mainly comes to campus for class, and she explained that she does not come to campus to “hang out.”

Ava felt much more connected to the university academically than socially, and her connection to Sociology was the strongest connecting thread. The discipline of Sociology made her excited to do her own research and felt that doing so will further academically connect her with the school. She shared that academic opportunities on campus, such as speakers or special guests and programs were better ways to connect with PNMCU than peer relationships or purely social activities.

Faculty Interactions

Most of the interactions she has had with faculty are within her major department, primarily by attending their office hours. She has not had “too many negative experiences” with faculty and believed that the professors she had classes with were “fair.” She shared that, “As I grew [intellectually] here and as time went on and especially when I knew [my major] I really started to try to get to know the professors really well so I would ask a lot of questions.” She shares with a hint of pride that she was that “annoying student” who hung out after class and talked to her professors bringing newspaper articles about class-related topics that she found interesting.

When asked how important she thought it was to connect with faculty and peers on campus, she believed that it depended on what you wanted to get out of your education. For her, once motivated by her interest in Sociology, she knew she wanted to go to graduate school and that she knew that she would need to connect with faculty. She

realized that their support and strong recommendation letters were essential to her graduate study plans.

Peer Interactions

Her response about her peer relationships was quite different. Ava thought that it is important to connect with others in your classes and on campus but pointed out that it was not essential. She explained that a lot of metropolitan students come into PNMCU with already established sets of friends, meaning that intact social networks become primary means of support. She conceded that connecting with peers could have the same academic importance as connecting with faculty, in that she found her peers to be beneficial allies in her educational career.

Consequently, Ava's primary peer contacts were academically focused, and through her interactions she arranged study groups, exchanged notes, and discussed school work. One form of peer interaction she did not like was team activities and group work. The root of her frustration with classroom and course team projects was the fear of unequal distribution of work and the potential grading issues that come up with group work. She feared earning lower grades due to a teammates' poor performance. She further explained that since PNMCU is not a traditional school and it is extremely difficult to coordinate people's schedules. It is apparent through Ava's story as well, that working students do not have "time to waste" when it comes to unsuccessfully coordinating for group work. Along with the fear of lowered grades, group projects were not an enjoyable part of her peer experience.

On a more positive note, Ava recalled, “our classes are pretty full of diversity and people come from all kinds of places so you kind of, especially if you are in a big class, you start talking and getting to know people who are sitting by you and you look for someone who is busy like you and have things in common with you.” It is very clear that in class diversity as experienced in an urban university was of great importance to Ava, but she preferred working solo and disliked team work.

Ava had two opportunities to travel abroad while at PNMCU; an exchange in Spain and also on a service-learning trip in Nicaragua. She said that everything she had learned in her classes prior to the trips translated directly to her experiences studying abroad. In these cases and also with her undergraduate research project she has been able to take everything she had learned in classes or in the undergraduate research seminar and apply it directly to the projects she was working on. She shared, “That is nice to see something you are actually learning in class and using it outside [of the classroom].”

Ava believed that connecting with the community around PNMCU is important if you wanted to stay in the area after graduation. Getting involved and networking within the community can be helpful for students in the future which is why service learning on campus is important, according to Ava. Service learning helps build a network for students to find out what they would like to be involved in with the community after graduation.

Expectations for the Undergraduate Research Experience

Prior to conducting her research, Ava stated that she wanted to do an undergraduate research project to gain research experience and explained that there was

not really an opportunity to do that in most traditional classes that she had taken. She went on to explain that the opportunity to conduct undergraduate research had not been offered as much as it could have been offered in her opinion. She had covered some research methodology terms in her classes, but did not have a chance to conduct a project by herself.

Ava was happy to be able to decide on her own research project and chose whom she would work with as a mentor. She also believed that being at an metropolitan university helped her study tremendously due to the fact that it's connected with the community and because of its placement within the city. She found that it is easy to talk to people in the metropolitan area about what she wants to study, which leads to an abundance of networking possibilities. Ava also saw the value in doing undergraduate research in preparation for graduate school, stating that "I started to get more interested in how people were able to [receive grants to do research]. So, I thought it would be really cool to be able to do my own project, and like I had said, I had done so many group projects it was nice to do an independent project...I definitely wanted to take the experience with me to graduate school. I know that's what a lot of graduate school will be like."

She expected the process of undergraduate research to be quite challenging and anticipated some disappointment, but hoped to conduct a strong study that would lead to something that she could put on a resume and carry around with her proudly. Despite being sociology major, Ava wanted to conduct a project in the area of public health since it was the field she wanted to go into for graduate school. Ava believed that

undergraduate research is especially important if you wanted to go to graduate school, and believed that the more research being conducted in the world, the more we learn about reality. She thought that it would be difficult to go from not having any experience with research to an intensive graduate program where having the skills to conduct research is expected of you.

Prior to starting her research project she decided that she wanted to do something with farmer's markets and food inequality, but she was not sure what specifically she wanted to focus on. When asked why it was important to research this topic she believed that "it is good to create local research...it does impact the community a lot and it could influence policy and change in a better direction." Accordingly, Ava chose her mentor based on similarity of interests and concerns for food access and policy. Additionally, she took a course with her mentor and "loved every minute of it," plus Ava knew her mentor had a strong background in qualitative research, which was the type of research she was interested in conducting.

Undergraduate Research Project and Experience

For her undergraduate research project Ava conducted a case study of a farmer's market in a low-income neighborhood. She looked at whether it was beneficial to the neighborhood to have adequate food access to fruits and vegetables and conducted a comparative study in an affluent neighborhood approximately 5 miles away to assess the differences between the two markets. She explored the opportunities and challenges for vendors when selling at a lower income farmer's market versus one in a more affluent

market. Plus, she wanted to know what customers liked and did not like about both markets.

This topic came out of her senior capstone project which is required of all students in the general education model at PNM CU. She knew it was important to continue this work after looking at the data and realized the importance of having access to fresh, healthy food when living in lower socioeconomic neighborhoods. According to Ava, the farmer's markets are often times one of the only places where residents can purchase fresh fruits and vegetables within their neighborhood.

During winter term, Ava reported in her participant journal that she had been working on several components of her research proposal including the literature review, outline, methods summary, and human subjects (IRB) application with her mentor. Her mentor provided inspiration and guidance and played an integral role in Ava's progress through the undergraduate research program. She reported being happy to work with her mentor, yet despite her enthusiasm for research, during winter term she did run up against time conflicts and consistently felt like she needed more time to work on her project. She enrolled in classes during this term and most of her time spent on campus was still devoted to attending classes.

In a passage from her journal during winter term Ava wrote, "I feel that this program is beginning to open up new possibilities and most importantly my mind is also opening up to all the possibilities that graduate and doctoral programs have to offer!" She reflected on being an urban student in the following journal entry "As a student at a

metropolitan university, again I feel blessed that I have so many connections to people, ideas, and resources. I feel like we can make things happen here.”

The Human Subjects Application consumed most of Ava’s research time during spring term. It was a process that was daunting, but also beneficial to her as a researcher. She wrote “I feel lucky to have been introduced to the world of the IRB and the human subjects process because it has opened a whole new thought process for me. There are so many things about creating and designing and implementing a research project that must be thought out; even sometimes well produced well designed [projects] fail to make new knowledge due to minor flaws.” The spring also provided an opportunity for Ava to explore graduate school options. She visited two out-of-state research universities and wrote, “personally, I am really looking forward to my future in graduate school. All of the assistance that I received from the West Scholars Program is going to be a great asset in terms of looking at different [grad] programs, selecting which ones are right for me, and figuring out how to fund the programs are all things that I need help with. I know I would wind up selling myself short without this program.” While at one of the research universities, she was able to present her work at a student conference and stated that “It was nice to feel like I was worth something and that I belonged there [at the conference]. Knowing that there are many other first-generation people like me made me feel alright about my situation,” she explained.

Perhaps it is the emergence of a scholar identity which was the most remarkable development of Ava’s three-term experience as a West Scholar. The identity realized during the visit and after her presentation was not enjoyed by all of her cohort members.

She wished they could have attended as their bonds strengthened throughout the year. For example, Ava recalls the program's spring honor cord ceremony where everyone in the cohort "blesses the cords" of the graduating scholars. She was appreciative of being part such an "amazing group of witty scholars" and shared that she felt safe and comfortable with this group of people. "Every time I leave the West seminar I leave with a sense of confidence and happiness that I don't get from other classes," she wrote.

Ava emerged a new person at the end of the academic year and at the senior recognition event she reflects that "anybody—no matter what the circumstances they face—can succeed with the right help and guidance. I am so happy right now I could burst. I never thought I would be so excited about commencement either. I made it! Even though my mother has went back and forth about whether or not she's proud of me—and has offered very little support throughout this process—I still made it!" Persevering in the face of no familial support speaks to the robust peer support within the West Scholars Program and the solid connection with her mentor.

The summer for Ava was spent collecting data, transcribing interviews, and writing her paper and for the most part, she was able to collect a sufficient amount of data. However, she expressed some disappointment when an interview fell through or when people were not willing to participate in her study.

Towards the end of the summer, Ava wrote, "I'm beginning to really look forward to the end of the program. It's been fun, but I'm ready to move onto the next step in life—such as applying to graduate school...As a researcher this week I feel anxious and kind of rebellious. I know I have to get things done, but I really have to push myself

further and harder to get enough motivation.” Ava recognized when her data has reached saturation and when no other interviews need to be conducted. She then wrote her final paper and prepared to share the work with an audience. Presenting her work at the culminating summer symposium made her nervous, but once she began her presentation she was able to pull through and convey the key points of her research project. “Moving to the world of doing scholarly work is daunting, yet intriguing. It’s enough of each to keep going and not give up.”

She admitted that in the beginning of her research she was overwhelmed by the theory and mixed methods she was using, but believed that her project went smoothly. Her nascent scholar identity led her to look at issues in a philosophical way; recognizing that sometimes when there were issues in her study, she could not stop, and had to just keep on moving to deal with whatever happened. It appears that in the nine-month long experience, Ava has developed a more nuanced understanding of research and an emerging scholar identity.

Reflecting on the Undergraduate Research Experience

After participating in undergraduate research, Ava shared that she took the college experience more seriously and believed that once she started doing research her professors also took her more seriously. “You really kind of gain a lot of respect,” she said. With respect also comes confidence and recognition in classes especially with so many people in large undergraduate classes. Participation in this program helped strengthen Ava’s academic integration. “Definitely [the West Scholars Program] has made me feel a lot more included in the academic community here...[it] definitely

enriched my time here quite a bit,” she shared. Benefits of undergraduate research were two fold for Ava: 1) she experienced greater satisfaction with PNM CU; 2) it inspired her to consider graduate school. Given her newly found scholar identity, Ava does consider herself a researcher, even if reluctantly. She explains that if she were sent to do research she would be able to use the proper methods and completing the project especially if she had interest in the topic.

Faculty Mentor Interactions

As mentioned earlier, Ava first met her mentor when she took a class from her that she ended up really enjoying. She would speak with her mentor outside of class and took readings and conference credits with her prior to her project. When Ava was awarded the undergraduate research experience this professor was the first person she asked to be her mentor and was amazed when the professor enthusiastically agreed. Ava speaks of her mentor as being “really positive and a really good person to work with,” sharing resources and being incredibly supportive. Her experience with her mentor was ideal and according to Ava “after talking to other people [about their mentors and their experiences with them], that’s when I really knew my mentor was something special, like we have a really good thing going here.”

This mentor was there for her to answer questions and walk her through the research process. Ava explained “we had really effective meetings and she didn’t do my work for me, which was good I was kinda afraid of that, since I knew that her name was attached to my project, and I was afraid that it would get taken over at some point or re-done.”

Ava's relationship with her mentor underscored the importance of strong faculty connections and support for first-generation students who are considering graduate study. In a touching revelation, Ava asked her mentor if she was coming to the West Scholars Program award ceremony and she replied "absolutely." Ava shared "That's when I knew it kinda meant as much to her as it did to me and I was really happy about that." This mentor went on to help Ava with her graduate school applications and left the door open for future collaboration. Finally, she recognized that connecting with her mentor also meant that she was connecting to a larger network of scholars and professors associated with her mentor whom she could use as resources. "It's all a big circle!" she exclaimed optimistically. Ava clearly benefitted from a strong relationship with her mentor and very likely developed her scholar identity from this person's inspiration.

Undergraduate Research Program Peer Interaction

When she first met her fellow undergraduate researchers she admitted that she was intimidated; she felt like an imposter, wondering if she really belonged. She felt that many of her peers stayed in their shells for a long time and it was difficult to get to know everyone. However, when she participated in the aforementioned trip to another university with a small group from the research cohort, she felt that she was able to get to know her peers better. She explained that on the trip the scholars could just talk and hang out and feel a little bit less stressed out or freaked out about doing research or going on to graduate school. It seems that this program could greatly enhance the social integration of its scholars from more social events such as the trip to another research university. Indeed, Ava commented that "I knew that we would all go our own ways [but] I wish we

would have been able to get to know each other earlier and I don't know how, I have been thinking about that, like how do you make that happen?" she said. Even with this small regret she stated that, "it will definitely be really exciting to see where everybody goes in the next couple of years. I definitely feel like I have made some lasting connections with people and that is awesome."

For Ava the connections with faculty, peers, and the community through conducting an undergraduate research project and through her experience at the metropolitan university in general have enhanced her college experience. But she and her classmates needed more opportunities to connect socially via discussions about their research, graduate school plans and experiences with mentors and program staff. Nevertheless, the peer interactions she enjoyed strengthened her scholar identity and made her more comfortable contemplating a career as a researcher or instructor.

Final Thoughts on the Undergraduate Research Experience

Ava believed that the university should try to incorporate more undergraduate research in their classes, but she is not sure if that could happen since the extra requirement would be burdensome to already busy professors. Also, she stated that the benefits she received from the program outweighed the additional work she completed. She explained, "Just acquiring those [research] skills I think it is important...even in a job. They are skills you are going to take with you whether you go on to graduate school or not. And I think that by doing individual projects like that you gain some independent experience and probably learn quite a bit about yourself....this program seems to stick with people a long time so that's exciting."

Concluding Thoughts

The gratitude that Ava had toward the West Scholars Program was apparent in her voice and all of her memos. She described the experience as a “blessing” and fully immersed herself in the program in order to gain as much as possible. Yet, within her busy life that is full of personal and family obligations, the title of “scholar” does bear a burden and a sense of guilt. She complained that she is “always, always, always” in between work, school and home and as a participant in the West Scholars Program added research as yet another responsibility in her life. While she expressed dissatisfaction with group projects, she thoroughly enjoyed her introduction into the world of empirical research, a world with many forms of collaborative work. It was very apparent that the relationship with her mentor was a transformative one, and equally obvious that stronger peer relationships would have occurred with more social events. However, the contradiction (individual vs. collaborative work) and scant social opportunities, Ava managed to walk away with a strong bond with a supportive mentor, an original research project, and a community of scholars to rely on. She experienced a sense of accomplishment unparalleled to any other in her higher education career. Sometimes undergraduate research just “clicks” with students who need seek that type of academic satisfaction.

Beverly’s Story: “Connections from Across the River, Tenuous Connections at PNM CU”

Beverly may just be the quintessential metropolitan commuter student. Living within the metropolitan area, she typically can be found biking to campus for a

community development or urban studies course. Her research interest does not stray too far from her every day commute as she focused on people's perceptions about the way that cars and bikes conduct themselves on the road. She mindfully traverses the metropolitan landscape in ways similar to the way she has traveled through higher education.

Path to PNMCU and Acclimation to a Metropolitan University

Bored with just “working and living,” Beverly knew she wanted to do something different--something more profound--with her life and decided to start taking classes at the local metropolitan community college. She admitted that she had no idea where she was going with her college career and started out taking a business course that she ended up not liking. After that she took a year off and then enrolled again, this time in prerequisites for the two-year degree program that eventually became work towards a bachelor's degree, transferring in the fall of 2006 to PNMCU. Why did she choose to transfer to PNMCU? Familiarity and convenience along with confidence in the institution, she explained. “I've lived (here) since I graduated high school for almost nine years now and I like it here and it was convenient and I didn't know enough about what I wanted to do to research a program that was more suited to my needs and PNMCU was here and I knew that it would get me off in a decent direction.”

At the time of this study Beverly was in her third year at PNMCU. She described adjustment to PNMCU as being “spotty” and explained that while she likes the institution and has met some good people, she was more a part of a “community” at the community college she attended. She explained that the classes were smaller and that she got to know

the faculty much better because she took many courses with the same instructors. This contrasts PNMCU, which she called a “bigger institution” and said that “it is kinda easy to get lost in the crowd....I just feel a little bit more detached from the community of PNMCU, it just seems too big to get a handle on.”

Consequently, her overall experience has been “up and down” at PNMCU. She also thought the school can be a “crazy place” since it so big, very bureaucratic, and difficult to navigate. “But there is so much going on here, it is also really exciting. And I don’t think that a smaller school would necessarily have that diversity and all the different projects that are around and all the things that various people are researching or working on,” she explained. Beverly appreciated the size and diversity of PNMCU yet was overwhelmed by these same characteristics. As a result her community college seemed to be more of a “home.”

Defining the College Experience from a Non-traditional student’s point of view

Beverly defines a “college student” as anybody who is enrolled in post-high school education and is attending school with some kind of goal in mind, however vague that goal may be. She pointed out that she is a non-traditional student who has attended college, taken time off from college, or gone to school only part-time some terms. Her definition of a “college student” is somebody who is not only taking college level classes but somebody who prioritizes college and going to school above the other things in their life.

When describing the college experience she used the following terms: “It’s everything that goes on when you are in school. Academics, interactions with peers,

interactions with faculty. Participating in extracurricular activities. Whether or not you live in the dorms or live off campus and how you relate to the university I guess.” When Beverly thought about her PNMCU experience she considered it to be dramatically different than many other people’s experience of college. “I am a non-traditional student since I took a couple of years off after high school, then came back to it more of an adult instead of as an older adolescent. So therefore my interpretation of what it was going to look like is completely different from more traditional students. So I haven’t had a traditional college experience but you know. I enjoyed school for the most part.” Not traditional does not mean “not meaningful” in Beverly’s mind, starting with the opportunities afforded by an urban community.

Indeed, despite its large size and the lack of a residential community Beverly felt that having an institution in the center of the city is beneficial for the students. She liked that fact that PNMCU was strongly linked to the city and has encountered many people around the city who either went to PNMCU or who are currently attending PNMCU. She noted that, “they are all doing amazing things and completely different things” she adds, “and so I feel like [PNMCU] is very tied into the fabric of the city itself and what makes this city so cool.” She continued stating that “there are tons of networking opportunities within the university and outside the university that are kind of enabled by the unique place that this school exists in,” she explained.

As noted earlier her adjustment and connection to PNMCU was challenged by the feeling of being lost in the shuffle of the large university. More specifically, she felt like just another face in the crowd in larger classes. She shared:

It's really hard when you have a class with a professor that you're super engaged with the material and you really appreciate their teaching style and yet knowing that it's a one sided relationship....There's sixty or seventy people in that class and there is no way that the professor is going to remember you—unless you really, really, really make an effort to pester them or whatever. That's something that I am actually really worried about in applying to grad school because I feel like I haven't connected with a lot of my professors and I know I am going to need to get those letters of recommendation in order to get into grad school.

Beverly seems to have a clear definition of how her experience differs from that of a residential student in a nonurban environment. Even with barriers she acknowledges (i.e., size and bureaucracy), Beverly knows the kind of strategies to employ in order to experience success.

The Specific Nature of Academic and Social Involvement

Structural impediments such as class size and the institutions quarter system impact academic engagement according to Beverly. She shared that, “you don't have that much time to dive into a lot of projects [and] you kinda have to just plow through everything super quick. I really like to get deeply involved in whatever projects I am doing and the way that it is set up here that is not [possible] ; it is not feasible most of the time, you know [for the] full-time student who is working and doing all that other stuff.”

For example, Beverly was involved in a student-run art gallery in the student café on campus and tried to get funding for projects and events. This art gallery was the only non-academic experience her time allowed for. “I am working as well as going to school

and I think a lot of times you know my spare time is on the weekends if I am lucky or really late at night and I can't really do a lot during the week and that's usually when the bigger campus events happen," she explained. In fact, majority of the time Beverly spends on campus is to attend classes. She typically does her work at coffee shops or at her house and confesses that she does not typically study at PNMCU. Her days revolve around coming to campus for class, working off campus, and doing homework with rare occasions when she has free-time to spend with her roommates instead of classmates. In regards to social involvement, Beverly told me "I have got a lot more going on on the other side of the river," she says, which is where she lived.

It is easy to see why Beverly did not feel socially connected with PNMCU, but it was puzzling that she felt academically disconnected. Like Ava, finding a good major helped her become more engaged with PNMCU. In fact, it was through this major she learned of the West Scholars Program. But the connection to campus was weak and Beverly does feel as though she has missed out on aspects of college because of the lack of social interaction that is part of the non-traditional, commuter experience. She admitted that if she ever had the opportunity to live on campus it would have made a huge difference in her college career. "I also think that if I was able to just go to school and not need to work part-time than that would also make a huge difference and being able to commit to things and get myself involved in things." Her definition of the difference between her experience and that of her fiancé proved interesting. She told me that:

My fiancé did the whole four year college right after high school private school thing, lived on-campus and, you know, he made these lifelong friends through the people who were in his dorm freshman year and we hang out with them regularly. I am kind of, you know, I'm a little bit resentful—resentful I feel is too strong a word—but you know I wish I would have been able to do that but you know everybody's got their own...their own path.”

Clearly, Beverly held a level of regret about making the decision to value convenience over choosing the unknown. Yet, in this convenience rests a small reservoir of regret about what could have been. Unfortunately, for Beverly no significant faculty contracts would drain this reserve.

Faculty Interactions

It is sad to report, but Beverly did not enjoy strong faculty contact. In fact, her interactions with faculty have been fairly limited. There were only two faculty members whom she had a cordial friendly relationship with outside of class and whom she still keeps in contact with. She does not mention close academic ties to any professor in particular.

Peer Interactions

Similarly, Beverly's ties to the “other side of the river” may have impeded her ability to enjoy PNMCU peer interaction. She has “somewhat” had significant interactions with peers and said that she has not made a lot of friends who she hangs out with outside of school. She found there to be an age difference with the peers in her classes and felt disconnected to them. She considers many students on campus as

“acquaintances” but those relationships mainly stay within the boundaries of campus. Again, the issue of size and possibly her stronger connection to her community college both got in the way of making friends. She said, “I think that this campus is so big that it is rare that you have another student in two or more classes and even more rare to have a reason to interact with them outside of class.”

Expectations for the Undergraduate Research Experience

Even with measureable academic and social disengagement, Beverly was excited about the possibility of research. “My favorite part of the college experience is investigating a specific field of study as extensively as possible, but in the quarter system there is not enough time to really dig into a research project. I know I would thrive if given the time and freedom to dive into a project and relentlessly pursue it.”

Already predisposed to the notion of scholarly research, Beverly entered the West Scholars Program expecting that her project would be time consuming, difficult, challenging, but ultimately an experience from which she would learn a lot. In addition to the excitement over full exploration of a topic, Beverly wanted to conduct an undergraduate research project because she has always been interested in graduate school and thought this could be beneficial preparation. Unfortunately, her enthusiasm was tempered by the reality that she was unprepared. She explained that her courses were mainly an introduction to a topic, her assignments only three-to-five page papers, and then she moved on to the next class. She wanted to become consumed but instead was only mildly exposed to research. And since she had spent most of her undergraduate career balancing work and going to school, she did not have the opportunity to just “do”

school and nothing else. She saw participating in the undergraduate research program as what she called “kind of an opportunity” to explore topics in great detail.

Undergraduate Research Project and Experience

Going in with those expectations, she found that the West Scholars Program experience was disappointing and that something new and interesting never occurred. “I was looking into identifying the accuracy about people’s perceptions about the way that cars and bikes conduct themselves on the road and how accurate their perspectives are in relation to what the actual laws state,” she says of her research project. “I was operating on the assumption that if people have a more accurate understanding of what the legal and safe thing to do is on the road then that would lead to less conflict and less accidents between cars and bikes on the road. So I did a lot of interviews and asked people to respond to traffic scenarios and the way they thought was the legal solution to that situation.”

It seemed that such a project would have yielded interesting findings but her research did not necessarily go as she had planned. First, it was more difficult for her to collect data than she anticipated since she did not want her cyclist status to influence her interview questions. Second, she switched her approach to the data because of its social research nature and adjusting to this switch was difficult for her. Finally, she expected to get more out of her mentor relationship but found it lacking. She shared:

I was really hoping that I would form a bond with this person. And be able to really connect with them and that didn’t really happen. But you know, the things that I did learn about it were completely unexpected...but still really beneficial.

Just because my original expectations weren't necessarily met doesn't mean that I had a terrible time or anything, I guess.

Beverly believed that her project would have gone more smoothly with more resources, guidance and support from the West Scholars Program but it is conceivable that her "other side of the river" primary social connection combined with a tentative bond to her mentor undermined her research. However, optimistically she concludes that the best lesson she learned through the process was how to in the future avoid the mistakes she made with this project.

Reflecting on the Undergraduate Research Experience

Beverly's journal revealed that around week 3 of winter term, she decided to change her research topic along with her mentor for the program. She wrote: "Well, it occurred to me that I should re-focus my research project on something different. The reason that I am participating in this program is so that I will have a better chance of getting into grad school. Also I'm having second thoughts about my chosen mentor. So currently I'm trying to come up with a research question that has something to do with transportation & urban planning because that is the type of program I want to go into for grad school." Despite feeling behind after the change in topic, Beverly found that she is much more excited with her new research focus than with her previous one. She admitted that "even though I am still behind I feel like I made the right decision."

Unfortunately, her new research project did not keep her on campus any more than previous one. Her across the river status meant that most of her work was done at home. She completed her proposal, her human subjects (IRB) application and all of her

reading for the project at home or on the bus during her commuter. It is not surprising that Beverly had motivational issues in getting her human subjects application done since it took the university a good while to respond with their approval. The bureaucracy and size of PNMCU played a negative role in Beverly's metropolitan college experience, she shared:

With all of the running around I had to do for the [human subjects research] application it made me realized how big this campus really is. I was describing the experience to a friend of mine who attends the community college (where I went) and we started talking about the contrast between (the two schools). When I first transferred to PNMCU I was really excited about being able to attend a big urban university but there are definitely some downfalls to being one tiny person in such a large institution. I think that overall the instructors at my community college were a lot more approachable than some of the PNMCU instructors. At the community college I was on a first name basis with many of my professors but here I always get the feeling that I'm going to introduce myself and remind the instructor about who I am, regardless of how many times I've done so in the past.

During this timer her mentor relationship continued to deteriorate causing her to approach a social researcher at a nearby university to discuss her paper and gain insight into the process. She felt much more comfortable talking to her than her mentor. Why was the relationship with her assigned mentor considered a failure? Her relationship with her mentor was described as being quite formal and professional and she admitted to seeing

him as an authority figure. She stated that sometimes meeting with him was intimidating. Could this be related to her first-generation status, or maybe it was connected to her lack of connection with PNMCU? She was able to draw support from those people and they helped her edit her work and listen to her ideas. But despite this support, she also found the experience of researching was also isolating. The gap between her home base across the river and her tenuous connection with her mentor made her project less focused and less meaningful.

Faculty Mentor Interactions

Clearly, Beverly had very little interaction with her mentor, but she has not really had frequent interaction with faculty outside of class throughout the undergraduate program. She confessed that she has pursued an “independent” path that does not encourage close faculty contact. Whereas Ava described herself as the “annoying student” who always stayed after class and created faculty contact, Beverly shied away. She did not interact with her mentor outside of their meetings for the program. While she benefitted from the support she did receive from her mentor, she had hoped for a deeper connection. But a deeper connection is a two-way street and Beverly seemed unwilling to initiate the action. She explained, “I was definitely hoping for...(pause) less of a QA session and more of a kind of personal relationship. Like, not only was I hoping to get his take on setting up a research project I was hoping to get more insight into the academic process. And academic life and things that I should be thinking about as I, you know, graduate and go on to apply to grad school and that wasn’t really there.”

Perhaps the mentors' more formal style discouraged Beverly, or maybe it was the power dynamic between a tenured male professor and a female student. Finally, perhaps it was the fact that the first-generation student already disconnected from campus did not see herself as having the right to this professor's time. A final question to ask would be what could the program have done to connect Beverly to her mentor? Could they have interceded for her?

Undergraduate Research Program Peer Interaction

Having a solid network of people within her cohort to collaborate with and to commiserate with made Beverly's college experiences as a West Scholar much more "dynamic." Being able to discuss her project and her peers' projects within the undergraduate research program added a depth to her understanding of things in general. Yet, she desired a deeper connection with her peers explaining that:

I think that some people were able to form friendships throughout the program but I know that for me everything just went by so quickly. I felt like I was just constantly coming up on a deadline or a little behind schedule. I just didn't have time to like focus on those relationships. But then after you know we did our presentations. We all hung out together a couple of times and were able to kind of relate to one another after having gone through this experience together.

Again, Beverly's "across the bridge" connections might have influenced her ability to maintain peer relationships as much as her off campus work. From her comments and journal entries, especially in comparison with her fiancé's

traditional education, Beverly knows what she missed. At the same time she valued the connections with peers she was able to make.

Final Thoughts on the Undergraduate Research Experience

Beverly believed that her college experience changed since participating in undergraduate research, more specifically, her understanding of the way the university works. Additionally, perhaps due to understanding what she could not achieve, she realized the importance of getting to know faculty and peers stating that, “[I] definitely underestimated the effect that those relationships can have on the quality of work that one is producing.” She wished she would have experience undergraduate research sooner, and elaborated on the experience by sharing that:

The program was a the first thing that became really really important to me that I didn’t necessarily have to do and so having that experience, I mean it was, both good and bad. I feel like I learned a lot and I made a lot of friends and I learned a lot about academia, and about research and about the culture of the university but at the same time it was really difficult and it was really time consuming and it kind of took away from my life outside of school.

Again, her off campus contacts and commitments served as her place of stability, but also the pulled thread that weakened the link to PNMCU. Prior to her undergraduate research experience Beverly said that her academic life was separate from other areas of her life, explaining that, “I took classes that I needed to take, that I was interested in, came to school, had class, went home, and had my life.” She also goes on to explain that school

was just this thing that she did and it wasn't really the path that she wanted to take.

However, at the time of our interview, her future plans became clearer. She said:

What I am learning about in school and what I am learning about with my research project I can see a direct path to what I want to do with the rest of my life. So now it's my life and my social life and school and all those things are more connected. I would say that the undergraduate research project made my college experience a lot more dynamic...it connected me a lot more to the university. It was an opportunity to participate in something that isn't just going to a class and turning in a paper. It provided a huge sense of accomplishment...you don't go through college to just continue going through college. You go to earn something, to finish something. I definitely have a big sense of accomplishment because of the research project. If I had gone through my degree and finished my major that would be an accomplishment, *but* it is a deeper sense of an accomplishment and an accomplishing of something I created and worked really hard at finishing, in addition to pursuing this other goal of obtaining my degree.

Concluding Thoughts

At the conclusion of our interviews and after journals were submitted, Beverly is gaining traction on the future. While her research did not produce the results she had anticipating, the experience of the undergraduate research process was beneficial in a way that helped her clarify her goals for graduate school and helped her develop an idea of how to integrate her academic and social life in a productive way.

She also learned to honor her across-the-bridge roots but to also truly invest in her on campus experience to the extent possible as a working woman. Beverly's story also reminds us that higher education can be bureaucratic and difficult to navigate to people who are unfamiliar with the culture of these institutions, namely first-generation students. Yet, as she continues to become an advocate for herself, she learns more about paving the right path towards her destination, one bike pedal at a time.

Camille's Story: "Not into rah-rah, but into Community Development"

After speaking with Camille for just a few moments it is clear that she is someone who is looking to better herself and the world through education. The choices she has made in her academics have led her to greater clarity regarding her goals in life, and her concern about improving situations for others has led her to find her true calling, global service learning. As an undergraduate Camille has taken advantage of many travel opportunities, including with her undergraduate research project where she traveled to Africa with her faculty mentor.

"I could not imagine my life without attempting to make a difference in the world," she writes in her application for the West Scholars Program. Her story will illustrate how her undergraduate research experience proved a vehicle to clearly define and explore her passion.

Path to PNMCU and Acclimation to a Metropolitan University

At the time of this study Camille had been at PNMCU for about three years. She transferred to PNMCU from a well-known state university where she attended school for one year. While she liked the school, she disliked the city in which it was located.

Additionally, by the end the first academic year she spent there, she felt uninspired and unengaged as a student. She explained that her coursework at this university lacked a connection between theory and practice. She felt that many issues were discussed in her classes, but little action was taken as a result of these discussions. She did not return for a second year and instead decided to take a year to travel; then she moved to the city where PNMCU is located for what she describes as a “change of scenery.” Due to its urban location, Camille decided to enroll at PNMCU since she felt that there were a lot more people who were doing interesting things at PNMCU. Plus, it had a different campus feel. Contrary to other participants in this study, Camille *chose* PNMCU, she did not necessarily attend because of its convenience, cost, or by default.

She characterized the previous institution she attended as a “more traditional” school with young people who moved on-campus right out of their parents’ homes. She said it was a “rah-rah” sports college scene that she did not connect with and further explained that she did not think the culture of the school was a bad thing, but in her opinion the students seemed a lot “more shallow” than at PNMCU. “Here it seems like a lot of people commute, and they have their other real lives and have a little more perspective on the world,” said Camille.

Her overall experience at PNMCU was a good one and she admitted to going from a little overwhelmed and scared when first enrolling to feeling extremely comfortable upon her final year. Like Beverly and Ava, Camille believed that finding her current major helped her become more pleased with the school. She shared, “I kind of just stumbled upon the [Community development major] which I am really glad, I felt it

was meant to be that I was at PNMCU because Community development as an undergraduate degree is not very common.” Also, the program has made her feel a little more protected and supported due to its small department size. Camille, an urban student by choice, entered the West Scholars Program predisposed to having an excellent experience.

Defining the College Experience from a Non-traditional Student’s Point of View

Camille defined a “college student” as someone attending a college, university, or higher education institution in general and believed that there are different types of college students ranging from those learning skills, expanding their knowledge, to those deeply connected to co-curricular and extra-curricular activities. She does consider a lot of undergraduates as being lost, confused, and not seriously engaged in learning, which may reflect her first year at a traditional university. She explained that even though she transferred from this traditional atmosphere and culture, she emphasized that not everyone wished to have that type of college experience. Camille was firmly counted in that number and shared that it should not be the norm in American institutions due to the variety of students and the variety of institutions. In fact, the college experience itself, Camille believes, is difficult to define because of the broad range of students and institutions. She stated that learning and gaining knowledge about the familiar and unfamiliar should be the focal point of college and appreciates that PNMCU tends to cater to not-so-typical students and feels validated in her experience.

Finally Camille told me that after her West Scholars experience, “undergraduate research experience has definitely broadened my horizons in terms of understanding what

the college experience can be.” She added that the college experience can be much more self-determined than simply soaking up professor’s knowledge since undergraduate research is a learning experience that is self-directed and based around creating an individual project of one’s own. Camille’s appreciation for all PNM CU had to offer, and her dislike of traditional colleges seemed to indicate that full engagement with her West Scholars project could be expected. The intense desire to engage might be connected to her small town upbringing. The metropolitan setting in which PNM CU is situated was both exciting but also intimidating to Camille. However, as she became more comfortable with the city and the school her perspective shifted. She shared, “being on an urban campus is very stimulating. Being in the center of the city you do not feel isolated from the world. You are able to go out and apply what you are learning to the real world.” She found her learning experience at PNM CU to be “applicable” to situations outside of the classroom; and that PNM CU is more diverse than a “private college that would have a gated campus—that sort of experience.” She continued to say, “the thing I love about PNM CU as an urban university is that it has an actual campus...and it also has common spaces...people are coming and going, it sort of has that diversity [of] people having different perspectives.” Despite the benefits of being accessible to community events and activities, Camille pointed out that commuting downtown can be quite difficult and inconvenient considering all that she is juggles in life. She lives in the southeast part of the city, which requires a commute to campus. Like Ava and Beverly, Camille comes to campus just for her classes.

Of all of the participants in this study, Camille was the only one who had experiences living on PNMCU campus. She describes her apartment in the university housing building as being really dark and lacking a sense of community; typified by the reality of rarely seeing anyone that she lived near on a daily basis. She pointed out that the proximity to campus was a benefit and that she was able to be more flexible with her schedule. However, the drawbacks outweighed this one positive aspect. Camille stated that she did not like the experience of living on-campus, “I liked the urban campus for coming to school but for living there is like nothing really around and it is kind of a weird place to live. Not a lot around here, not, like, a community, it’s just a lot of people coming and going.” Even though she did live on-campus, the experience she described was not comparable to a traditional college. In her case, living on-campus meant just that, a place to bunk but not an experience integrated into the culture of the rest of the campus.

The Specific Nature of Academic and Social Involvement

As noted earlier, establishing Community Development as her major made Camille’s academic experience much better as her classes within the department were taught by professors who enjoyed learning and who understood how to teach. She has had minimal involvement with the larger campus community; the involvement she enjoyed was connected to her department. Community development encourages much social interaction between students with numerous group projects, events and activities. In this regard Camille is the complete opposite of Ava who distrusted group work. She felt that the mission of Community Development resonated with her own ethos and it is obvious that people in her department feel connected to Camille’s passions.

Before beginning her West Scholar journey she believed that she would grow to understand her potential, especially as it applies to graduate work. At the time of the study she felt that she had improved her understanding of her own academic abilities and had begun to “trust” herself more as a student. She understood how she “needed to go about school,” and navigate the university as an academic in addition to knowing her own limitations as a scholar.

At the time of our interviews, Camille believed that she was more mature than she was when she started college and more focused on her studies. Part of this maturity was her developing concern for the third world. She identified a recent study abroad opportunity to Nicaragua as a turning point for her, in ways that conveyed excitement her voice about her travels:

[The trip] was basically two weeks of learning and interviewing [locals]. This is actually where I realized that I was really interested in research. [The trip] was amazing...I am realizing the further I get away from it the more it has shaped my education. I guess because I have also loved travel but have never done it in an academic setting and I really enjoyed that. I guess the traveling experience with the group and learning at the same time—it fosters tons of discussion which is also really great, just because...you see different things and talk to different people and obviously it gives it your education so much more depth.

Through this trip Camille moved beyond doing school work for the grade and towards the full impact of service as a form of learning. After the trip she confessed that it was difficult to return to the typical classroom, having been exposed to something greater than

just regular lecture courses. She told me that “I needed to apply all the theories to action and integrate that into some project.”

Camille found a way to feel connected to PNMCU socially and academically ostensibly through her involvement with the Community Development department. She has made friends and connected with many people and felt inspired by professors and subjects that really interested her. She was happy with her PNMCU education, telling me that, “I feel like I received a great education for the cost ratio in relation to what the university charges, I think that was good.” Similar to Ava’s connection to Sociology, Camille’s connection to Community Development seemingly filled the void she felt as a part of PNMCU’s on-campus scene. Again, another student participant appeared to come alive with the touch of an intense academic interested housed in a particular discipline.

Faculty & Peer Interactions

On the topic of connecting with faculty, peers and the campus community Camille believed that:

It is always important and as an urban university obviously it is easy to not be as connected. Because people are just coming and going. That almost makes it more important to be connected to faculty. [With] larger classes, it is more difficult so I think to really be engaged in your education, it is really important to connect with peers and faculty and I guess campus in general.

Motivated by this outlook, the connection Camille made with faculty and peers had a “huge influence” on her college experience. For her, full engagement requires a commitment to exploit all opportunities to learn she told me that:

I think that just your investment in it, if you are connected to peers and faculty, that just adds whole other dimension in terms of abilities to discuss what you are doing...[to] inform the decisions you make outside the of the classroom...having that sort of connection between the classroom and the rest of your life I think is totally dependent on having a relationship with your peers and faculty. I think also it is really important to have a relationship with faculty in terms of, like, internships, or learning outside of the classroom, or recommendations.

It follows then that, most of Camille's interactions with peers have been during group projects or opportunities to work with others in Community Development were she has made a lot of friendships through different events and trips in which she has participated. On the other hand, she admitted that early on in her academic career she did not take advantage of professor's office hours. "I think at first it was really intimidating the whole university scene and feeling like professors won't have the time [to meet with me]." Eventually she was able to form bonds with professors and began to realize that "professors really do care." Toward the end of her undergrad experience, Camille invested fully in both faculty office house and projects with her peers.

Expectations for the Undergraduate Research Experience

Many indicators pointed to a wonderful West Scholars experience for Camille including her intellectual curiosity, willingness to invest in group team projects, and her peers along with her opens to interact with faculty from Community Development at a meaningful level. From the beginning of her time as a West Scholar, Camille was figuring out where to go with her education after completing her undergraduate degree.

Additionally, she was looking forward to working with a mentor and having in-depth feedback about her work and how to get into graduate school. Her journal entries conveyed that she expected to be excited but also overwhelmed when conducting an undergraduate research. The enthusiasm Camille showed for PNMCU and the major she selected communicated a good deal of optimism, and perhaps a positive energy, that inspired those who would work with her.

Undergraduate Research Project and Experience

Camille put this positive energy into her project where she studied women's access to land in Africa. She explains that during her internships she, "conducted interviews looking to find out whether recent changes in their land tenure systems, how they affected women and what sort of awareness women had about these new laws and land rights in general and whether they are concerned with that and their ability to access land what they are and what they are doing about it. And how they are interacting with the land and how they are gaining security in their access to land." This was important to her because she believed that "having a place to exist should be a human right." In Africa land rights are a big issue and will grow in importance as there is a push for privatization and urbanization. She utilized fieldwork to collect data and found that it was something she enjoyed. She explained:

I really enjoying being the field, [even though it is] challenging because of depressing content at times. But it is also uplifting, the personal stories were emotionally impactful. It was a lot of work, looking back on it now it was really cool to have gone from an idea that was totally intangible and then kind of have it

come to fruition and go through all of those steps and feel like you really learned something and like you actually understand something on all of its different levels. Typically, you don't really do this as an undergraduate, you know, you don't learn just to really fully understand something. I guess I am still reflecting a bit so it is hard to even say how much it affected me.I understand why [graduate programs] really take into consideration whether you have done undergraduate research because I feel like having done one project is so much less intimidating and have a sense of how much work it is going to be it will feel so much more comfortable doing it a second time [in graduate school].

Perhaps a student like Camille is the ultimate "perfect match" for the West Scholars Program. She is a non-traditional student who, with opportunity and encouragement, makes the leap from undergraduate student to a graduate scholar in the making.

A student like Camille is predisposed to a strong mentor relationship and described her mentor to me, saying that, "she is a great match for me as a mentor and we are building a great friendship. I'm enjoying the tons of reading I am doing and our discussions. Every week I feel a bit more empowered." The key point is that the most beneficial mentor matches include consistent contact and at minimum weekly meetings. Ava and Camille showed great growth from their mentor's encouragement and had successful projects as a result.

Reflecting on the Undergraduate Research Experience

The West Scholars Program experience enriched and added a tremendous value to Camille's experience at PNMCU. She was able to feel confident in and proud of her

degree and admitted that “it will only be years from now that I will really understand how much it [the West Scholars Program] affected my experience and enriched it, or just added to it, changed it from a good experience to a really great experience.” Camille explained:

Before this I felt slightly self-conscious sometimes like PNMCU is not a very impressive school and I kinda had to defend my education to friends who go to more prestigious schools. Now with this experience [the West Scholars Program] I feel like I gained so much more knowledge than a lot of people who went to what would be considered top of the line [schools]. Even Ivy League schools because it actually it seems like the point of an undergraduate degree, you want to get a sense of where you want to go or learn a skill but I feel like so many times that doesn't actually happen. I feel like I am leaving PNMCU really understanding what I find fascinating and with knowledge of how to go about pursuing that which is huge!

What is it about the undergraduate research experience that adds value to a Bachelor's Degree? From my interview with Ava, the term “scholar identity” would capture what Camille says when she feels “qualified” to be in higher education, which seems to her like the idea of an undergraduate degree. The research experience is the onramp to an undergraduate program of meaningful learning beyond mere grade accumulation. In fact, Camille stated that her friends at what would be considered “much better schools” completed final projects much less rigorous and enriching than her West Scholars

Project. The development of a “scholar identity” is a transformative experience and central to the West Scholars Program.

“I am really glad that this program, West Scholars Program is here. I think that it is just really important...it completely changed my trajectory.” She expressed satisfaction with the opportunity to visit graduate schools and meet faculty from other places along with the chance to pursue a newfound passion for scholarly inquiry in ways that would not happen outside the program. For Camille, the program and her project were a gateway to new possibilities and a way to claim a boost in prestige compared to her peers who attended more traditional universities and colleges.

When asked to define a “researcher” it is significant that Camille includes herself; a description not likely to occur prior to the West Scholars Program. She explained that a vehicle such as an undergraduate research experience help students “to make connections to peers and faculty. This sort of program connects you to a cohort of people, peers that are socially and academically beneficial to your life and to faculty who become a support system which an urban university tends to not have.” She makes an interesting distinction between college student and a “researcher” stating that, “college students have a lot of the personalities and characteristics that a researcher could have.” Perhaps the fact that she sees these two kinds of academic pursuits as similar shows that by the end of the program Camille had fully embraced the scholar identity while still a student. It seems that this revelation screams “I can do this!”

Faculty Mentor Interactions

Camille chose her mentor in many ways for how she is different than Camille, but also because of their common interests. Like many other participants in the study, Camille took a class with her mentor prior to being accepted into the undergraduate research program. During the class, she said that she liked her mentor's energy. She was upbeat and was very knowledgeable about Africa.

From her relationship with her mentor, she has learned what it means to be a "good mentor." She feels bonded to her and will stay in touch with her for a many years to come. She reflected:

I consider her my friend. It's an honest relationship. I think I will really appreciate having her [as a mentor], I would contact her in my future work, for information on certain subjects or for her input on things. I do feel scared of her sometimes I will be honest. So, but that's a good sign they are actually trying to mentor you.

Critical to this new found friend ship is that fact that they met weekly during the undergraduate research program and they traveled together for a month during Camille's summer research internship. Camille explains, "We stayed in the same room most of the time. We got to know each other really well." It would seem that any undergraduate research project needs to fully consider the critical relationship between mentor and new scholar, especially one who is a first-generation college student who may not have academic role models to look to for guidance.

Undergraduate Research Program Peer Interaction

While Camille's connection to her mentor was strong, engagement with peers outside of class was weak. She felt that her travel schedule kept her away from the group seminar in the summer, and also felt that she missed out on bonding that occurred among the cohort during that term. She admits the research process has also felt very isolating, especially during the writing process.

Despite not being around the cohort while she was traveling in Africa, Camille feels like her undergraduate research cohort was supportive overall and feels inspired by her peers' work and the variety of interests they hold. Finally, she says that it was great to go through the research experience with a group of people who were on a similar page who were willing to share information with each another.

Concluding Thoughts

Leaving behind the traditional, well-known state university experience, Camille intentionally enrolls in a metropolitan university to find the diversity and perspective that is unique to these types of institutions. Despite the confidence in her decision, the need to validate and justify her experience at a public, metropolitan school is apparent. However, she finds that through the undergraduate research experience she is able to feel "qualified" to be in higher education because of the programs comprehensive and beneficial components. She is also able to make informed decisions about her life moving forward, and knowing Camille, her journey has only just begun.

Darcy's Story: "The Missed Scholar Opportunity"

In high school Darcy's art teacher saw potential in her that others did not always get the chance to see, so he took her under his wing and gave her the guidance she needed to complete high school. In 1995, she was the first person in four generations of her family to graduate from high school, and to enroll in college, achievements for which she credits her art teacher's motivation and support. She wishes to do the same for other young, aspiring artists who could use a little push like the one she so willingly accepted years ago.

Path to PNMCU and Acclimation to a Metropolitan University

It has taken Darcy 14 years to get through her undergraduate degree of Art History. Starting out at a local community college in 1995 and finally transferring to PNMCU in 2007. Darcy confesses that her path to PNMCU is a result of her inability to understand the college system as an 18 year-old who took mainly art classes and did not pay attention to her coursework. As a result her grades suffered and she explains that she "wasted that opportunity" as a community college freshman. After a short break from school, she returned and eventually was able to raise her grade point average by taking one class at a time and focusing on her work. While she believed that having life experience helped her improve her academic performance her grades and academic background were not enough to get her into the local art college that she wanted to attend. Additionally, Darcy was not able to afford the high tuition at the art college and the school's financial aid system was not favorable to her at the time. She explains that she ended up at PNMCU by "default."

Her overall experience at PNMCU has been “rewarding and frustrating” to use her words. Similar to other participants in the study, she described her classes as being a “mixed bag,” both outstanding and at the same time frustrating. She believed that it depended upon the department from which you are taking a course. Lacking the enthusiasm for PNMCU that powered other study participants like Ava or Camille, it was a challenge to create an environment enticing enough to help Darcy experience West Scholar success.

Defining the College Experience from a Non-traditional Student’s Point of View

Darcy defined a “college student” as someone who is attending college, who has made it through high school and has been accepted into a college or university. A college student is also someone who is aware of the need to advance themselves, either in the job market or in academics. She also described “college students” as people who are pushing themselves to learn. She pointed out that depending on one’s academic background, the definition of a college student can change greatly since individual background influences whether some students take school seriously or decide to not put much effort into their studies. Darcy told me, when you are a younger, college is something that people think they have to do when they get out of high school. However, when you are older students returning to school after having some life experience it is to make a better living. Additionally, she believed that if a student is from a privileged background where he or she receives family support for education, and from a family where there is a history of education, that student is more likely to excel, and be more comfortable in college. Like Camille, Darcy thinks of college in terms of traditional “rah rah” culture complete with a

raucous party scene. She explained, “when I think of college experience I think of drinking and jocks, this party scene thing that I never knew--some movie thing. I don’t know why it think like that, it is like a greeting card in my head.” However, her lived experience in college differed greatly from this due to the fact she had been enrolled in school for long period of her life. For Darcy, college was the most severe of challenges as she describing “college is something that is probably one of the hardest things you will ever go through in your life,” she continued, “a lot of work but it is rewarding. Overall, it’s a learning experience whether it be for education or otherwise.”

Similar to what Beverly shared, part of the challenge stemmed from the age difference and motivation difference Darcy noted when defining “college students.” At times, Darcy wished that the university were an “over 21 club” since she finds many of the younger students in her classes lack discipline or interest; but she looks past this challenge and believes that the diversity in her classes is beneficial. She stated, “one of the biggest benefits you can learn or glean from a metropolitan university [like PNMCU] is the diversity which combines the fresh perspective from younger students and the guidance and knowledge from older students. Even though PNMCU was not Darcy’s first choice, her definition of “college” and “college student” indicated that she understood the values and challenges of a metropolitan commuter university.

The Specific Nature of Academic and Social Involvement

Darcy described her PNMCU academic experience as underwhelming and short on academic emphasis. When she did take a course that was challenging she felt

overwhelmed because she had not receive the skills from other courses in order to excel and succeed.

Interestingly, Darcy spent a great deal of time trying to be more involved socially and have a “true college experience.” She really started to take notice of suggestions that were made to her all throughout her college career in order to succeed. As a result she tried to jump into groups, clubs, getting into leadership roles, trying things she had never done before; and her grade point average went up. Even though her involvement increased at PNMCU, she still felt that she as lacking full engagement in the university because she was unhappy with her major department. “I don’t think my academic program is very organized. So, it wasn’t really a well-rounded education and I felt that limited my experience.” Yet even with the drawbacks of being in a disorganized academic department, Darcy pressed on and pursued deep social integration.

In fact, Darcy was one of the more involved students in this study and explained to me that she was trying to be more involved and have a “college experience.” She held an on-campus job at the Montgomery Gallery, and was a member of academic student groups and of art co-ops. She was a judge in student art shows and wrote budget proposals for student groups and projects, helped coordinate an art historians conference, participated in a sculpture co-op, and apprenticed as a blacksmith. Darcy spent about 28 to 35 hours a week on campus, attending classes, working at the gallery, and studying in the library. She also maintained a second job off-campus for 18 hours a week creating a schedule full of academic, social, and personal obligations. Darcy never wanted to live on-campus even though it might have made her life easier.

Clearly, Darcy felt that she has connected socially to PNMCU and academically, while her grades are considered to be good, she felt that she was not engaged with the university. She did not feel that her education prepared her for graduate school but she believed that the social connections she has will lead to some advancement in the academic part of her life. “PNMCU for me is just a place with a lot of people and if you put a lot of people together then eventually you are going to make friends and talk about school stuff especially if you are in a class together,” explained Darcy. However, even though the social connections for her were made on campus, she does not have any “personal attachment” to the school. “I don’t find myself going to PNMCU alum activities. I don’t mean to be negative, but PNMCU wasn’t where I wanted to end up so I am frustrated that I made poor choices early in my college career that cost me where I was able to go. But I guess that is also program driven too. If I was here for business or science it might be a totally different situation.” Art History was a disappointing experience for Darcy perhaps due to the disappointment of missing out on what she deemed her dream art school. It may very well be that her disappointing academic experience led her to greater emphasis on exploring social and co-curricular options and activities.

However, Darcy thought “you are really only part-time in any of those activities and you really can’t work [or else you couldn’t participate]. You really have to be a traditional student where you have enough loans or parental help to just go to school and then you can do other things.” Consequently, while she was involved on campus, she also found it challenging to balance all of her activities, along with school and work, as well

as managing to conduct undergraduate research project with the West Scholars Program. Her plate was overfull and this did not bode well for her West Scholars project.

Darcy admitted that working full-time and going to school full-time took its toll on her. She felt that juggling all of those areas of her life was challenging academically, socially, personally, and financially. Like Ava, she felt continually pressured and always overwhelmed. “The school part really seemed easy sometimes,” she confessed and that “I always kinda day dream and wonder what it would be like to go to school and not worry about anything else--outside life.”

Faculty Interactions

Even though Darcy did not feel like she had a personal attachment to the school, she still thought it was important to connect with faculty and peers in college and wishes that she would have been more connected with faculty. She believed that students who created some kind of academic relationship with a faculty member really thrived. This is true of the participants Ava and Camille’s strong relationships with faculty resulted in great project. There have only been two or three professors who Darcy has felt comfortable talking with outside of class and they were typically within her already established art community. Building a relationship with them has been easier than with other faculty. Mainly she discussed art with her professors and art exhibit opportunities within the urban community. She explained:

I think having someone who understands where you are coming from, especially the type of anxieties you have while going to school is nice. To have that sort of recognition that what you are doing is difficult—they (faculty) can kinda see you

from the outside. You see a giant pile of homework, but they see it as something you can make it through...they would say that you're going to do ok and they see the potential in you. That type of support makes a huge difference.

Beyond these two to three professors tied to the local art scene, faculty members were not accessible and had “a lot of other stuff to do and a lot of other students to work with.”

However, one class in particular stayed with her, and explained:

I took a history of Japanese religion, and the instructor has to teach it on line and she followed up with me for months after class. That meant a lot to me, that I was still within her scope and it made you feel, that you are not *just* going through something to memorize it and pass a class. To get a grade to complete a degree. It kinda takes the purpose of college out.

Darcy represents another student whose goals extended beyond grades and reached in the area of meaningful, experiential learning.

Peer Interactions

Darcy also points out the value of peer connections. “Peers seemed to me to be the best resource, sometimes even more so than the faculty. We all have different experiences and often learn from mistakes and help each other out. Also, informing each other about things happening in class, a new class, or a new policy.”

While at PNMCU, Darcy had stronger peer connections than faculty connections and she recalled two peers in particular. One was supportive and came from a similar background as her. They connected over feelings of inadequacy and insecurity about higher education and strategize about how to help each other navigate the system to get to

their goals. Her other peer had similar academic and art interests and he gave her personal support concerning family issues they share. She found a support network on campus with her peers that was cemented by similar academic interest and personal life experiences and backgrounds. She typically interacted with peers by getting coffee or having lunch together while studying for mid-terms or getting into heated debates over topics covered in class.

In reviewing her responses a glaring deficit emerges, lack of respect for academic department and feelings of rejection by faculty who seemed “too busy” or more interested in other students. It would be interesting to see what this would mean for her West Scholars Program experience.

Expectations for the Undergraduate Research Experience

Going into the West Scholars Program, Darcy stated that she wanted to conduct an undergraduate research project in order “to express a culmination of all the things I have been working so hard towards.” She added, “it is time for me to start being able to verbalize and vocalize and organize the things that I have learned to contribute to the community—giving my perspective.” Along with tying together what she learned during her undergraduate career, she also wanted to be academically challenged by the West Scholars Program in ways she was not in the Art History department. Darcy shared, “you know if I were ever to meet someone who came from the same background I came from who is struggling in the same way, if I do excel at this and this is something I can do well, I may be an inspiration, I hope that isn’t too narcissistic, my research itself may provide some sort of inspiration, or my story, I might be lucky enough to be a mentor to

someone – when I grow up.” At this time Darcy defined a “researcher” as a curious person who has an uncontrollable need for information, and wants to learn more about something, finds gaps or unexplored topics that need more attention. She considers researchers to be “big geeks...but in a good way.” To her researchers and people who see issues that need to be resolved. Research according to her, should serve a societal purpose:

I wanted to conduct an undergrad research project for a lot of reasons. The first reason being the experience in general. Secondly, I knew even though I was an art major and taking art history, I was never really getting the full story of anything. Even on the 15-20 page paper [she wrote in an undergraduate course] it is so hard to research a topic in inserting the amount of necessary research material in a three month period in addition to your course work. So I looked at [the West Scholars Program] as an opportunity to find out more about something I was interested in...catching on to that wider view, that’s the thing that fascinates me about undergraduate research.

Driven by an “unquenchable thirst” for understanding and the goal of conducting socially relevant research, Darcy was poised to have an outstanding West Scholar experience.

Undergraduate Research Project and Experience

The problem or issue Darcy wanted to explore concerned the huge lack of involvement with the community and museums. These two elements did not connect or interact effectively. Museums are seen mainly as archives and not a living, breathing environment, and her work looked at education programs offered by museums and how

they gave high school students opportunities to develop themselves as curators and artists. Darcy loves museums and is personally invested in seeing them improve, telling me that, “one thing I have been thinking about is how art classes when I was in high school saved my life.... We have taken art out of schools. And I think that art provides an important social document of where we are in understanding who we are and where we are going. If we want the arts to survive we need to start with younger generations.”

As the project began Darcy’s work was co-opted by her mentor and at times she thinks that her project seemed more like her mentor’s than her own. However, she focused her paper on one goal, asking what the impact of teen programs at art museums could have on a community or an area. The ebb and flow of her research experience reached what she described as “really exciting” moments such as after conducting an interview she would take the audio tape and listen to it on her headphones over and over again as she walked around the city. Listening to the interviews was a highlight in her research experience.

Yet, other times the research experience was frustrating, especially when she was “not finding things,” such as resources, literature, or interesting findings. She admitted not being able to learn as much as she wanted to during this experience and felt that she did not uncover anything new or interesting in her topic area. In addition, the relationship with her mentor began to deteriorate.

Toward the middle of her project her relationship with her mentor became more “cold” and “frustrating.” “I felt like I was a disappointment to her,” she explained and shared that “...I would just get really angry when I had been busting my butt and it was

not being appreciated to any degree. She told me that, “I had a lot of questions and I needed more information but just maybe don’t work well together and maybe I just do better in her classes.” Darcy powered through her study even as things fell apart around her. She spent the winter preparing her research proposal and searching for relevant articles, but the weight of doing research, while going to school full-time, a failing relationship with her mentor and working two jobs had its down side for Darcy. Her journal entries were riddled with self-doubt and she frequently wrote about her frustrations:

This past week I have been incredibly frustrated with school and my research project for West. I am very passionate and excited about my research topic and would love to feel a little more confidence and qualified for the task ahead. I have had an anxiety induced panic attack and I think I had at least three this week. I have become so frustrated with the fact that I have had to work so much in addition to my school work that both are suffering. My head is so full of information it can’t take anymore...seriously.

By the end of winter term, Darcy was still trying to find a balance for her busy schedule and heavy workload but like many others in the study, she spent spring term completing and submitting her IRB human subjects proposal. She considered the application process to be a great (and also extremely frustrating) learning experience that has helped her clarify the details of her project. Additionally, most of her research was done at home and her interactions with her mentor began to deteriorate further from lack of contact. She spent the summer interviewing participants for her study and transcribing the interviews,

but with a limited amount of time to collect data her paper began to slip away from her as the time expired on the summer internship clock. She was frustrated with the lack of support she received from her mentor during the summer and overwhelmed by the work and this frustration was evident in her last journal entry:

I am so behind and have absolutely no idea what to do with all this information I have collected. I feel like I could have done more but this project has taken over my life and I can't tell what is what anymore. I feel crushed by and frustrated by my mentor, after hearing from students about how great their mentors are. I thought about quitting the program numerous times this week—no amount of money is worth feeling like this. I thought I could navigate without a helpful mentor and now I am a mess.

Regretfully, she believes that she never really got to be a scholar through this experience because she missed out on having a significant and beneficial relationship with her mentor. Additionally she felt let down because she was too overwhelmed while going through the program to enjoy it. She also wished the quality of her work was better. Heartbreakingly, she saw that the West Scholars Program experience became a huge stepping stone for several people in the cohort, but that was not her experience and she felt she was missing out on something she could have had.

Reflecting on the Undergraduate Research Experience

Darcy believed that completing an undergraduate research project was overwhelming and it was evident in her journal entries. She believed that the type of work done during the project should be standard for the university and that working on an

individual project from start to finish, and using skills that college students should have is important. She pondered the possibility that at smaller, private residential colleges students may conduct similar work, but at PNMCU, that opportunity does not exist. Darcy recalled “the classes here, it’s the same formula all the time.” She continues to explain “As hard as it was to do something for nine months (the duration of the undergraduate research program) it definitely made me feel more like an expert, like I was actually learning something and it was self-propelled or self-motivated. There definitely needs to be more standard practice, to do long term research while in school.”

Even with the failure to her project, the West Scholars Program helped her gain knowledge about graduate school and the application process which helped Darcy feel far more confident in how to approach continuing her education. She wished she had participated in undergraduate research and in the program earlier in her college career because it definitely enhanced her educational experience. “It made being here worth my time. It made me feel like I was accomplishing something,” she shared.

Faculty Mentor Interactions

In regards to her mentor, Darcy chose her mentor because she was someone who saw both Darcy’s strengths and weaknesses while pushing her to do work outside of her comfort zone. Before the program began she described her mentor as knowledgeable, intelligent, congenial, and casual which were all important characteristics to her. However, Darcy ended up clashing with her mentor about style, the research topic and work, and needed more from her. Perhaps the “need” was for affirmation and support; reassurances that are so vital to the experience of even the most confident appearing first-

generation student. She expected to have a close and valuable relationship from her mentor and did not, this was a failure. Starting in spring term, her interactions with her mentor began to decrease and the support she received became less and less Darcy's connection to the project was swept up in the undertow of two jobs and campus activities. In the end, she was left feeling completely abandoned by her mentor. Where could the West Scholars Program have intervened and in what ways could the program and administrators have reached out to the mentor or to the Art History department? The link between academic department and the West Scholar was a critical part of the success of Ava, Beverly, and Camille. It is clear that this issue needs to be explored further so that there are fewer "Darcy" incidents.

Undergraduate Research Program Peer Interaction

Darcy recalled when she came into the room on the first day of the undergraduate research program seminar that she thought "oh my god, how are we ever going to connect?" She continued by explaining:

I kept hearing about how the connections were and the impact it was going to make. I think everyone was really nervous and awkward and it took forever for me to figure out. But over time the scholars really became my safety net. It was nice to know that they were suffering, don't want anyone to suffer, but nice to know that we were all going through the same thing. It was nice to be around people who had that discomfort of being a first-generation student.The [label of] 'scholar' kinda changes how people chose to behave. It was a lot of responsibility. People took it to a degree that was funny and awkward but I think

most of us even struggled with that identity in general and had a good time joking with it. I love them [the scholars in my cohort], they are great.

Darcy admits to still having feelings of being an imposter even though she was with a group of people “like her,” all the more reason that her mentor’s abandonment must have hurt at a deeper level than she realized. Throughout the start of the program she was protective of personal information. However, after getting to know her cohort better she started to share more with the others scholars and realized that they came from similar backgrounds. She also explained that she shared more with the scholars in the cohort than she would have normally, or would be too ashamed to discuss with ordinary groups of students at PNMCU.

Concluding Thoughts

Students need advocates, cheer leaders, supporters. Luckily, Darcy received that support in high school. Yet at the undergraduate level, when she reached out for mentor support she was left hanging. This illustrates an unfortunate consequence of a scholar and faculty relationship that is not a good match. Not having a mentor felt to Darcy like not even being able to fully participate in the program which seems to echo a continual struggle throughout her educational experience. She wants to be involve in a major department but that department gives the perception that faculty are too busy for students. She wants to be engaged with opportunities on campus, but cannot juggle all that commitments she makes. To reiterate her words, “being fully involved with college, you are really only part-time in any of those activities.” For those students who want to commute, be involved on campus in clubs and activities, spend time in the classroom and

in their major department, seek faculty guidance, and interact with their peers, is it really possible to fully experience them all, or are they as Darcy puts it just really “part-time” in any of those?

Elise’s Story: “All Day, Every Day”

Elise has roots deeply planted into the soil of the metropolitan university. Like integrated tree roots that twist around and provide the nourishment the plant needs to thrive, this metropolitan student has planted her community in the heart of the PNM CU metropolitan campus. While other metropolitan students may be characterized as disconnected, uninterested, or too busy for real involvement; Elise provides another prospective. She is deeply integrated, wrapped tightly around the school—its location, its people, and its purpose. Elise shows us the other side of the metropolitan experience.

Path to PNM CU and Acclimation to a Metropolitan University

Elise became very interested in the setting of PNM CU while she was at a rural community college working in the Learning Center with at-risk students who needed extra support in order to be successful in school. In this position she would often hire mentors from the General Studies program at PNM CU, several of whom encouraged her to apply to PNM CU for admission and to apply for a position as a peer mentor. Elise had already completed her Associates of Arts degree and was ready for the next step, explaining that, “The [PNM CU General Studies] mentors helped me apply and I was mentored through the process by someone who really loved it at PNM CU.”

It was that community college learning center experience that guided Elise’s path and acclimation to PNM CU. She selected the school as much as the students selected her

into the peer mentor program. However, during her first year at PNMCU she declined the offer to work with the program and instead opted to take a year to adjust to the metropolitan university and focus on academics. “I felt like I spent a very quiet year academically orienting myself. I really needed to understand how I was going to balance everything academically.” After choosing acclimation over campus work, Elise was again invited to become a mentor for the program and this time she accepted during her second year. At that time of this study, Elise was a senior in her third year at PNMCU.

Her overall experience has been positive. She believes it has been positive mainly because she knew what major she was going to be in when she started at PNMCU and purposefully looked for relationships inside the department. She immediately connected with faculty and peers in her discipline and this was helpful for her. She said that she was completely dedicated to her department and commented that she has taken classes from good instructors while at PNMCU. Additionally, because she worked on campus she felt that she had a community on campus that has been helpful as well. Like Ava, Beverly, and Camille, Elise found a departmental home and thus experienced a more complete acclimation to PNMCU. Unlike Beverly, it appeared that she was able to move her roots from her rural community college and replant them in the urban soil of PNMCU.

Defining the College Experience from a Non-traditional Student’s Point of View

Elise believed that a “college student” is anyone who is attended classes at, or in a collegiate setting for enrichment purposes or to attain greater knowledge. She believed that there are several motivations for going to college including the motivation to

graduate, the pursuit of knowledge or information, to impress others, to appease family members, or to experience higher education culture.

“My college experience has been a decade long,” explains Elise, “and it took extra time and I think my experience is richer because of that I felt less pressure, and had more of an actual experience because I took so long. There was a level of depth that people who are pushing themselves to take 21 credits a term may not reach.”

Elise thought that the college experience varied greatly from student to student, for example, there is a “forced” college experience where you are expected to go; and this is different from a college experience where you have to sacrifice almost everything in your life in order to take even one class. She concluded that there is no single college experience and added that “...if you are lucky, you’ll find other people who are having a similar type of experience and help each other out.”

Her solid PNMCU college experience was enhanced by the advantages that come from being an employee of the university. She clarified, “the time I was here I think I had a very typical...well maybe not typical, but true experience.” She says that because of the support she received from her PNMCU supervisor and peers her college experience was not the typical experience for an average PNMCU; she received information and resources because of her position on campus. She was also very connected to her department where she was employed which greatly added value to her PNMCU experience.

It is conceivable that her employment gave her a reason to be on campus beyond attending class which would create greater academic integration. The fact that Elise still

lives in her rural town illustrates the level of commitment she has for PNM CU.

Commuting and the cost of the commute was challenging for Elise who traveled from her rural residence to the metropolitan university, driving one hour each way. However, she believed that these challenges are offset by the benefits and enjoyed her new community centralized within the city, the PNM CU campus. Also, she appreciates the way campus looks, the outdoor and indoor spaces, and its layout in general. Elise loves the aesthetics of an urban campus in contrast with her rural home. She mused that, “I think about what it feels like to be walking through central corridor of campus when the clock is ringing, it is just such a great atmosphere for me personally. I just really enjoy it. Really enjoy it.”

Like Camille, such enthusiasm and satisfaction with her school boded well for all of her West Scholar activities. It seemed as though nothing could deter her from achieving total academic and social integration.

The Specific Nature of Academic and Social Involvement

Elise believed that she had firmly connected with PNM CU socially and academically, and actually achieved a good balance between the two. Academically, she believed her experience at PNM CU was excellent and she consistently performed well in her classes. Her academic experience was linked to her work experience in the General Studies program recalling that, “the training that we received there I think helps us become better students and as we work with students who do well or don’t do well respectively you learn from those experience and shape the way that you move through your academics.” Elise enjoyed a solid interconnected web of support through

relationships with faculty, fellow mentors, and the students for whom she teaches and mentors. She explained:

Being a [General Studies] peer mentor could not be segregated from my experience. The places where you learn the most are where you are teaching what you are learning. And that happened to me almost daily when I was a mentor, there are some many times when what I was learning in my class was similar to what they were learning in theirs and the information would be transmitted immediately from the senior level to the freshman level. That's amazing for them and for me.

Her extracurricular involvement outside her job was equally impressive whether with learning groups on campus, the Spiritual Center also on campus, or study groups in her classes. "I am on campus all day, every day," said Elise. "That's not what a full-time student at PNM CU normally does, but it feels like I am very involved with the campus." Indeed, Elise spends anywhere between 25 to 45 hours on campus, and it is not rare to find her at the library studying until midnight. Unlike Ava, Beverly or Camille, she does not come to campus just to attend classes. Instead she is on campus to work, to be socially involved, and to participate in her classes. This truly is a stark contrast to the other metropolitan students in the study. "I don't know if there is a corner of the campus that I don't know. Even though it is a commuter campus, I never just come here, go to class and then leave. That has never happened to me," she explained. Of course, working on campus in a position of consequence helps too, but even factoring in this advantage

her enthusiasm for PNMCU is rivaled by Camille who was a transfer from a tier one, residential campus.

Elise, who like Ava owns a home, explained that housing options off campus not only have always been less expensive than on campus housing they afford her greater levels of privacy. But even with a significant commute, she not only maintained an extraordinarily strong level of social commitment and an even more impressive academic commitment. Knowing Elise one might ask, where does she get the energy and when does she find the time for classwork?

If support and positive reinforcement could be converted into energy perhaps we could see what helped fuel Elise. She found her major department to be “ridiculously endearing and supportive” of her work and the professors appreciated her maturity and community college preparation. She reflected that, “I felt sometimes like I was a step ahead of the courses here, but there were a lot of courses that were amazing and mind blowing with new, fresh information for me. But, I think a lot of the instructors saw that I was an older student that I had already previously had several years of college and helped me step up where it was applicable and help me step back when I needed to.” Once again the first-generation student connection to faculty and academic department proved to be foundational for success. In this study, Ava, Camille and Elise enjoyed the strongest levels of academic commitment and this translated to classroom and West Scholars Program success.

Faculty Interactions

Elise had copious contact with faculty and staff within her major department, as well as been paired with four different faculty partners for her work as a student mentor with the General Studies program building solid relationships with many of her instructors in classes outside of her major and with General Studies. She clarified that “because of my age, I don’t feel odd about fostering friendships or friendships turn out after the term ends with a lot of my instructors....I live in a gray area where I am not staff, but I am facilitating a class [as a mentor] so I think that helps me connect a bit more [to faculty].” She added that she would call some staff members on campus among her closest friends.

Persistence and being the “pest” hovering around faculty seems to be a successful strategy employed by the more academically integrated women of this study. Elise described herself as a student who haunted the faculty halls. She reflected:

Any faculty that I ever took I made sure I went to their office hours at least once. And I have always found myself in a position where I am working on campus while I am going to school. That just always happens. So, I think I am perceived as part of the faculty often by other students. That doesn’t keep me with connecting with them but I am more likely to be in a staff room when I am having my lunch than in a student common even when I am a student.

Peer Interactions

Her fellow mentors in the General Studies program are a large part of Elise’s peer community on campus. These students have a protected space set aside for them where

they can sit, do work, or help each other and share resources. She says this space is a “thick community.” Outside of the mentor community she has been able to connect with many students in her classes and in her department. Connecting with her peers within this thick community contained intellectual and personal benefits more valuable than mere classes. She explained:

I think connecting with the campus community, this urban community, and the faculty, and my peers feels more valuable to me than a lot of the book learning that I got. Looking back on what has furthered me here at PNMCU, it’s been my relationships,” Elise reflects. ““If you asked me 15 years from now what I learned at PNMCU, most of the things I would tell you would be related to my relationship with faculty. Because they often gave me more information than other students because they knew I was hungry for it.

It can be stated from our interviews and from her journals that Elise values outside of class learning more than class learning. Part of this kind of learning involved Elise becoming more familiar with the metropolitan environment that PNMCU is based in, and also in contrasting it to other environments she has experienced. Elise stated, “What we learn in the classroom at some point starts to carry over [into the real world] so what I have learned helped navigate and negotiate the world outside of the classroom.”

Expectations for the Undergraduate Research Experience

Before beginning the West Scholars Program, Elise conducted smaller scale research projects, participating in projects for a seminar course prior to being accepted into the undergraduate research program, but she had never taken on a project from start

to finish. Elise learned from researchers whose work benefits the population and this is the underlying reason for her to conduct her own research. Elise stated that, “the research I do on my own will have a more significant meaning to me than just reading other people’s research.” She expected to be able to, “create some meaning out of the small window of information that represents a larger whole.”

Her topic explored “urban agriculture” and she explained that in many cities in South America, Africa, and Europe there is funding for urban agricultural studies in order to create sustainability of domestic food and non-imported food sources. She pointed out that, “we’re at a period in time where if we don’t reserve our land and use it for that and also educate the citizens of the city on how to really focus in on urban agriculture we may lose some very valuable space that could be allotted for that.”

As a PNMCU student and as a full member of the PNMCU community she has to be mindful of her schedule and must always allot the time necessary for research activities. Elise described a researcher in the following way, “anyone who goes in search of information on a topic.” She explained that there are several levels associated with being a researcher, the first level being the process of searching for information. The next step involved making sense of the information collected and how it fits into the world’s perspective. The creation of new information out of the research conducted is the last level. Elise believed that once you have researched the point where you can contribute to the conversation in the field, then you can consider yourself a researcher. Even more so if something you are researching warrants a response. After completing the West Scholars Program, Elise considered herself a researcher.

Undergraduate Research Project and Experience

Out of all of the participants in the study, Elise spent the most amount of time on campus averaging about 32 to 43 hours a week. Most of her time on campus was spent working as a student mentor, attending classes, participating in study group or student groups, prepping her application for graduate school and studying. However, the time spent interacting with her mentor was most beneficial to her West Scholars project. She wrote in her journal, “my mentor continues to be a source of comfort and a cheerleader for my efforts. I am so in awe of his ability to make his students think, act, and engage.”

Working closely with her mentor, Elise spent the majority of the first term in the program reviewing research articles, composing her human subjects research review application, and preparing her research proposal. It was in this winter quarter when tragedy struck Elise and her family.

During the last week of winter term her father became ill. She wrote during this week, “this campus situated downtown continues to be a positive for me, the way it feels, the ability to walk between buildings streets and classes helps to create a balance for my body and mind.” While coping with her father’s illness Elise still managed to stay focused on academics and her goal of applying to graduate programs but her father’s health condition grew worse. She spent much of her time traveling to be with her family who lived out of town. She characterized these days as “less about school, more about life.” The experience of her father’s illness demonstrates that metropolitan students need to develop complex coping strategies to negotiate their real world commitments and obligations to family, work, and friends while exercising commitment to their studies.

During the week of June 22-27 Elise wrote, “My dad died,” and while she attended the undergraduate research program seminar that week she was barely present, “I know I cried,” she said of her time in class. She described her drive back home from her father’s place out of town, “And while I drove,” she wrote, “I thought about my research... I am stretched out in two opposite directions.” In some ways the West Scholars project provide an emotional refuge to cope with the deep sadness of her father’s death. On the other hand, her enthusiasm and substantial investment in PNM CU, especially her connection to faculty seemed to ensure that measure of stability would guide her through the succeeding months.

Reflecting on the Undergraduate Research Experience

The West Scholars Program experience exposed her to the competition for graduate admissions and how the experience at PNM CU was not the only faculty influencing admission. She told me that “...these are things I never would have known to consider in my thought process when getting ready for to apply for a master’s program.”

The experience of undergraduate research also prepared her for the anticipated goals she has for the future which include:

Taking care of the details, like the human subjects review, helped me think about what will happen when I do my dissertation later or when I am getting ready have to do for my culminating project for my master’s thesis. It changed the way I think about the timeline of research and how long it takes to get the necessary components to do the type of research I want to do which will continue to be

ethnographic. I started thinking about other things as research opportunities, other than just observational. I liked that, it carried across everything I was doing.

Like Camille, the West Scholars experience was a matter of both pride and prestige for Elise who explained, “I felt like a representative of PNMCU while I was a scholar. I think that can only enhance the way you feel about the school that you work for. So that was a really important part of doing a research as a part of PNMCU. I also think that PNMCU is highly regarded in the area.”

When reflecting on her project in general, Elise feels like it was an important marker in her young academic career. The culminating activities were more than ceremonial as she shared with me that, “I got to present in front of students in my department with my research before I graduated, I would not have been able to do that [if I was not in the program] that felt like a lot of closure like I had reached the end of that.” The satisfaction and feeling of accomplishment Elise enjoyed upon completion of the West Scholars Program will always stay with her; but if not for an excellent mentor the memories may not have been as fond.

Faculty Mentor Interactions

Elise had the most exceptional mentor relationship of the participants. She chose to work with her mentor because she valued the way his work was structured and his passion for the topics he researched. More importantly, he was also willing to foster her research interests and to learn more about the topic Elise was researching. In an unusual step, he also began to integrate her work into the classes he was teaching through his department and this made Elise feel like she was a part of something larger, not just

doing research for herself. As it turns out, prior to the program she had a strong, and friendly, relationship with her mentor of whom she said:

I have an immense amount of respect for my mentor. I am afraid for him to think badly of me. And I knew that and I knew that that would keep me from embarrassing myself so that would make me work extra hard. He knows me very well. We really I think became a stronger unit to work together.

Elise was fortunate to have found a mentor with whom she “clicked,” but her insider status as a hired mentor may have facilitated this relationship. It is very likely that this was a singular advantage to other study participants.

Undergraduate Research Program Peer Interactions

Elise admitted that at first her peers in her cohort seemed like “competition” as opposed to support. She felt pressured to produce work that was original and unique from her peer; yet, at the same time she grew to appreciate having someone research the same topic since she was able to share resources and gain valuable feedback from someone who was well-informed about her research topic. Networking and building professional connections were a benefit of the peer community for Elise.

Eventually, she formed friendly bonds with most of the scholars in her cohort, and she became good friends with one student in particular whom she called her “closest academic partner in crime.” Just as the relationships she has had with her fellow mentors she also expects to have on-going relationships with students in her cohort. Both in as personal and professional connections.

Concluding Thoughts

Elisa's experience illustrates just how a student might become fully integrated despite the commuter environment and unengaged perception of metropolitan universities. Her community is built around her enrollment at PNMCU and she utilizes the faculty, peers, and resources around her to maintain a balance between school, work, and family. She is a mindful student who is taking the initiative to obtain her goal of continuing her education in graduate school. The undergraduate research program provided her with an opportunity to prepare for this goal. It should be noted that the main impact on her participation in the undergraduate research experience was less about her integration or involvement with the university. Instead, it was more about creating a culminating project that branched out and encompassed all of the work she had done in her academic career which provided her a sense of closure as she finished her bachelor's degree at the institution she holds so close to her heart.

Summary of the Five Narratives

Path to PNMCU and Acclimation to a Metropolitan University

All of the participants in this study had transferred to PNMCU from different universities for various reasons. For Ava and Beverly, the convenience of having a metropolitan university in the city where they lived prompted their enrollment here after completing transfer degrees at the area community college. For Camille, attending an urban university was her choice after she spent a year at a traditional, residential school in the state. After a failed attempt to enroll in and pay for the local art school, Darcy arrived at PNMCU as the lesser alternative. At the encouragement of PNMCU students, Elise

was helped through the admissions process and intended to continue her education at the metropolitan university.

Admittedly, all of the participants were slightly overwhelmed by the university when they first arrived. Ava had heard mixed reviews about the school and was apprehensive about enrolling at the school. Beverly ran up against the bureaucracy and crowded nature of a larger university. Camille transitioned from a small town to a school in the middle a city, and Elise took time to find her balance within her new environment.

For Ava, Beverly, Camille, and Elise declaring a major and establishing an academic home within their academic department helped them acclimate to the metropolitan commuter university. Consequently, for Ava, Beverly and Camille most of their involvement with the campus took place through their academic department, rather than student activities or athletics.

The engagement with their major department was perhaps the only way these three women could be involved with the campus because of the busy lives they lead, having to go from school to work obligations to home responsibilities. Elise and Darcy's involvement were at a higher level which I will explain in a later section.

Defining the College Experience from a Non-traditional Student's Point of View

Despite acknowledging their non-traditional student identities, all of the participants in the study defined "college students" and the "college experience" in traditional terms, a distinction that speaks to the perception of college within our society. In their interviews and journal they discuss both the benefits and drawbacks of attending a metropolitan commuter university. Transportation and class scheduling issues topped

the list for challenges, while networking opportunities and close ties to the metropolitan area were highlighted as benefits. Ava, Beverly, and Camille were just on campus for classes. They rarely stayed within the boundaries of the university to socialize or otherwise. They preferred to do their school work at home or at neighborhood coffee shops. In contrast, Darcy and Elise built their academic and social networks around the metropolitan commuter university and could be found doing any number of activities on campus.

The Specific Nature of Academic and Social Involvement

Due to only coming to campus for class, Ava, Beverly, and Camille were the least involved on campus. They recognized the value being involved could add to their time at PNMCU but were restricted by the other priorities in their lives. However, where they were socially they were disengaged, they were academically connected, especially through their major departments as I mentioned earlier. On the contrary, Darcy was deliberately socially involved at PNMCU, but felt academically adrift due to her dissatisfaction with her major department. Despite Darcy's involvement, she confessed that she did not have any personal attachment to the school, perhaps since it was not her first choice. Elise managed to combine both academic and social integration by working on campus in an academic capacity as a peer mentor. Ava and Camille both sought to gain as much as possible out of their last year as undergraduates which prompted them to apply for the West Scholars Program.

Faculty Interactions

Ava and Elise had the most contact with faculty prior to participating in the West Scholars Program. They both attending faculty office hours often and actively and deliberately engaged with faculty in their departments. Elise worked alongside faculty members as a peer mentor in the general education department. Camille admittedly did not utilize faculty office hours, but after she took a university sponsored trip with faculty from her department, the barrier that once prevented her from approaching faculty receded. This was not the case for Beverly and Darcy however. Beverly took a very independent-minded approach to navigating school and did not look to faculty for guidance. Darcy probably would have willingly accepted positive interactions with faculty, but did not pursue faculty support because she perceived her department to be inaccessible to undergraduates.

Peer Interactions

Peers in their classes ranged from being assets and supporters, to distrusted group project members, to “young people” without a sense of reality. For Ava, her peers were fellow class mates learning alongside one another and, at times, burdensome group project partners. Beverly held close the ties she had to her group of friends off campus and rarely socialized on campus or interacted with peers regarding anything but coursework. As a Community Development major Camille enjoyed group work and gained friends throughout her time on campus. Darcy and Elise valued peer connections more than the other three participants in the study. At times, peers were a better resource for them than faculty or academic professionals.

Expectations for the Undergraduate Research Experience

A challenge that could yield a great reward was the theme that resonated through the participants' expectations for undergraduate research. While their classes varied in rigor, all of the participants saw this experience as the one that would really bring out their academic prowess. Tired of the formulaic undergraduate courses that did not allow enough time for meaningful investigation into a topic, Ava, Beverly, Camille, Darcy and Elise looked to the West Scholars Program to provide them with the time needed to complete an original research piece, adequate preparation for graduate school, a structured faculty mentorship experience, and a chance to wrap up their undergraduate academic careers.

Undergraduate Research Project Experience & Reflections

Conducting research that would be beneficial to people within a community they cared about was important to all five participants. For Ava it related to quality food access; for Beverly it was transportation issues and bike safety; for Camille it was land rights in Africa; for Darcy it was museum and arts education; and for Elise it was urban agriculture. They were dedicated to their topics regardless of how difficult they felt the research process was for them. Each created a research proposal, conducted a literature review, submitted Institutional Review Board Human Subject research applications, collected and analyzed data, and completed final research papers. However, their experiences varied greatly, and so did their finished research products. Those with strong mentor support, Ava, Camille, and Elise produced scholarship they were proud of, and along the way developed strong scholar identities. Beverly lacked the mentorship she

intended to gain from the program and also could have benefited from more resources and support from the West Scholars Program. Her project was completed, but not at the level she had hoped. Darcy was the most disappointed in the experience, being that perhaps she never even had the chance to develop as a scholar since she felt there were so many odds against her (such as a failed mentor relationship, an unfocused project, loose ties to the program itself, and self-doubt).

Faculty Mentor Interactions

The faculty-student partnership is the backbone of the West Scholars Program experience. It is evident through the five women's experiences that the type of relationship a student has with a mentor will influence the experience she has in the program. Ava, Camille and Elise benefitted from close, nurturing mentoring experiences, while Darcy and Beverly had to deal with the fallout of failed partnerships. Without having the strong support from her mentor or her academic department, Elise would have struggled to complete the program as she went through her challenging family situation. Additionally, positive faculty-student experiences headed toward future collaboration and advocacy for Ava, Camille and Elise. While Darcy and Beverly were left without that continued support and, possibly, did not pursue any other faculty mentorship after the West Scholars Program, thus cutting off that option for them.

Undergraduate Research Program Peer Interactions

Despite being with a group of students from similar backgrounds with comparable academic motivation, all five participants were apprehensive about interacting with peers in the West Scholars Program cohort. Echoed throughout the participants' interviews and

journals was the desire to form stronger bonds with the group of scholars. However, it did not occur until very late in the program. Hindered by the feelings of impostership and competition, complicated by their already hefty academic and research workloads, and challenged by being metropolitan, commuter students they failed to form the close bonds they were expecting. Ava, Elise, and Darcy somewhat connected with other scholars academically and socially, but only after months of being in the program together. Elise found solace in her friendships within the group especially when she needed it most. While Beverly and Camille felt isolated from the group; Beverly because of her off campus friendship ties; Camille because of her travel abroad for research.

Concluding thoughts

Ava expressed genuine gratitude toward the West Scholars Program for the transformative experience she had growing her scholar identity. Beverly, while disappointed with aspects of the program, did experience some benefits and chose to focus on those as she exited the program. Camille felt confident in her future academic path and was eager to continue researching and traveling. Darcy left scarred from the experience, and I fear, her stunted experience may prevent her from pursuing an academic future. Elise entered the program as the participant who was the most academically and socially integrated, and it was that strong integration that helped her preserve and served her well despite her personal hardship along the way.

Chapter 5

A Theoretical Analysis

This dissertation has investigated the lived experiences of five first-generation, low-income female students who participated in a structured undergraduate research experience at a metropolitan commuter university. Specifically, the study set out to explore the following research questions:

- 1) How effectively does the West Scholars program engage PNMCU female, first-generation, low-income undergraduates in the academic life of this institution?
- 2) Secondly, what are the specific ways in which the West Scholars program engages female, first-generation, low-income college students through research?
- 3) What are some of the issues that inhibit a female first-generation, low-income college student's ability to fully engage in the experience of research and are these barriers to participation produced by the program, PNMCU, the metropolitan area, or dynamics from their own lives?

At a glance, some of the results are consistent with the literature reviewed in chapters 1 and 2, while other results illuminate alternative issues to consider when looking at metropolitan commuter institutions, this population of students, and undergraduate research.

For the most part, the urban university experience continues to be difficult to define and varied in its characteristics. The participants in this study have a wide range of

backgrounds and paths that have lead them to PNMCU. Similar to the literature, as first-generation, low-income, commuting students their college choice process and duration in school is typical of other non-traditional students. Their experiences show that there is no one way to “do” college despite that fact that the higher education system seems to operate under that assumption. The participants themselves define college students and the college experience in traditional terms regardless of the fact their lived experiences differ from the “collegiate ideal.”

When examining the findings related to the first research question, “how effectively does the West Scholars Program engage PNMCU female, first-generation, low-income undergraduates?” We must first look at their engagement prior to entering the program. Their experiences at PNMCU have been described as a “mixed bag,” they report being both frustrated and inspired; stressed yet challenged; satisfied yet also restrained and limited by the bureaucracy of a large public university in the center of a city. It was not uncommon for the participants to have to juggle academics with work and other life obligations and responsibilities. They admit to being minimally involved on campus, since most of the participants did not have time to devote to extra-curricular activities. They spend most of their time in class, at work, at home, or travelling in between the three. They typically come to campus just for class and rarely socialize on campus, with the exception of participants who worked on campus and built their personal networks and communities among fellow students.

The participants in this study had limited interaction with faculty, except for one participant who was often partnered with a faculty member for her on-campus job. Four

of the five perceived faculty as being too busy to meet with them or that the classes were so large it was easy to get lost in the shuffle of the university making it difficult to receive individual attention from faculty. However, while they lacked interactions with faculty they all understood the importance of connecting with faculty and all had the desire to build stronger relationships with faculty and staff.

Interactions with peers were slightly greater, because students were surrounded by their peers in their classes. Their contact was mainly academic. Students would use their peers as resources and information while in classes together, but would rarely maintain social relationships with their classmates outside of campus. It was difficult for student to build long-term relationships since their classes and the people in their classes changed every term. The urban university lacks continuity and the common types of on-going experiences that can be found at a residential, traditional school. When they were able to connect with their peers, they usually looked to like-minded students who had similar life situations and backgrounds and interests for friendship or academic support.

Due to the University's proximity to city resources, the participants felt that it was easy to draw connections between their in-class learning and out-of-class experiences in the community. They saw a direct link from theory to practice and participated in various types of out-of-class learning. These experiences helped enrich their education and it was encouraged and promoted by the university.

In sum, their connections to the university were mainly academic rather than social. They felt more connected to the university through their academic major departments than any other way. Once they established a major department, they felt

more comfortable, satisfied, and happy with their college experience. They also became involved and engaged through their majors by attending events and participating in events and activities sponsored by their department. Previous literature underestimates or does not account for the importance of academic major departments in student involvement, but it is apparent in this study that they can play a major role.

The urban university has its share of benefits and challenges. The participants were pleased with the university's connections within the city and where those opportunities could lead them. However, they were challenged by the commute, the inflexibility of the class schedules, and the lack of community on campus.

Overall, the engagement of female first-generation, low-income undergraduates was quite sparse, with the exception of Elise and Darcy who were more involved in campus due to on-campus jobs and increased student activities. However, once accepted and enrolled in the West Scholars Program, all of five of the participants saw an increased interaction with university faculty, a delayed yet rich connection with program peers, and a heightened appreciation and awareness of their academic majors and their academic paths after graduate school.

In relation to the undergraduate research experience the results shed light on student motivations for conducting undergraduate research and the types of mentor relationships they sought. Student motivations have typically been absent from literature on undergraduate research. The findings also describe the impact undergraduate research had on participants' perceptions of their academic ability and experience in college, and the participants' options after college, including graduate school. The participants

reported feelings of validation and closure as a result of completing an undergraduate research project in accordance with the completion of their undergraduate degrees.

Surprisingly, every participant suggested that undergraduate research be integrated into the general university curriculum and provide insights on why based on the value the experience added to their undergraduate learning.

The next set of findings address the second guiding research question, “what are the specific ways in which the West Scholars program engages female, first-generation, low-income college students through research?” Previous research has shown that undergraduate research programs may increase the likelihood of frequent interactions with faculty and academic professionals and with peers; experiences that integrate in-classroom and out-of-classroom experiences; negotiation of higher education systems; experiences that assist students with connecting to the institution socially and academically; and the experience of significant campus involvement (Hathaway, Nagda & Gregerman, 2002; Ishiyama & Hopkins, 2003; Lancy, 2003; Merkel, 2003). This study reaffirmed all of the past findings. However, this study diverged from the literature in that these factors appeared to be less important to the female first-generation, low-income students in the scope of the entire college experience. The participants mostly valued the opportunity to explore, in-depth, an issue important to them with the guidance of a faculty mentor. They also sought validation and qualification for their public education from an urban school, and desired the abilities and skills to get them to the next step in their lives, if it be a career or graduate school. While involvement is no doubt an integral part of the college experience, this study illustrates that the preparation for what is to

come and the confirmation of one's abilities also leads to successful students who are satisfied with their education.

In looking closely at the growth of the participants over the course of nine months, a progression I would like to refer to as "scholar development" has occurred. Scholar development, as I see it, is a student's realization and recognition of the original knowledge and contribution they can produce and add to the already established conversation in her academic discipline. The student takes ownership of her ideas and finds value and satisfaction in her academic work. In turn, this academic connection provides the student with a sense of accomplishment and belonging within her discipline and promotes a respect for and an increased affiliation with the university at which they had the experience.

Nonetheless, there were still several barriers which inhibited these five female first-generation, low-income college students from fully engaging in their research experience, which corresponds to the third research question of the study, "what are some of the issues that inhibit a female first-generation, low-income college student's ability to fully engage in the experience of research and are these barriers to participation produced by the program, PNMCU, the metropolitan area, or dynamics from their own lives?" On a personal level, students were still struggling to find enough time in their lives to balance academics, work, personal obligations and the extra burden of undergraduate research projects. There were also mentorship issues that lead students to disengage with the process and feel overwhelmed or doubtful of their abilities to become scholars. As students in a metropolitan, commuter university, transportation and

scheduling issues were not resolved but rather accentuated with having an extra responsibility of undergraduate research. On an institutional level, the bureaucracy of a large university was at times daunting and frustrating during the research process.

The following is an expanded discussion of these results which have been grouped into the following three overarching themes (see Appendix G for list of study codes):

- 1) Always, Always, Always: The Perceived Luxury of the Traditional Undergraduate Student Experience vs. The Burden of the Actual Non-Traditional, Commuting, Working Student Experience at a Metropolitan University
- 2) Establishing an Academic Home and Building Relationships with Faculty and Peers
- 3) Entering the Culture of the Academy: Development of a Scholar Identity

The discussion highlights each of the summarized points just mentioned and furthers the conversation on these three themes by weaving in direct participant quotes and comparisons to relevant literature.

Always, Always, Always: The Perceived Luxury of the Traditional Undergraduate Student Experience vs. the Burden of the Actual Non-Traditional, Commuting, Working Student Experience at a Metropolitan University

For some students in higher education, the path through college is a simple straight line. The student graduates from high school, then in the Fall enrolls in a college or university. That student stays enrolled full-time at the university for four years and

completes his/her degree after fulfilling all of the necessary requirements. However, for the participants in this study, the path through college has not been a straight line. It has been a disjointed curve, with breaks and starts, with intersections, with tangents and splinters. The participants in this study described their time in college as a “decade-long,” or “epic.” The duration of their college degrees are not within the four-year window as traditionally expected. College was just one priority in the complex, busy lives of the participants who juggled multiple obligations and responsibilities. As a result, the participants felt that they were “always, always, always” running between school, work, and home with little down time, and even less breaks from all the things that occupied their time.

The pathways they have taken to get to PNWCU illustrate the impact their life situations have on their educational choices, as well as their involvement (or lack of involvement) once enrolled in school. The participants also recognize their non-traditional status within a traditional higher education system and how that intersection can, at times, be a challenge.

Pathways to PNWCU

For the participants in this study there is no clear line that travels throughout the college path, except for the fact that all of them desired more from their lives and they knew that education could help bring them to where they wanted to go. Interruptions seem to be more common among students with fewer financial resources according to Goldrick-Rab (2006) and this is apparent with participants in this study.

All of the participants transferred to PNMCU from another college. Four participants came from community colleges and one student transferred from a well-known state university. For those who transferred from community colleges, the transition was convenient for them. They lived locally and had already established lives and homes so it was a logical transition. Ava and Beverly admitted that they did not think much about where they wanted to apply to school besides PNMCU. They were not sure what they wanted to do academically, nor did they have enough knowledge about the academic options that were available to them. Darcy admits to ending up at PNMCU by “default” due to not being able to afford the high tuition of another, private school in the area and because of not knowing more about the college system when she first started out.

Their experiences are similar to what the literature reports in regards to first-generation and commuter student and college choice (Engle, Bermeo & O’Brien, 2006; Pascarella et al., 2004). Typically, first-generation and commuter students have less people to talk to about their college options and attend schools within a close proximity to where they live.

For Camille, she first attended a “traditional” state university which she describes as having a very “rah-rah sport college scene” with many students who moved right out of their parents’ homes into dorms. While she liked the school itself she did not connect with the culture of the university and sought a campus with more depth and diversity. She believed that students at PNMCU “have a little more perspective on the world” and she valued the school’s ability to bridge theory to practice.

Similarly, Elise actively chose to attend PNWCU because she saw attending a four-year school as the next step in her education. Other PNWCU students also encouraged her to apply to the school and also to a peer-mentoring program. Their mentorship through the application process was a main factor in her decision to attend the college.

There are several motivations behind why students enroll in metropolitan universities. They see it as a convenient option that is close to their homes and their work; they see it as a valuable educational institution in the city; and as a default option that is available when other institutions are inaccessible to them. Their limitations in regards to college choice also spill over into their limited involvement once enrolled in the metropolitan university. It was common for the participants in the study to feel like they were running on a constant treadmill of school, work, family, etc. bound by the responsibilities of their lives.

Always, Always, Always: Between Work, School and Home

For the majority of the participants, their connection with the university was mainly academic and based on taking classes on campus and fulfilling the requirements for their degree. They admit to being minimally involved on campus, since most of the participants did not have time to devote to such activities. They spent most of their time at school, at work, at home or going between the three. They were more comfortable spending time in the neighborhoods they lived in. They also studied mainly at coffee shops around their homes or at home, not on campus. They typically came to campus just for class and

rarely socialize, with the exception of two participants who worked on campus and built their personal networks and communities among fellow students. Participants who worked off-campus explained that being a part of clubs, activities, and events was not an option for them due to their need to work to pay for school and the cost of living. Even while in the West Scholars Program, participants in the study struggled to find time to complete the research work they needed to get done. At times they felt this type of project deserved much more of a time commitment than they could provide. Their views on time and availability is consistent with the literature on commuter students (Dugan, Garland, Jacoby & Gasiorski, 2008; Jacoby, 2004; Kirk & Lewis, 2013; Schuh et al., 1991/1992)

Similar to the findings of Jacoby's (2004) and Kirk and Lewis (2013), the participants in this study state commuting to be one of the biggest challenges they face. It costs time, energy, and money to commute to campus every time they have classes. They also find it difficult to schedule classes since most classes are offered at times of the day when they cannot be on campus due to work or other reasons. For instance, there are sometimes required courses that are offered during only one quarter each year, which can pose a real challenge to enrollment.

The participants in this study also felt that it is more difficult to connect with others when the student population commutes to campus and is constantly coming and going. They also describe a lack of community on campus because of its transient nature. It was common for all of them to feel overwhelmed by the bureaucracy and size of the

university during their first term. They describe PNM CU as lacking a community and cohort feeling.

Similarly, Kirk and Lewis (2013) in their study aimed to increase knowledge about the commuter student population by understanding how students connect to campus, found that students used the term “in and out” to describe their campus involvement. The university was a setting they attended for class and then left. Students in Kirk and Lewis’s study saw their college as just another place they received a service, similar to a grocery store or a beauty salon.

The challenges of school and work become slightly easier when the student works on campus; however, having to maintain both areas can be taxing, especially along with other responsibilities. However, all of the participants had to work in order to pay for school, so it becomes necessary that they do both.

Darcy and Elise both worked on campus and were more socially involved with the university. They built their friend networks on campus and were able to view the university as more than just a place to take classes. Elise’s integrated campus experience helped her maintain a positive balance between work, academics, and life. Yet as stated in chapter 4 Darcy admitted that despite “being fully involved with college, you are really only part-time in any of those activities,” which put added stress on her at times.

Perhaps because they were enrolled at a metropolitan university, all participants reported that they valued having a connection with the city. Due to the University’s networks and location within the city, the participants felt that it was easy to draw connections between their in-class learning and out-of-class experiences in the

community. The ties with the city that were formed during their undergraduate programs were seen as beneficial to their futures, since their connections and networking with the metropolitan area could lead to future jobs and/or opportunities.

According to Riposa (2003), metropolitan universities use the city as a learning center. The urban university is a place to foster student experience through jobs, internships, service learning, and a laboratory to study community and city issues. These are the key characteristics that participants in this study described and valued at PNM CU. The participants benefit from the ties the university has with the rest of the city. They feel like they have resources to find jobs in the area after graduation and a network of people to help them.

Camille describes being on an urban campus as very “stimulating,” and highlights the advantages of studying in a place that is connected to the outside world, a setting that is not isolated or closed off from “real-life.” Beverly sees PNM CU as being “tied to the fabric of the city itself.” Since the metropolitan area has a diverse population, the students who attend the university typically reflect that diversity. The participants appreciate the diversity of perspectives in their classes. They tend to learn from the life experiences of older, returning students, and become inspired by the fresh viewpoints of younger students.

McNamara Horvat & Shaw (1999) state that urban universities hold out the promise of providing the type of education that will prepare students to confront difficulties inherent in the complex, multicultural world in which we live. This type of education is far from the philosophy of the collegiate idea that valued isolation and

distance from the distractions of the real world. Instead PNMCU is situated squarely within the real world and brings its students into it so that they may learn from the world around them.

The contrast between living the reality of being a working, commuting student and the expectations of the type of traditional involvement and engagement they wanted to have in college is prevalent. This dichotomy is further explained in the following section.

Traditional View of College vs. the Non-Traditional Lived Experience

I think it is important to point out the perceptions the participants have about college in relation to their actual lived experiences. All of the participants in the study define and described the characteristics of a college student and the college experience in very traditional terms, despite experiencing a very non-traditional college experience themselves. They explain that college students are typically 18 to 24 years of age who are enrolled in higher education for the purposes of obtaining a degree or more knowledge. Some participants highlight the fact that college is a time for exploration and not many responsibilities. Others emphasize the social side of college in their definitions, including “partying,” “joining student clubs,” “participating in extracurricular activities,” and “football games.”

However, once they initially define college students in general, traditional terms they all pointed out that there is a wide variety of college students who range in age, motivations, and abilities. Darcy argues that depending on one’s academic background, parental education level, and/or socioeconomic status the college experience can differ

greatly. All of them also emphasize the fact that they are not traditional students and that PNMCU is not a traditional college. There is a clear division between “college” and the experience of attending PNMCU.

They explain their lived experiences of college as being busy and a constant struggle to balance life obligations. The participants have gone to school part-time, have taken time off from school, worked full-time while attending school, maintained family responsibilities, and spent very limited amounts of time on campus.

Despite their having “non-traditional” or “not typical” experiences in college all of the participants believe that they had a “true” college experience. They appreciate the fact that PNMCU caters to a population of students who are not of the norm and right out of high school. They also sought experiences that were not of the typical four-year experience, since many of them were older students who returned to college after a break, or who had transferred later in their college careers.

Yet, there was regret in their statements as well. Most of the participants did feel that they “missed out” on a traditional “college experience,” or were “jealous” of those students who were supported by their parents and could just “do” college instead of having to work their way through school. Specifically, Ava shares “I wish that I would have had more time to do things that I had mentioned before, like more clubs and actually go to a football game.... It is hard to not feel slightly jealous of people who get money deposited into their account every month and just sort of get to do their thing.” Similarly, Darcy states, “I always kinda day dream and wonder what it would be like to go to school and not worry about anything else (such as) outside life.”

Beverly also explains that if she did not work but rather just attend school, it would have made a huge difference in her college experience. She feels as though she could have committed to activities and gotten herself more involved in events. She explains that her fiancé went to a private college after high school and lived in the dorms and was able to form close bonds and friendships with his college that he still maintains after graduating with his degree. She wished she was able to have that experience, but as mentioned in Chapter 4 Beverly states “everybody’s got their own path.”

The participants’ views on college students and the college experience reflect the traditional paradigm that still guides the actions and beliefs of college faculty, students and administrators. Similarly, Smith et al (1997) states that even at predominantly commuter schools, the tradition of residential life has been responsible for developing attitudes, policies, and practices. Students enter college with a perception that college will be a certain way (the traditional way) and administrators, faculty and staff build their programs around the myth of the traditional experience. Pascarella (2006) explains that rational myths in higher education include utilizing and adopting programs and policies that lack evidence of effectiveness. Dugan, Garland, Jacoby, and Gasiorski (2008) add that it is an incorrect assumption that the effectiveness or outcomes of programs designed for traditional students will be equivalent to that of non-traditional, commuter students. While Kirk and Lewis (2013) argue that the dominant residential tradition of colleges and universities hinders the response of institutions to adapt to the needs of diverse student populations. Once on campus, students realized that what works for a student who does not work off-campus or who does not live off-campus does not work everyone. Yet, they

go along with the structure anyway because this is the norm and they must work within the structure in order to proceed.

It is important to listen to the voices of these students and what they are really saying about the state of higher education and the culture of an urban university. It is apparent they understand the dichotomy between the collegiate ideal and the lived experience of attending PNMCU, yet they still feel like they are missing out on some aspects of college that they deem valuable. In the long run, it does not seem to change how they go about completing their degrees and most of them are content with the idea that they will have an alternative experience from the norm.

Going back to Astin's theory of involvement (1984 & 1996), the emphasis of investing much of one's time into school and extracurricular activities seems to be at odds with how urban students are progressing through school. These students know that involvement in social activities is part of college and know that it is somehow linked to the importance of their experience. But they do not have time to invest in such activities and as a result do not value the experiences they are having. Instead there is a void in what they could be doing to feel more like college students.

Further into the discussions with the participants, it is revealed that they considered the opportunity to conduct undergraduate research as a way to just "do" college, or to validate their experience in college by doing something that is very "academic" and what is "expected of them as a college student." It is as though they are using the undergraduate experience as a way to do something "traditional" or uniquely

tied to the academy, just as joining a Greek society, or attending a college football game is uniquely tied to college.

In her interview, Beverly states that she has spent all of her undergraduate career working and going to school and balancing those two things, she was craving the opportunity to just “do” school and nothing else. She saw participating in the West Scholars Program as “kind of an opportunity” to do that.

Contrary to Pike & Kuh (2005) who state that first-generations students may be less engaged is because they know less about the importance of engagement and about how to become engaged compared to second or multi generation college students, yet most cases in this study the participants understood the importance of connections and involvement on campus but were unable to commit to such types of activities to become involved and engaged. The problem, so it seems, is not in the students’ inability to recognize the importance or value the benefits from involvement, but rather is it the structural and personal limitations that prevent such involvement from occurring. Luckily, for most of the participants finding an academic home became a bright beacon for them to follow in the haze of the drudgery of personal obligations that seemed to blur their academic experience. It has been the involvement with their academic major department and undergraduate research that helps bring them closer to faculty and peers. This theme will be discussed next.

Establishing an Academic Home and Building Relationships with Faculty and Peers

For four out of the five participants, establishing an academic major department was a major turning point in their career at PNMCU. The participants credited their major

department for helping them become more engaged and connected with the school. Camille admitted that declaring a major helped her become more pleased with attending the school. As mentioned earlier, Camille shared with a confident smile, “I just felt like it was meant to be.” Conversely, Darcy was unhappy with her department in general and overall had a less than satisfied academic experience. She argued that her unpleasant experience within her academic department was one of the things that kept her from fully enjoying her time at PNMCU. She characterized the department as being unsupportive and closed off to academic diversity. She also explained that faculty seemed too frustrated and busy to approach.

However, the other four participants saw their major departments as places for resources, help, support, and encouragement. Specifically, Elise said that she felt fostered by and dedicated to her department. Those who felt connected to their departments said their professors were available and accessible, and they enjoyed taking classes from them. Ava said that having good instructors makes her major classes more interesting and really affects the classroom experience. The importance of building faculty relationships and the participants’ experiences with faculty mentors while conducting undergraduate research will be discussed later in this section.

Additionally, connecting with peers within their academic departments was important to them. Elise explained “I do not have family support (when it comes to college), so support from my peers on campus is that much more important to me.” Similarly, Beverly points that connecting with her academic department enables her to create beneficial relationships with likeminded people and a framework for developing

those relationships. Which to her makes school more than just “going to class and turning in papers,” but rather an opportunity to network and build her personal resources. I will expand on the participants peer interactions at the college level and within the West Scholars Program in a following section of this chapter.

Significance of the Academic Major Department in the Metropolitan University

Most of the participants’ student involvement took place through their academic departments. They were more likely to attend an event or social activity, or participate in a department sponsored trip or project with department faculty. They participated in a program or an activity through their departments and through their department’s structures rather than through the student activities office or the athletic department on campus.

Typically, the participants came to PNMCU with very broad ideas of what they wanted to focus on academically. Not until they established a major did they feel like they found a topic they were interested in studying in detail. This is similar to their experience within the undergraduate research experience and having to identify a research project.

Previous literature underestimates involvement in an academic major department as an important factor in student success and satisfaction. Instead, most research focuses on and values the roles of faculty and faculty interactions in student success (Pascarella, 2006). It is apparent that the participants in this study, while they did appreciate the faculty in their majors, saw the establishment of an academic major as a significant factor in increasing their happiness and satisfaction with the urban university.

The academic major acted as a home, as an identity, and as a protected space for them. A small portal they could use to connect to a larger university. The academic major encompasses not faculty, but university staff, class offerings, fellow students, and a physical location on campus. All of these aspects play into the creation of an academic department and together they can help make students feel more comfortable on campus. Ava, Beverly, Camille, Darcy and Elise all admitted that once they felt more comfortable on campus and more confident as students at the metropolitan university they increased their interactions with faculty and peers, as well as actively sought educational opportunities and applied for more scholarships, fellowships, and program such as the West Scholars Program.

More attention should be paid to the importance of the academic major department on metropolitan campuses. Since these institutions typically lack a place or space for students to connect, the academic classroom and department office become even more significant in reaching all students.

The bridge between academic departments and undergraduate research should also be strengthened. Typically students find out about the West Scholars Program through their departments, so capitalizing on this pipeline from academic major department to undergraduate research program is particularly significant. As mentioned in chapter 1, Krabacher (2008) found that undergraduate research experiences also provide students with a sense of “place” which in turn helps students feel more integrated into university life.

Faculty Relationships at the Metropolitan University

The participants in this study had limited interaction with faculty prior to establishing a major and prior to conducting undergraduate research, except for Elise who was frequently partnered with a faculty member for her on-campus job. Mekolichick and Gibb (2012) highlight the idea that students who feel either intimidated or alienated by college culture may experience anxiety about approaching professors for help or involving themselves in extracurricular activities. Four of the five participants perceived faculty as being too busy to meet with them or that the classes were so large it was easy to get lost in the crowd making it difficult to receive individual attention from faculty. More often than not, literature reports that metropolitan students lack in effort when it comes to making contact with faculty (Franklin, Cranston, Perry, Purtle, & Robertson, 2002). However, participants in this study report that professors sometimes do not make themselves available or approachable, thus making the student less likely to form a relationship with those professors. It is not always the fault of the student when it comes to faculty interactions according to the participants in this study.

Yet despite the minimal interactions with faculty, peers, and the campus community, all of the participants agreed that it is important to connect with faculty, peers, and the campus community in any way possible. According to the participants, connecting in this way during one's undergraduate education can help "enrich" one's experience in college. Beverly further explained that interacting regularly with faculty provides a different "dimension" of support and understanding.

However, all of the participants in this study had the desire to build stronger relationships with faculty and staff. As mentioned earlier, becoming more confident and comfortable on campus, the participants were more likely to interact with faculty and discuss extracurricular activities such as undergraduate research opportunities. All of the participants believed that participating in undergraduate research could help them become more academically involved and closer to a faculty member.

In observing some of her successful classmates, Darcy explained that students who have created some kind of academic relationships with a faculty member really “thrive.” There is evidence of these benefits from connecting with faculty and the participants seek the rewards of such interactions.

Significance of Working with a Faculty Mentor in the West Scholars Program

Along with student motivations for conducting research which will be described in the next theme, this study also illustrates the specific reasons why students want to work with mentors. In their interviews, participants also described how they went about choosing their mentors and how their relationships unfolded during the course of the undergraduate research experience. Wozniak (2011) illuminates the need for such research by explaining that examinations of the mentoring relationship should be undertaken to identify those components that foster long-term benefits for undergraduate researchers and faculty members, as well as those that hinder or hamper the relationship. Additionally, Pita, Ramirez, Joacin, Prentice, and Clarke (2013) clarify that given the marked benefits of undergraduate research and the importance of mentorship interactions,

it is worth exploring the strategies since that would aid in the identification of best practices.

As explained in Chapter 4, Faculty Mentorship is a key characteristic found in successful undergraduate research programs. They are considered ideal role models for showing students the various steps of discipline-specific research processes, as well as the satisfaction that comes with completed a research project. The student-faculty mentor relationship is the backbone of the West Scholars Program which all other program elements are built around.

All sought close relationships with a faculty mentor since most of the participants did not have previous experience working closely with faculty in this capacity. In general, students selected their mentors because of the following reasons:

- 1) Academic interest similar to theirs
- 2) Their mentor's expertise in the area of interest
- 3) The participants took a course previously from the faculty member and enjoyed it
- 4) The participants liked the mentor's work/teaching style, approach to research and learning, organizational skills, passion for work
- 5) The participants found their mentor to be approachable and were able to work well with them

Ava shares that she chose her mentor because she "loved every minute" of the course she took with her. Camille liked her mentor's "energy," and described her as "upbeat" and "knowledgeable." Elise explains that she chose her mentor because he was

“willing to foster her research interests” and she valued his “passion for the topics he researched.”

Through the undergraduate research program the participants did experience an increase in significant interactions with faculty members. While most of the interactions were positive, the types of mentor relationships varied among the participants. There were both positive and negative interactions.

The data of Mekolichick and Gibb (2012) suggest that high-achieving first-generation students might approach and experience the mentoring relationship differently than high-achieving continuing generation college students. The first-generation students in their study approach the mentoring relationship from a more “utilitarian, pragmatic perspective than the other students, thinking primarily about the educational and career-specific skills gained and commenting on the tangible benefits of their experience” (pp. 44-45). However, I would argue that the five female participants from PNM CU in this study were quite savvy in identifying the benefits of a faculty-student relationship (outside of the pragmatic) and were proactive in exploring the opportunity such a relationship affords. This is also why it was so devastating for the two scholars whose expectations were not met in their mentoring relationships.

After participating in undergraduate research and working closely with a faculty mentor, the participants shared that supportive and effective mentors were encouraging and provided resources for them to get their work done. Mentors who welcomed the participant into their lives and into their work and research formed the closest bonds. In the end, those participants whose mentors exhibited a mutual interest in the research

topic, who were honest in their feedback, and who were respectful of their scholars, were most likely to do well in the program. Ava explains that she knew she had a good relationship with her mentor when she realized that her mentor valued the experience of working with her as much as she valued the opportunity to work with her faculty mentor.

Strong mentor relationships led to fully developed, completed, high-quality research papers. Participants describe their mentors as “instrumental in moving the project forward to completion.” Strong mentors with positive student relationships were also praised for providing structure and guidance through the research process. Creating an approach to research that took the fear out of what the participants saw as a daunting, overwhelming task is a positive trait of effective mentors. Mentors were equally committed to the success of the research and the scholars were empowered by that loyalty to their scholarship. As with other research on faculty mentorship, participants perceived the research project and faculty mentorship as more beneficial than directed coursework (Melhorn, Roberts, Cain Parrott, 2012).

As for role-modeling within the profession, effective mentors helped participants understand the process of research within the discipline and academic expectations. Mentors served as guides through the graduate admissions process and provided insights into graduate school culture. The undergraduate scholars also gained valuable social capital from their mentors and they began to realize they were plugged into their mentor’s network of colleagues who were also willing to support them. “It’s all a big circle,” Ava realized (as mentioned in her narrative), when she figured out that her mentor was strongly connected with several other researchers, professionals, and professors.

Additionally, if participants were pleased with their major department, they were for the most part content with their undergraduate research experience. The importance of a good mentor and scholar match, as well as a positive working relationship cannot be emphasized enough according to Ava, Camille, and Elise.

In contrast with Hu et al (2008) description of the faculty-student relationship as being an “apprenticeship” of sorts, Cramer and Prentice-Dunn (2007), believe that such a faculty-student relationship should be seen as a “whole person mentoring approach.” Slightly less pragmatic and more transformational, whole person mentoring is based on personal connections and professional role-modeling (Cramer & Prentice-Dunn, 2007). The five female participants in this study I believe sought a much more whole person mentoring approach. They wanted guidance not only in academics but in decisions for their future. They wanted more of a trusted, respected friendship. When that did not occur, students become less satisfied with their mentor relationships.

Less effective mentors typically provide little to no advice outside of the basic project requirements and were often times unavailable to the participants. The feedback they gave to their scholars was limited and not helpful to the project. The participants who struggled in their mentor relationships perceived their mentor’s actions as unappreciative of their work and experience. In general, mentor and student relationships that suffered during the program were the result of a lack of communication among student and mentor, and a lack of understanding about the expectations they had for one another.

Less than supportive mentors led to unhappy scholars who felt as though their projects were not as good as they could have been with proper support. They expressed many feelings of being overwhelmed with their research. They felt unable to produce adequate results or fully complete their projects. Those without guidance felt that their projects were too big to handle and as though the project took over their lives in a negative way. In an extreme case with Darcy and her mentor, personal issues began to cloud their relationship and interfered with their scholarship. Darcy regrets selecting her mentor and feels as though she never able to actually be a scholar, since she was abandoned by her mentor.

It would be very neglectful of me not to mention the commitment mentors must make to their scholars when undertaking a research project with them. I do not want to make light of the responsibilities and obligation mentors take on. While the study did not directly capture the mentor's perspective of conducting research with West Scholars it is important to make note of some literature to add insight into why mentorship may be less than ideal in all situations. The high cost and considerable amount of time necessary to form an effective bond, as well as limited personnel impacts the faculty-student mentor experience (Elrod, Husic & Kinzie, 2010; Guterman, 2007; Melhorn, Roberts, Cain, & Parrott 2012). Additionally, undergraduate research projects require a learning curve for students and faculty alike. Many times, the only mentoring experience that faculty members have is their personal experience from their own graduate program process (Melhorn, Roberts, Cain, & Parrott 2012).

Through the findings of this study it can be concluded that the student/mentor relationship is extremely important to the satisfaction and success of an undergraduate research experience. All in all, a positive, supportive and honest student/mentor relationship can lead to quality projects and good experiences for both parties.

Understanding what student expect from mentors, and what type of student/mentor relationship works best for undergraduate research programs, can help structure future undergraduate research opportunities for student and faculty.

Peer Relationships at the Metropolitan University

Interactions with peers were slightly greater than with faculty, because students were surrounded by their peers in their classes. Their contact with their peers was mainly academic and based on connections made in the classroom. The participants in the study would seek resources and information and diverse perspectives from their fellow classmates while in classes together but would rarely maintain and social relationships with their classmates outside of campus. Darcy points out that she has learned from other students' mistakes, and she has seen students help each other out. She also values the chance for students to inform each other about different things happening in class or on campus, or about new course offerings, or new university policies. Peers are good sources of information on the metropolitan campus, where university messages can often times be absent from some students attention. Since she worked on campus and was fully integrated into the academic and social aspects of the metropolitan university, Elise believes that the relationships she formed while at PNMCU are equal to and at time more valuable than the "book learning" that she received.

However, despite the connections they make in the classroom, it is difficult for urban students, and also the students in this study, to form long-term relationships with their peers or professors. This is mainly because of the temporary nature of the urban university students and the fact that the classes and the people in the classes changed every term. Darcy described PNWCU as a place where people are just “coming and going.” Similar to Clark’s (2006) work with commuter students, the participants in this study seemed to have to start over each semester. The urban university lacks continuity and the common types of on-going experiences that can be found at a residential school. Beverly describes the situation by saying “campus is so big, it is rare to have another student in two or more classes and even more rare to interact outside of class.”

When they were able to connect with their peers, they usually looked to like-minded students who had similar life situations and backgrounds and interests for friendship. Ava explained in her narrative that when you are in class “you look for someone who is busy like you, and have things in common with you” so that they can feel like another person can relate to the experiences they are going through as an undergraduate. Also, the majority of the participants already had established friendships outside of the university that they depended on for support.

Peer Interactions in the West Scholars Program

At first the participants admitted that their 20 fellow cohort members in the West Scholars Program were slightly intimidating. They felt that, at first, everyone in the cohort was guarded and struggling with feeling like an imposter, or worthy of being in the same room as other talented students. Surprisingly, all of the participants felt some

sort of discomfort in the first few weeks of the program despite being a room with other students who have similar backgrounds as them. The label of “scholar” was a heavy burden to bear; they felt it came with great responsibility. Also, they admitted to having difficulties shedding the established classroom roles and behaviors they were used to in classrooms with traditional-aged, continuing generation college students. At times there were even feelings of competition among students who had similar topics, as well as among students within different disciplines. Becoming part of a scholarly community creates a “peer-driven culture of expectations” (Bender, Blockus, & Webster, 2008, p.8). It offers students an opportunity to gauge their research progress against that of their peers, provides stimulation or motivation for students to “keep on task,” and creates an encouraging and supportive atmosphere (Bender, Blockus, & Webster, 2008, p.8)

However, the West Scholars Program cohort began to know each other to some degree and was able to bond over the shared experience of conducting academic research projects and of being first-generation, low-income students. Previously, it was stated that the participants looked to connect with students similar to themselves. According to a 1998 study by Nagda, Gregerman, Jonides, von Hippel and Lerner undergraduate research programs can provided students with an accessible community of peers with similar interests, which is evident in this study.

Those connections among scholars did not come until later in the program and all the participants wished that the bonding could have occurred sooner rather than later, when it did. Yet, their academic connection came much sooner than their social connection. They supported each other’s work throughout the program. They inspired

each other; they drew connections across their various disciplines, majors, and theoretical foundations. They shared information with one another, used each other for resources and networking, and problem solved together.

Ava and Darcy described their scholar peers as her “safety net.” The participants shared that they would like to stay in touch with their fellow cohort members and see where they go and what they accomplish in the future. It is important to point out that since Camille conducted her research abroad over the summer she did feel as though she missed out on an opportunity to significantly bond with her scholar peers. She had to weigh that cost with the chance to study in the field which was a difficult decision for her. “It is even more important to connect (with peers) since we are commuter students who don’t do much outside of class,” explained Camille.

While their previous interaction with peers was fairly minimal, the experience in the undergraduate research program only slightly increased their peer interaction. However, when the participants did form close relationships with their peers and were able to not only connect academically but eventually socially. That turning point came for many students who participated in an off-campus, overnight trip to a neighboring university for a research conference. Representing the university unified the group, as well as having casual interactions outside of campus.

Unlike previous relationships they had with fellow students, the participants were able to create long-term bonds with their fellow scholars and since they were together in the same weekly seminar over the course of three terms. However, it is challenging to foster bonds that are genuine rather than superficial or forced. It is possible for close ties

to form, but it is important for undergraduate research programs to provide early opportunities for the cohort to connect. Otherwise it will become a lost benefit of the program. Bender, Blockus and Webster (2008), emphasizing the importance of creating community among undergraduate researchers but point out that “we take this as a given.” Which is why I think it is even more challenging to build inclusion within the group when not much has been done to focus on the issue since instead we just take “bonding” for granted.

While connecting with an academic department, faculty, and peers has been shown to be helpful in involving and engaging participants in this study, the process of conducting research and the internalization of the ability to produce a meaningful and quality research is equally significant to student engagement. The next section will expand on the participants’ research processes and the benefits and challenges that came with that experience.

Entering the Culture of the Academy: Development of a Scholar Identity

In looking closely at the progress and growth of the participants over the course of nine months it is evident that a specific type of development has occurred. The progression of the “scholar identity development” is a student’s realization and recognition of the original knowledge and contribution they can produce and add to the already established conversation in her discipline. Instead of being the receiver of knowledge, the student becomes the creator of knowledge. The student takes ownership of her ideas and finds value and satisfaction in her academic work. In turn, this academic connection provides the student with a sense of accomplishment and belonging within

their discipline and promotes a respect for and an increased affiliation with the university at which they had the experience.

This development falls in line with the literature that shows through undergraduate research students become more confident in their academic work and more fully integrated into their particular campus (Elrod, Husic & Kinzie, 2010; Hathaway, Nagda & Gregerman, 2002; Hu et al., 2008; Ishiyama, 2002; Krabacher, 2008;). Also, through an undergraduate research experience, students have a more comprehensive understanding of the academy and how their academic area fits into the larger scope of knowledge (Krabacher, 2008; Martinez, 2009; Nagda, Gregerman, Jonides, von Hippel & Lerner, 1998). Additionally, undergraduate research can inspire and motivate students to continue to graduate school and enter research careers (Hathaway, Nagda, Gregerman, 2002; Merkel, 2003).

The following discussion illuminates the key points of scholar identity development. Scholar development, in the case of the five participants in this study, begins with the motivation to do quality academic work with a robust sense of rigor; it is cultivated by the process of conducting actual research and creating original knowledge. It is a validating process that brings together several disparate parts to form a consistent, cohesive body of work, and it can lead a student toward higher aspirations and encourage a student to further progress and strive within the culture of the academy. The following section expands further on these characteristics, and includes a discussion regarding stunted scholar development.

Motivations for Conducting Undergraduate Research

This study helped explain various student motivations for conducting undergraduate research projects rather than explain the benefits of the experience for participants from an administrative view, or an outcomes angle, like in other previous studies. It is important to understand the student motivations for and expectations of undergraduate research in order to better structure and design undergraduate programs and meet the needs of students.

Participants in this study had various motivations to conduct undergraduate research and to work with a faculty mentor on a research project. One motivation specifically was clear in all of the participants' interviews; they all possessed a strong desire to be scholars. Regardless, maybe, of even knowing exactly what that meant or how it would impact their lives.

All of the participants were interested in conducting research to better understand a topic or a problem, to gain experience and skills necessary to conduct research, to prepare for graduate school, among other reasons. They also had a variety of expectations for the experience. Both their motivations and expectations are discussed in the following section.

There is a definite hunger among all of the participants for more information. They all crave the opportunity to learn and delve into a topic that they are interested in. Elise describe this best by saying that she has always wanted to find out everything there was to know about whatever topic that interested her; it was the same for the rest of the participants. The participants were personally connected to finding out more about their

topic. Their passion for their topics rooted from where they lived, what they do, what they are interested in studying in graduate school, and what they cared about.

Ava explains that there is not an opportunity to conduct research in regular classes. Mainly because regular classes have a limited amount of time to cover a large amount of information. It is also unlikely that a student can create a study, collect data, analyze the data and write up the findings within one quarter. They did not have the time to do such research in regular classes, nor did they have the resources and structure of a program to keep them accountable and disciplined to complete a project. They would have had to pursue these topics on their own and some admit that they would not have followed through on their projects without the structure and deadlines of an actual program.

Additionally, some of the topics of interest that were researched by the participants during the program were not offered in regular classes. Either the participants were focused on very specific issues or problems, or there just was not a class or an expert on campus that knew about the topic. As a result, the participants saw the opportunity to conduct undergraduate research as an avenue to explore their research questions that were not covered in regular classes. As discussed in chapter 1, undergraduate research can provide students with opportunities for continued discussion of issues outside of the classroom, and extended students' intellectual challenges in ways that class could not (Nagda, Gregerman, Jonides, von Hippel & Lerner, 1998).

Another main student motivation for conducting undergraduate research was to build beneficial skills and gain necessary knowledge for the next step in the participant's

careers or academic lives. They would be able to use their undergraduate research project as a work sample for graduate school applications or for job interviews. They also would have practice in doing research, which they all knew would be necessary if they were to go on to graduate school. Their assumptions for graduate school assistance through the undergraduate research program runs similar to literature on the topic that shows undergraduate researchers were more likely than students who did not participate in undergraduate research to use faculty for recommendations and pursue graduate education and research activities (Hathaway, Nagda, & Gregerman, 2002). All of the participants expected to be challenged but they knew the rewards of the experience would be worth it because they would be able to gain future connections and skills for graduate school and beyond.

The participants also saw the opportunity to conduct undergraduate research as a chance to pull together everything they learned in their undergraduate careers into one culminating project. Having the opportunity to exercise their academic skills and focus their energy on one independent project was something they all felt they needed to bring closure to their time at PNMCU.

The participants in this study did not see research as self-serving. The research problems they were investigating and the topics they were interested in studying were community-based and focused on bettering different situations for people. Elise explained in the previous chapter that she wanted to “create some meaning out of a small window of information that represents a larger whole.” They were motivated to conduct research in order to benefit others on both a local and global level. Darcy also adds that

one of the reasons why she wants to conduct research is to serve as an inspiration, or a role-model, for other people from backgrounds similar to hers. She would have benefitted from seeing someone one like her excelling academically in this way, which is common among first-generation college students who lack role models or examples of successful students in higher education, since they are the first in their families to attend college.

The participants did look to faculty mentors for guidance and were all looking forward to building a relationship with a faculty member in their department. This was one of the most important motivations for conducting an undergraduate research project. The advice from their mentors, not only on how to do research, but about navigating the academy and applying to graduate school was seen as very valuable and a major benefit of the undergraduate program. The socialization process through faculty role-modeling is a significant function of undergraduate research (Merkel, 2003; Hu et al., 2008; Elrod, Husic & Kinzie, 2010). The transmission of knowledge regarding the workings of college life is as informative as learning about the academic discipline itself. Having first-generation, low-income backgrounds, it is particularly important for the women in this study to be exposed to the knowledge of the academy and how to successfully interact within academe.

The findings also describe the impact undergraduate research had on participants' perceptions of their academic ability and experience in college; the participants' options after college, including graduate school. The participants also describe their feelings of validation and closures as a result of completing an undergraduate research project in accordance with the completion of their undergraduate degrees.

From the findings on the undergraduate research and the participant's experiences, the student mostly valued the opportunity to explore an issue important to them, not increase their student involvement. Their involvement was also manifested in different ways than what Astin (1984 & 1996) postulates. The participants sought validation for their public education from an urban school, and desired the abilities and skills to get them to the next step in their lives. While involvement is no doubt an integral part of the college experience, the preparation for what is to come and the confirmation of one's abilities also leads to successful students who are satisfied with their education.

The Undergraduate Research Process

Through the undergraduate research program the participants were able to learn how to conduct research from start to finish and all the steps in between. They express satisfaction in going through the entire process and feel as though they learned both what to do and what not to do when conducting research. They learned both concrete skills and cultural knowledge about research and the university. They completed Institutional Review Board applications (IRB) to ensure participant safety and researcher ethics, and witnessed university politics and the unspoken ways in which work gets done in higher education. Narrowing their topics, creating literature reviews, collecting data, identifying when their data had reached saturation, assessing resources for quality and relevancy, and conducting field work were all a part of their undergraduate research experience. Additionally, they began to understand where their scholarship stood in relation to the already established conversations of their disciplines. Beverly proudly declared that her "research hangs somewhere in the middle." Discussions with peers in other academic

departments helped open the participants up to other ways of knowledge, approaches to research, and types of methods. This expansion of possibilities shifted and fortified their own work.

Camille and Elise share that their thoughts about research were not just contained within the program, but instead it spilled throughout the rest of their lives. Camille talked about her research project to anyone who would listen and most of the people in her life. Elise began to see research possibilities in everything around her and in all aspects of her life and school work. Research enriched their daily lives not only their academic experiences. Undergraduate research experiences have the potential to transform the way students perceive and understand what they are learning and how it is applied in authentic real-world situations (Elrod, Husic & Kinzie, 2010).

After conducting undergraduate research, the participants admitted that they took academics more seriously and that they felt more respected by faculty. They also reported to feeling closer to the academic community on campus since they were able to produce work to contribute to their discipline. Beverly also explains that working with a faculty mentor on her project impacted the quality of work that she was producing. She believes that having a relationship with a mentor and a network of people to collaborate with made her college experience much more dynamic.

Feeling like an expert on their research topic was common among the participants. They focused on one subject for nine months and gathered a comprehensive understanding of their topic from a variety of angles. They appreciated having the chance to work semi-autonomously, on a “self-directed,” “self-propelled” and “self-motivated”

research project. They had ownership over their scholarship, they were in charge of the choices they made about their work, and they had a voice in their learning process. It was evident that the participants matured through the research process. They began to identify what they needed to become better researchers and scholars. As opposed to trying to find their own way without support, while in the West Scholars Program they asked questions, advocated for themselves, and sought out information they needed to get their work done. When student researchers are treated as members of the scholarly community, even if they are still novice members, they have primary responsibility for their projects and take ownership of their work (Stamatoplos, 2009, p. 237).

They began to see their research as a way to gain more knowledge and self-betterment, instead of doing academic work just for a grade. Camille viewed her education as much more self-determined after completing undergraduate research, instead of just “soaking up a professor’s knowledge.” The participants also agreed that they received a better academic experience through undergraduate research than what they typically receive in a regular class with typical assignments and exams. The undergraduate research experience also allowed the participants to learn more about themselves as academics and researchers. They understood their academic barriers and boundaries and further defined their academic interests and focus.

Despite the participants’ positive experiences with undergraduate research, the participants still felt like they needed more time to effectively complete their projects. It was a common complaint that their one term courses did not allow for an extended exploration of a topic, but it was also an issue for a nine month long research program.

This could possibly be because of the inherent nature of academic work and the idea that one's research is never really complete and instead continually expanding.

Validation of Urban Degree and the Culmination of Undergraduate Career

Having a sense of closure and validation was extremely important to the participants in the study and an unexpected finding. According to the participants a feeling of confirmation and a sense of accomplishment seemed to outweigh the importance of student involvement and engagement. Participants explained that completing their degree at PNMCU without having gone through the undergraduate research experience would have been like “going through the motions” and then “being spit out” of college after completing the correct amount of credits for a degree. While they all agreed that completing their degrees without conducting an undergraduate research project would have been an accomplishment, the participants sought more out of their experience. More specifically, they desired an opportunity to bring together all of their schooling into a culminating project that they could show for their time in college. Instead of feeling like their education was disjointed and pieced together, conducting a definitive undergraduate research project helped tie together their education in a cohesive manner to add continuity and credibility to their academic experience. Publically presenting their work at the end of the program also helped provide closure and promoted feelings of accomplishment.

As a result of conducting undergraduate research, they said they felt “validated,” “qualified,” and “worthy” of being in higher education. This is important for urban, first-generation student who may not have seen themselves as full-time and dedicated college

students or who have been discouraged from pursuing an education by their families. Camille further explains that after participating in undergraduate research she was able to feel confident in and proud of her degree from a public metropolitan university. Before her research experience she felt like she had to defend her public, urban education to her friends who went to more “prestigious schools.” Whereas now, she feels like she has gained even more knowledge than those friends at those schools.

Again, as mentioned in the discussion regarding the traditional view of college and the lived experience of urban students, undergraduate research can be seen as a way to validate an urban student’s experience in college by doing something that is very “academic” and what is “expected of them as college students.” They used the experience of academic research as a way to establish themselves as college students since they are not involved in other social ties that are uniquely tied to college, like joining a Greek society, or being involved in campus clubs and activities.

The participants defined a researcher as someone who: has the desire to learn, investigates and unpacks problems and issues; asks questions, searches for more information, is self-motivated, is passionate about a topic, is inspired to help the community and contribute to knowledge on a subject. All of which are characteristics that they exhibited as students and in some cases how they described college students in general. As the study concluded, it became apparent that their own personal characteristics and the characteristics of a “researcher” began to run together. This was an important distinction in the development of the scholar identity.

As discussed earlier in this study, urban universities often have a lack of ceremony and tradition (McNamara Horvat & Shaw, 1999). Through undergraduate research, the participants were able to bring closure to their experiences at the university, similar to the intentions of a commencement ceremony which confirms the completion of a major event in one's life. Since the participants connected more with the academic side of the university this confirmation needed to take place in an area where they were already connected—their departments. While commencement is an event on campus, the massive amount of graduates participating at one time takes away the personal accomplishments of the graduates and may only fulfill the “social” connections one has with the university. Having a unique research project to show for the work they did at PNMCU weighed more heavily than the diploma they would receive.

Options for the Future

Upon entering in to the undergraduate research program, all of the participants expected to receive preparation for graduate school. These expectations were met and in most cases exceeded. Through the undergraduate research program the participants received guidance on graduate school that would not have been given otherwise from other resources on campus. Additionally, participants believed that they received skills to prepare them for the next step in life.

While participating in research, undergraduates can learn what graduate school would be like before they make the commitment to the years of research and study (Merkel, 2003). The additional “shepherding” of students by mentoring professors to assist students in preparing for graduate school through the process of preparing an article

for publication, or presentation for a professional conference has rewards and benefits as the students mature in their career choices and increase their opportunity for successful post-undergraduate careers, according to Galbraith (2012).

Lack of academic support from home can lead to disadvantages when trying to advance in higher education. It was not uncommon for the participants to feel cautious, overwhelmed and even scared of the idea of graduate school, since they admitted to being unfamiliar with the rules of higher education and how to navigate the system. Even more daunting was the idea of joining the faculty and researcher ranks of a university, especially given the unfavorable climate for females in the academic profession (Aquirre, 2000). Undergraduate research experiences, in line with the literature from Melhorn, Roberts, Cain and Parrott (2012), help connect students with career and graduate school paths. Especially, when students initially do not understand the requirements of continued education in their field, or when they only perceive undergraduate research as reserved for those students who already were planning on pursuing graduate work.

Ava shared that the undergraduate research program opened her mind to all of the possibilities that graduate and doctoral programs could offer her. She confessed that she would not have visited prospective graduate programs, nor would she have even applied to graduate school if she did not participate in the West Scholars Program. Darcy believes that having gained knowledge about graduate school and the application process through the undergraduate research program has helped her feel far more confident in how to approach continuing her education and the process that she needs to go through. Elise admitted that what she learned in the undergraduate research program were things that

she would have never known to include in her thought process when getting ready for a graduate program. Beverly said that through the undergraduate research program her future plans became clear. Camille believes that her undergraduate research project completely changed the trajectory of her life.

There is a genuine sense of gratefulness from the scholars regarding the program. Their acceptance into the program almost made them more humble, characterizing their accomplishment of getting in as being lucky or fortunate. Their honest gratitude is encouraging and inspiring since they did not waste a single second of the opportunity, although they were challenged with the demands and requirements of being a scholar in the program.

Stunted Scholar Identity Development

However, giving someone the label of “scholars” does not make them a scholar. Rather, it is a development that requires time, work, internalization of the meaning of the word, and external encouragement from respected and trusted sources. First-generation, low-income, commuter students at metropolitan universities often times do not even get the chance to begin, let alone cultivate, their scholar development due to the nature of the institution. Also a public, commuter, metropolitan institution like PNMCU typically does not represent prestige, credibility or significance in research in general.

The two participants who were most frustrated with their undergraduate research experiences felt as though their work did not provide any new information to their topic and perceived their work as not having value. This was from mentor feedback and unmet expectations for the program. This is where scholar development is stunted. Yet, the two

participants did admit to still learning from the experience of undergraduate research by gaining valuable insight into higher education itself and the culture of the academy. They also learned from their research mistakes and believe that they will “know what to do better the next time” they approach a research project. Even in what Darcy considers a “failed” research project, her growth within the program year is still significant. She might not have received all of the intended benefits of the program, but she did take away several lessons that she admitted will stay with her.

However, this does bring up the issue of how to ensure students are taking away the objectives set forth by the program. While set up to provide a comprehensive understanding of research, the program does lack the ability to respond to all of the challenges that can inhibit the ideal undergraduate research experience to take place. Hu, Scheuch, Schwartz, Gaston Gayles, and Li (2008) warn that there are many challenges to undergraduate research experiences including having to negotiate feelings about failure that accompanies the research project, and the fact that the research process is unpredictable. They also explain that navigating and learning about academic politics also gets in the way of ideal experiences.

These challenges can be debilitating, but they can also serve as valuable lessons. Gaining a holistic view of higher education, its positives and its negatives, can help these women understand who they are and where they are located within the system. The challenges will not just come at the undergraduate level but continue throughout graduate school and even further. Through the undergraduate research experience, Elise came to the startling conclusion that she needed to stop thinking about her specific experience

at PNMCU and instead shifted her focus to figuring out what other people's experiences might be at prestigious, highly respected research universities. More specifically, how that was going to affect her when she was in the same pool as these students for graduate school. The competition for graduate admissions became more apparent to her and her isolated experience at PNMCU was not the only factor that she needed to consider.

While Hathaway, Nagda and Gregerman (2002) report that undergraduate research opportunities can level the playing field for students at a disadvantage; this study's findings suggest this may not always be certain. There are factors that can also play into the success or failure scholar development of first-generation, low-income female students from metropolitan commuter universities due to a weak institutional research culture, a college's research reputation and classification, poor faculty mentorship, lack of integration of the peer research community, disconnection from one's academic major, self-doubt from students who have never been through the research process before, and uneven preparation for graduate school. These are all challenges with which the West Scholars Program has only minimally prepared scholars to negotiate.

However, through the five female researchers' narratives it is clear that a structured undergraduate research experiences such as the West Scholars Program may be instrumental in encouraging student involvement and creating a diverse generation of up-and-coming scholars who are looking to improve the situations around them. The insights and the perspectives of Ava, Beverly, Camille, Darcy, and Elise should not stop here. Instead, when looking at the findings of this study, it is important to explore the

possible implications and create helpful recommendations for practices and research which will be discussed in chapter 6.

Chapter 6

Implications for Practice and Suggestions for Future Research

This chapter will provide a brief summary of the study, relate findings to prior research, and suggest implications for practice and possible directions for future research. Using the following three research questions to guide the research, we sought to investigate the experience of five female first-generation, low-income students who participated in a structured undergraduate research experience at a metropolitan, commuter university in the Pacific Northwest:

- 1) How effectively does the West Scholars program engage PNMCU female, first-generation, low-income undergraduates in the academic life of this institution?
- 2) Secondly, what are the specific ways in which the West Scholars program engages female, first-generation, low-income college students through research?
- 3) What are some of the issues that inhibit a female first-generation, low-income college student's ability to fully engage in the experience of research and are these barriers to participation produced by the program, PNMCU, the metropolitan area, or dynamics from their own lives?

Summary of Findings

Through interviews, observations, and participant journals, this grounded theory-based qualitative case study revealed the perspectives of the five female participants. As stated in the previous chapter, three significant themes emerged from the data.

- 1) Always, Always, Always: The Perceived Luxury of the Traditional Undergraduate Student Experience vs. The Burden of the Actual Non-Traditional, Commuting, Working Student Experience
- 2) Establishing an Academic Home and Building Relationships with Faculty and Peers
- 3) Entering the Culture of the Academy: Development of a Scholar Identity

It was common for the five female first-generation, low-income college students in this

study to balance academics, employment, and personal obligations. They admitted to being minimally involved on campus, since most of the participants did not have time to devote to such activities. They were only on campus for class and rarely socialized at the university, with the exception of participants who worked on campus and maintained a social and academic community among fellow students. Prior to the West Scholars Program, four of the five participants in the study described their interactions with faculty and peers as limited. Their connections were mainly academic rather than social. They felt more connected to the university through their academic major departments than any other way.

After participating in the West Scholars Program they increased their involvement and interactions with faculty and peers. However, they explained that while that type of involvement and interaction was significant in their educational experience, it was actually less important than preparing and obtaining skills necessary for their next step in their lives such as a career path or graduate school. Participating in the process of

conducting undergraduate research and observing the behaviors of their faculty role models were specific ways in which they felt engaged with their academic disciplines and began to grow as researchers. A specific “scholar development” progression occurred most significantly with Ava, Camille, and Elise. Despite taking various ways through the development, they recognized the contribution they could make to their academic discipline. They took ownership of their work and as a result gained a sense of accomplishment and belonging.

Implications for Practice on the Programmatic Level

Taken together the results from this study can be used to inform the practice, policies, and organizational structure of undergraduate research on the programmatic level. The following section includes implications for the following: faculty mentorship, academic major departments, undergraduate peer research communities, and the pathway from undergrad to graduate school.

Faculty Mentorship in Undergraduate Research Programs

Prior to conducting undergraduate research, four of the five participants admitted to having limited interaction with faculty members outside of the classroom. They even explained that professors were perceived as too busy to meet with students and they felt invisible in large university courses. While conducting academic research with a faculty mentor, the urban undergraduates increased their interactions with faculty. Three of the two students formed strong bonds with their mentors. Also, as the participants grew more comfortable on campus, they were more likely to contact their professors during office hours and discuss academic issues outside of the classroom.

In understanding the experiences of the participants in this study, it would be beneficial for the urban university to offer more opportunities for structured mentored activities on campus, specifically undergraduate research. The interactions that result from research mentorship can help alter the perception of faculty as being too busy or too ignorant of students in large classes. The mentors who worked with participants in this study willingly worked with undergraduates on projects that had mutual benefits for both student and faculty member. Given the literature which supports faculty involvement and also the experiences of participants in this study, it would be advantageous to promote and institutionally support increased faculty mentorship (Elrod, Husic & Kinzie, 2010; Guterman, 2007; Hu et al., 2008; Melhorn, Roberts, Cain, & Parrott 2012).

In regards to benefits on an institutional level, faculty and undergraduate teams can bring in more research opportunities to a university and funding for different laboratories, grants, and institutions. With an increase in the number of people conducting research on campus, there can be an increase in the amount of research being brought on to campus in general.

Yet, it must be noted that it is necessary to provide incentive or reward for faculty to work with students in such a focused manner. It should be recognized within the tenure process and fiscally valued. However, it cannot be ignored that not all faculty are adequately prepared to mentor undergraduates. The faculty themselves may only have experience being a mentee while in graduate school or elsewhere. This may inhibit the quality of the faculty-student mentoring or lead to uneven participation of faculty within

a given program. Students were negatively impacted the most by non-ideal mentorship during the West Scholars Program.

Being able to provide training or orientation to a faculty on best practices in mentoring can at least increase the likelihood of strong, quality mentorship that is necessary for building a successful program. Training should also particularly emphasize working with first-generation, low-income, commuting students as this might not have been an experience faculty mentors had in school. Additionally, preparing scholars for the type of positive and effective interactions they can be having with their mentor would also improve the faculty-student relationship. The participants had limited interactions with faculty prior to the program, so they entered the West Scholars Program underprepared to form the bonds necessary for mentorship.

When faculty-student relationships began to deteriorate, scholars should be encouraged to inform the program of the issues they are having with their mentors. For lack of experience working with faculty, or for fear of embarrassment, scholars with mentor issues may not always report problems. As a result, resolution of mentor issues does not occur, or it goes unrecognized until it is too late. Having an open communication between scholar and administrators of the program can help backstop some of these situations. However, once informed of the problem, it is equally important for the program to facilitate an appropriate mediation and training for these types of occurrences are necessary.

Increasing the Connection with Academic Departments

Connecting with one's academic department was also a major factor in participants' satisfaction. Once the participants in the study established their academic major, they felt as though they had a home on campus. Students were more likely to be involved through their academic department than through any other pathway on campus. Since most urban students only spend time on campus to attend classes, it is most likely that their interactions with the school go through their academic departments. Emphasizing the importance of student relationships within the faculty, staff, and peers within their department is necessary to involve students on urban campuses. The bridge between academic departments and undergraduate research should also be strengthened since students typically find out about the West Scholars Program through their departments, and departmental faculty. Enhancing this pipeline from academic major department to undergraduate research program is particularly significant. As mentioned earlier, undergraduate research experiences also provide students with a sense of "place" which in turn helps students feel more integrated into university life (Krabacher, 2008).

Undergraduate Peer Research Communities

Interactions with peers on campus were mainly academic as well, according to the participants. They worked with their peers in the classroom, in study groups, or in group projects. They also saw their peers as effective sources of information and knowledge. However, they rarely spent time with fellow classmates outside of class. While participating in the undergraduate research program cohort, they also had academic interactions. The social bonds formed much later in the program year. This may be

because most urban students who live off campus already have established friend circles outside of the university. Their socialization does not occur on campus.

Given the perspectives of the participants in the study, it might not be necessary for urban students to create “best-friend” type bonds with their peers. But instead it is more powerful and beneficial for urban students to see their peers as allies and partners in an educational journey through higher education. The role universities can play in fostering such relationships can be through group academic opportunities for students. According to the literature, one of the reasons why undergraduate research cohorts build strong student support networks is because they allow like-minded students to form a smaller community within a larger university (Hathaway, Nagda & Gregerman, 2002; Krabacher, 2008).

This smaller community is easier to navigate and typically is comprised of students with similar backgrounds or similar academic interests or goals. Since four of the five students in the study reported feeling a lacking an opportunity to build long-term relationships because of constantly changing terms and courses, having group academic opportunities like undergraduate research on campus can encourage continuity and involvement among students. Facilitating mentor programs, and maintaining community ties across semesters can be used to help the non-residential student experience the benefits of the campus community (Kirk & Lewis, 2013). Additionally, literature shows that those who feel safe in a community of scholars are more likely to be comfortable talking to the program director about their progress or about problems in their academic environment (Bender, Blockus & Webster, 2008).

However, as we saw within the West Scholars Program cohort in 2008-2009, creating an undergraduate researcher community can be a challenge. It does not happen instantly or without assistance. Bender, Blockus, and Webster (2008) suggest that organized social activities during times when West Scholars are on campus for academic program seminars can help form bonds among the group. They also emphasize the importance of a program Orientation and Closing event which the PNMCU West Scholars Program does host for each year. Other suggestions include group problem-solving challenges, and creating a visual sense of belonging such as a program t-shirt or pin that represents the group which promotes community identification. Frequent scholars new letters, a student advisory board, and opportunities for alumni involvement also top this list from Bender, Blockus and Webster (2008).

When thinking about the longevity and stability of the undergraduate research programs, it is also important to consider the contributions of program alumni. Participants in undergraduate research who feel strongly affiliated with the program may become future donors or program mentors. The PNMCU West Scholars Program also stays in contact with alumni and when possible honors the accomplishments, awards and graduate degrees of the scholars. Bender, Blockus and Webster add that “community building should be considered a continuum, with a useful life well beyond the end of the undergraduate-research program” (p.10).

Pathways to Graduate School

While the participants in this study did utilize a handful of services that were beneficial to them, there were several services and programs they did not know about on

campus. Through the participants' interviews it was apparent that services on campus are often times underutilized because students did not know they were available to them. Or, that the university did not offer in adequate services that could meet urban students' needs.

Besides the career center, which the participants in this study did utilize, the scholars felt that there were few services that helped them prepare for their next step in life, whether it is a career path or a graduate school path. Most services focused on the current goal of completing the term and finishing current courses. There seemed to be a lack of graduate school preparation resources, or any services designed to help students navigate higher education beyond the undergraduate level. This is especially necessary for first-generation students who do not have the familial knowledge of higher education that their multi-generational peers may have. For the participants in the study, the preparation for the next step in life was as important as being invested in their undergraduate experience. Through guest speakers, strategic examples, and academic professionals' presentations, the West Scholars Program provided insider information about the graduate school admissions process that they would not know how to obtain otherwise. As a result, the five scholars were eager to pass the information on to others from comparable backgrounds in similar situations.

As illustrated in the participants' narratives, each of the five females in this study had unique pathways to PNMCU. Assistance in their decision to attend a 4-year university from a community college or elsewhere was not prevalent (except in the experience of Elise) and most chose the metropolitan, commuter university out of

convenience or by default. It would be in undergraduates' best interest if they were able to be proactive about the options they could take after completing their baccalaureate degrees. Helping pave more structured, informed paths from undergraduate programs to graduate programs could increase the likelihood of graduate school enrollment and retention. PNMCU houses a variety of graduate programs across campus, the strategic preparation and recruitment of high-achieving, undergraduate researchers in the West Scholars Program could encourage many students to stay at their alma mater to continue with a graduate degree. This has several positive implications for graduate program enrollment. Additionally, experienced, intelligent researchers who are already familiar with research faculty, labs and research projects could be retained on campus.

Implications for Practice on the Institutional Level

This study's findings can be used to inform the practice, policies, and organizational structure of undergraduate research on the institutional level of a metropolitan, commuter university. The following section outlines implications for developing a research culture at a metropolitan commuter university, as well as the integration of undergraduate research into university curriculum.

The Perception of the Metropolitan Commuter University and Academic Research

Starting out with humble beginnings as a learning extension center that focused mainly on teaching, PNMCU does not possess a strong history of successful and significant academic research. However, the emphasis on research has become a priority in the last decade, with much of the school retaining its teaching roots. Perhaps the largest obstacle that the undergraduate research program must face at this metropolitan,

commuter university is establishing itself within a campus that lacks a strong research culture. It can be a struggle to secure institutional support, resources, program space, and faculty and administration participation when the university's attention is turned elsewhere. However, I do not want to discount the importance of the other priorities of the university. Instead, I want to mention that serving such a vast and diverse metropolitan campus population with such a variety of needs may spread resources thin and, in turn, may not allow for any program on campus to receive the full support it deserves. However, leveraging the metropolitan city ties to the university may help strengthen research and support. The metropolitan university experience is still perceived as the lesser alternative to the traditional, isolated, idyllic experience of other colleges. Advancing undergraduate research at PNM CU can legitimize the university's position in higher education as producing quality research results can be seen as a marker of success and prestige. The university's proximity to industry, commerce, and community organizations can lead to countless research opportunities and funding. One of the main reasons why participants in this study appreciated and valued PNM CU is because of the fact that the city is the urban university's laboratory and classroom.

Garde-Hansen & Calvert (2007) recommend that a student-led research conference as one simple, effective and low-cost way of developing a research culture in the undergraduate curriculum. Show casing the research already conducted at the university through a conference can further attract and incentivize others to participate in this academic activity and make the campus and its outlying community aware of the university's research potential.

Emphasizing the academic research aspects of the university may also help shift the perception of the college experience for urban undergraduates who expect their university to be similar to the traditional norm. Promoting the idea that this is a university that is steeped in research and academic integrity paints a clear picture of the type of experience one will receive at a metropolitan university, rather than rely on the myths of college to dictate the experience the students may come to expect. The act of doing scholarly research is unique to the academy and in participating in such an activity is solely a “college experience.” Beckman and Hensel (2009) suggest that it is possible for an institution (like PNMCU) to realize how to best access the many benefits of institutionalized undergraduate research by carefully formatting a definition that fits its campus culture and its unique mission.

Kuh (2005 & 2009) points out that there are two critical features of student engagement and involvement: student and institutional features. This paper has focused mainly on the student’s effort, and the amount of time and energy a student puts into academic and social involvement on campus. Yet, Kuh (2005 & 2009) emphasizes that institutional effort is equally important, and that institutions must utilize resources and curriculum to promote student success. It is extremely important for schools, such as PNMCU, to offer learning opportunities, like undergraduate research, that “induce” students to participate in activities that lead to student success outcomes like persistence, graduation, and satisfaction.

All five participants in the study also suggested that undergraduate research experiences become incorporated into the already required curriculum of the university. This may also be one step closer in promoting a research culture at PNMCU.

Integration of Undergraduate Research into University Curriculum

All of the participants in this study said that undergraduate research should be standard practice in university curriculum in some way or another. They believed that conducting a full research project should be an experience that all students participate in since it adds so much to one's education. The participants shared that the skills and knowledge necessary to complete a research project should be included in everyone's college education. They agree that by the end of one's undergraduate education it is expected that one can think critically about an issue, apply proper methodology to answer a research question, and analyze, summarize, critique and apply various types of information. However, the participants note that this is not always the case when students graduate. Undergraduate research can help ensure that students receive the type of skill set necessary to be successful after college. As it currently is offered now, the undergraduate research experience is seen as an optional addition to the curriculum. It is only for a concentrated period of time, and is reserved for students who are selected for participation (Beckman & Hensel, 2009).

It is suggested that undergraduate research be better embedded into the offerings of a university otherwise it will just be seen as one more requirement to fulfill before graduation, or another commitment that a busy urban student must find time for in his or her schedule. For the participants in the study, participation in the program did put a

strain on their time and they admitted that it did add pressure and stress to their already full lives. The undergraduate research experience does not have to be another obligation that delays or restricts a student's graduation. It can be a seamless integration of university course offerings and an institutionalized experience that the participants recommend in their narratives. It is of the utmost importance to listen to the needs of these students first before implementing change in the university.

Beckman and Hensel (2009) suggest that an institution could apply its resources toward both a co-curricular fellowship model and a curriculum integration model, and ideally falling toward the middle of the continuum when considering overall research orientation for students.

The integration of undergraduate research at an urban university may be extremely beneficial. As explained previously in this study, there is a disconnection between student and school and between perceived expectation and lived experiences at urban universities. Undergraduate research can help bridge this gap and set up a framework for connections to take place on campus.

Yet, integrating undergraduate research into a university-wide curriculum is not an easy task. Nor would every academic discipline or department on campus be in agreement with how "research" is defined or what students should be learning. This is also a challenge in the West Scholars Program classroom where multiple disciplines, ways of knowing, and academic departments are represented. Melhorn, Roberts, Cain, and Parrott (2012) summarize this dilemma well when they state it is a challenge when dealing with one-size-fits all research methodology courses from students from multiple

academic areas. They add that in most university settings students are focused on a single curriculum and can many times develop tunnel vision about how the discipline fits into the overall system. This discipline-specific mindset could hinder the ability to merge undergraduate research experiences in with already established academic course objectives and syllabi.

I would like to suggest one possible way to integrate undergraduate research into the university curriculum through the already established and required capstone project at PNMCU. Beckman and Hensel (2009) suggest that some institutions or academic programs may embed research skills throughout curriculum, developing an articulated plan for a course wherein research skills are cultivated and students take steps towards becoming a researcher.

Participants in this study sought an opportunity to exercise all of their undergraduate education into a culminating project and viewed conducting an original undergraduate research project as such. It provided needed closure for them, which came at the end of their, sometimes, long journey through undergraduate education. The self-motivated and individual project seemed to be more of a vehicle for conclusion than the already established final capstone project the university offers. Unlike the capstone, the undergraduate research experience was individual and was directed by faculty mentorship. The steps to complete the undergraduate project were structured around an established methodology and research protocol. This helped the students exercise the knowledge they had gained from years of coursework and also build new research skills that were universal in education. Different than the capstone which is most often a group

project that focuses on a community-based partnership that can lead to various collaborative products.

However, the university may be able to integrate the senior capstone experience with the undergraduate research program without compromising or losing important aspects of both experiences. Merging the university requirements with undergraduate research would allow for a seamless integration of the research experience with an already established requirement for graduation.

Additionally, the capstone focuses on a problem or an issue to address in the community. The undergraduate research program encourages participants to identify a research problem and approach that problem through scientific method. Integrating this approach to review the issues discussed in senior capstones can fortify the learning experience in these courses. The students also will walk away with valuable research skills that can be helpful in the next stage of their careers.

It is evident in this research that more structured, mentored undergraduate research experiences should be institutionalized at PNWCU because of its positive impact regarding student involvement and development, and educational practice. However, this change will not come over night, but findings from this study can help advance the goal of institutionalizing undergraduate research at PNWCU.

Limitations and Strengths of this Study

Although this study's interviews and participant journals yielded rich data from the five student case studies, it does have its limitations. Given the nature of qualitative research, it is impossible to generalize the findings of this study across all urban

institutions or urban students. Instead, the study is able to provide insight into the lives of five individuals whose unique stories may help us better understand the urban student experience.

The small sample size is also limiting with regards to the diversity of the participants and the variety of experiences captured. Additionally, the participants were only selected from a population of students who were already accepted into the McNair Scholars Program and who were conducting research during the 2008-2009 academic year. This limited who was able to participate. It also unintentionally allowed for only white or Caucasian female students to participate due to the limited ethnic diversity within the pool of available participants for the study. While the study intended to only focus on the female, first-generation, low-income urban student experience, its findings are also limited to this narrow lens. The results may not be applicable to the male student experience or other types of underrepresented and non-traditional students.

The requirements to participate in the undergraduate research program are specific. Only students who have completed at least 90 credits upon entrance into the program, have at least a 3.0 grade point average, have full-time student status, and have a desire to enter into a PhD program after graduating from PNMCU are eligible to apply. As a result, students were selected to participate from this high performance, upper classmen; graduate school bound population which may exclude certain students whose experiences could not be reported in this study.

The study also was conducted within one single program at one single university within one region of the country. This study acknowledges that institutions and

undergraduate research programs operate differently from one another, which could have students with various experiences that may be similar or unlike the experiences of the five participants in this study. . Due to its qualitative nature and the fact that this research took place at a single institution, it is not possible to generalize the finding of this study across all urban institutions.

Generally, researchers bring their own perspectives into the interpretation of data from a study; the interpretations that one researcher makes may differ from the interpretations made by others. I am associated with the program and have worked for the university for ten years. This could create bias in my interpretation of the results. Participants may also be unwilling to share certain information with me because of my position within the university. Or, they were intentionally, or unintentionally, providing response they thought would be pleasing to the program and to me. However, to prevent this from happening, several measures were in place to promote validity, rigor and trustworthiness within the study. These strategies were previously explained in detail in the data collection section of this paper. I, also, repeatedly positioned my within the study to reflect upon how my actions or association with the program may vary the results.

Despite these limitations, valuable information has emerged from this study. Our understanding of the urban student experience at PNMCU is clearer due to hearing these participants' stories. The study also allowed for the participants to actively reflect upon their academic lives at PNMCU and their experience conducting undergraduate research. Each participant reported that keeping a journal was beneficial and being able to reflect upon their time within the program and at the urban university helped them better

understand and process their college experience. For most of the students in the study, this was their last term as an undergraduate; the opportunity to reflect was greatly appreciated as it coincided with the conclusion of a major event in their lives: graduation.

As illustrated in the literature review, very little research has been done specifically on the experience of urban students who conduct undergraduate research. Typically, the literature focuses on the challenges of urban students within a traditional framework, or discusses the urban college experience as an alternative experience which is somehow flawed in comparison to its traditional counterparts. This study intended to focus on the lived experiences—good or bad—and did not want to blame the structure of the institution or victimize the students who are enrolled. Hopefully, the honest voice of this paper achieved this goal by simply sharing the words and knowledge of the participants without researcher judgment.

Additionally, the studies relating to undergraduate research typically focus on the administration of a research program and the programmatic details of such an undertaking. The work also focuses more on the experiences of science, technology, engineering, and mathematics (STEM) majors. Or, the research studies the impact of undergraduate research on students' desire to continue on to graduate school. It is rare to find a study that focuses less on the students' discipline and more on the lived experience of undergraduate research and how it relates to being a student within an institution. Also, there is a limited amount research on undergraduate research programs that has been done using qualitative methodology.

As reported in the participant narratives and through the emergent themes, this qualitative approach helps fill the gaps in the previous literature and adds to the discussion by illuminating the undergraduate research student experience, instead of merely describing outcomes or survey data related to performance or comparisons.

Suggestions for Future Research

Given the limitations and strengths of this study, it is recommended that further research be conducted in this area. The following list specifically states the type of future research that could yield valuable information for the field of higher education.

- This study only covered the female, first-generation, low-income experience. It is necessary to also capture the male student experience, and the experiences of other underrepresented or non-traditional students enrolled in urban institutions.
- Even though there have been several studies comparing the experience and student involvement of traditional students and non-traditional students at traditional institutions and urban institutions there is a lack of qualitative data on this subject. Qualitative data could provide richer data, not focused on cause-effect relationships, but rather focused on the meanings of student experiences.
- Also, on any given urban campus there are both students who are considered traditional and non-traditional students. It would be worth an investigation into the differences or similarities of the student involvement and urban experience of both groups within the same institution.

- This study centered on a single institution within one region of the United States. Urban cities vary around the nation. New York City is much different than Seattle, Washington, or Dallas, Texas. Conducting research at urban universities across the nation can provide a more robust understanding of urban student involvement and engagement.
- In regard to undergraduate research, while this study did provide valuable insight into the importance of the research experience, more work needs to be done in this area in general.
- The results of this study illustrated a strong desire among the participants to receive research training before graduation. How can we integrate the skills and knowledge associated with conducting undergraduate research into already established courses? Or, should it remain a supplemental experience in addition to required coursework? Which option would be more impactful?
- Additionally, faculty and peer relationships and institutional involvement through undergraduate research was very important to the participants in this study. How can faculty relationship and research opportunities be better promoted in our institutions?
- How can programs ensure consistent, quality faculty-student mentorship?
- Since the students in the study were from a variety of disciplines, the study helps point out that more work should be done on the impact of research on non-STEM disciplines such as the liberal arts and fine arts. Attention in

this area may help promote undergraduate research opportunities and provide more learning opportunities to students in these disciplines.

- Metropolitan students are busy with many competing obligations, it is necessary to investigate how undergraduate research can be integrated into the curriculum, not as another obligation or requirement, but as a way to enrich the learning experience.
- All of the participants in this study became more satisfied with their academic experience and more comfortable with the university once they established their major. Having an attachment to an academic department helped them connect with the institutions and most of the participants became involved in the events and program of their major. Literature focuses mainly on the importance of the faculty/student relationships and involvement and satisfaction with the institution, but perhaps some studies need to be directed at the important of establishing a major and a department within the institution. It was this event in the participants' academic careers at PNMCU that had a major impact on their happiness and comfort within the institution.
- In general, this study prompts us to rethink the definition of the college student and of the college experience. The perceptions of college and the lived experiences of the students in this study varied greatly. Most times the students perceived "college" in traditional terms, but lived "college" in a vastly different way than those terms. How is one's understanding of

college created and how does that understanding impact one's expectations and satisfaction within college?

These suggestions were derived from the data collected in this study and the questions the researcher felt needed to be explored through further investigation on this topic.

Conclusion

As the number of students who enroll in metropolitan, commuter universities grows, it will become increasingly important that these institutions create new strategies for improving student involvement and development (Seaberry & Davis, 2003). Through exploring a specific sub-group of students selected for an undergraduate research program experience and investigating how these students negotiate their involvement within this metropolitan commuter university context and how this program exerts an influence on their experience can play a significant role in the way universities utilize undergraduate research programs and also re-define successful student involvement and development.

In general, there will be increase enrollment at urban universities, more commuter students flowing in and out of the nation's campuses, and a continued desire for universities to conduct research. This study is relevant and timely given the circumstances in which higher education is currently in. It can be seen as one step closer in understanding the urban university experience and the valuing undergraduate research opportunities. Without proper knowledge of either of these areas of higher education, we

may not be able to advance our metropolitan institutions' program offerings, best practices, policies, or structures to meet the future needs of our students or communities.

References

- Astin, A.W. (1977). *Four critical years: Effects of college on beliefs, attitudes, and knowledge*. San Francisco, CA: Jossey-Bass.
- Astin, A.W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25, 297-308.
- Astin, A.W. (1985). *Achieving educational excellence: A critical assessment of priorities and practices in higher education*. San Francisco, CA: Jossey-Bass.
- Astin, A.W. (1993a). What matters in college? *Liberal Education*, 79 (4), 4-15.
- Astin, A.W. (1993b). *What matters in college: Four critical years revisited*. San Francisco, CA: Jossey-Bass.
- Astin, A.W. (1996). Involvement in learning revisited: Lessons we have learned. *Journal of College Student Development*, 37, 123-133.
- Attinasi, L.C. (1989). Getting in: Mexican American's perception of university attendance and the implications for freshman year persistence. *The Journal of Higher Education*, 60 (3), 247-277.
- Aquirre, A., (2000). Women and minority faculty in the academic workplace. *ASHE-ERIC Higher Education Report*, 27(6). San Francisco: Jossey-Bass.
- Beckman, M. & Hensel, N. (2009). Making explicit the implicit: Defining undergraduate research. *Council on Undergraduate Research Quarterly*, 29(4), 40-44.
- Bender, C., Blockus, L. & Webster, M. (2008). Creating community in your undergraduate research program: It isn't spontaneous! *Council on Undergraduate Research Quarterly*,

28(4), 8-12.

- Bogdan R.C. & Biklen, S.K. (2007). *Qualitative research for education: An introduction to theories and methods*. Boston, MA: Pearson Education, Inc.
- The Boyer Commission on Educating Undergraduates in the Research University. (1998). *Reinventing undergraduate education: A blueprint for America's research universities*. New York: State University of New York at Stony Brook.
- Braxton, J.M., Vesper, N., Hossler, D. (1995). Expectations for college and student persistence. *Research in Higher Education*, 36 (5), 595-611.
- Brownell, B.A. (1995). Metropolitan universities: Past, present, and future. In D.M. Johnson & D.A., Bell (Eds.), *Metropolitan Universities: An emerging model in American higher education* (pp.17-26). Denton, TX: University of North Texas Press.
- The Carnegie Foundation for the Advancement of Teaching. (24, February 2012).
Institutional
Classification. Retrieved from
<http://classifications.carnegiefoundation.org/>.
- Charmaz, K. (2001). Grounded Theory. In Emerson, R.M. (Ed.), *Contemporary field research: Perspectives and formulation* (2nd ed.) (pp. 335-352). Long Grove, IL: Waveland Press, Inc.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: Sage Publications.

- Chickering, A.W. (1974). *Commuter versus Resident Students: Overcoming the educational inequities of living off campus*. San Francisco, CA: Jossey-Bass Publishers.
- Chung-Joo Masse, J. (2009). *An Ecological Perspective on commuter student success*. (Master's thesis). Retrieved from Dissertations and Theses database. (UMI No. 1472234).
- Clark, M.R. (2006). Succeeding in the city: Challenges and best practices on urban commuter campuses. *About Campus, (July/August), 2-8*.
- Cohen, A. W. (2009). *The shaping of American higher education: Emergence and growth of the contemporary system* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Cramer, R.J. & Prentice-Dunn, S. (2007). Caring for the whole person: Guidelines for advancing undergraduate mentorship. *College Student Journal, 41(4), 771-778*.
- The Council for Undergraduate Research. (2010, November 14). Retrieved from <http://www.cur.org/about.html>
- Creswell, J.W. (2005). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, (2nd ed.). Upper Saddle River, NJ: Pearson Education, Inc.
- Creswell, J.W. (2007). *Qualitative inquiry & research design: Choosing among five approaches*. Thousand Oaks, CA: Sage Publications.
- Dey, E.L. & Hurtado, S. (2005). College students in changing contexts. In P.G. Altbach, R.O. Berdahl, & P.J.Gumport, (Eds.), *American Higher Education in the Twenty-First Century* (pp. 315-339). Baltimore, MD: The Johns Hopkins University Press.

- Douglass, J.A. & Thomson, G. (2008). *The poor and the rich: A Look at economic stratification and academic performance among undergraduate students in the United States*. Berkeley, CA: Center for Studies in Higher Education, University of California, Berkeley.
- Dugan, J.P., Garland, J.L., Jacoby, B. & Gasiorsko, A. (2008). Understanding commuter student self-efficacy for leadership: A within-group analysis. *National Association of Student Personnel Administrators Journal*, 45(2), 282-310.
- Eisenhardt, K.M. (2002). Building theories from case study research. In A.M. Huberman & M.B.Miles (Eds.), *The Qualitative Researcher's Companion* (pp. 5-36). Thousand Oaks, CA: Sage Publications.
- Elrod, S., Husic, D., & Kinzie, J. (2010). Research and discovery across the curriculum. *Peer Review*, 12(2,) 4-8.
- Emerson, R.M. (2001). *Contemporary Field Research: Perspectives and Formulations*. (2nd ed.). Long Grove, IL: Waveland Press, Inc.
- Engle, J., Bermeo, A., & O'Brien, C. (2006). *Straight from the Source: What works for first-generation college students*. Retrieved from The Pell Institute for the Study of Opportunity in Higher Education Executive Summary.
http://www.pellinstitute.org/files/files-sfts_what_works.pdf
- Franklin, K.K., Cranston, V., Perry, S.N., Purtle, D.K., & Robertson, B.E. (2002). Conversations with metropolitan university first-year students. *Journal of the First-year Experience*, 14(2), 57-88.

- Galbraith, J.M. (2012). Shepherding undergraduate students through a research experience and a professional meeting. *North American Colleges and Teachers of Agriculture Journal*, 56(2), 76-81.
- Garde-Hansen, J. & Calvert, B. (2007). Developing a research culture in the undergraduate curriculum. *Active Learning in Higher Education*, 8(2), 105-116.
- Gay, L.R., Mills, G.E., & Airasian, P. (2006). *Educational Research: Competencies for analysis and applications* (5th ed.). Upper Saddle River, NJ: Merrill Prentice Hall.
- Geiger, R.L. (2005). The Ten Generations of American Higher Education. In P.G. Altbach, R.O. Berdahl, & P.J. Gumport, (Eds.), *American Higher Education in the Twenty-First Century* (pp. 38-69). Baltimore, MD: The Johns Hopkins University Press.
- Gianoutsos, D. (2011). *Comparing the student profile characteristics between traditional residential and commuter students at a public, research-intensive, urban commuter university* (Doctoral Dissertation). UNLV Theses/Dissertations/Professional Papers/Capstones. (Paper 925).
- Glaser, B.G. & Strauss, A.L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York, NY: Aldine Publishing Company.
- Goldrick-Rab, S. (2006). Following their every move: An Investigation of social-class differences in college pathways. *Sociology of Education*, 79(January), 61-79.
- Gupton, J.T., Castelo-Rodriguez, C., Martinez, D.A., & Quintanar, I. (2009). Creating a pipeline to engage low-income, first-generation, college students. In Harper, S.R &

- Quaye, S.J. (Eds.), *Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations* (pp. 243- 328). New York, NY: Routledge.
- Hathaway, C.E., Mulhollan, P.E., & White, K.A. (1990). Metropolitan Universities: Models for the Twenty-first century. *Metropolitan Universities, 1*(1), 9-20.
- Hathaway, R.S., Nagda, B.A., Gregerman, S.R. (2002). The relationship of undergraduate research participation to graduate and professional education pursuit: An empirical study. *Journal of College Student Development, 43*(5), 614-631.
- Harper, S. R. (2012). *Black male student success in higher education. A report from the National College Achievement Study*. Philadelphia: University of Pennsylvania, Center for the Study of Race and Equity in Education.
- Harper, S. R. (2008). Realizing the intended outcomes of Brown: High achieving African American male undergraduates and social capital. *American Behavioral Scientist, 51*(7), 1029-1052.
- Heaton, J. (2004). *Reworking qualitative data*. Thousand Oaks, CA: Sage Publications.
- Hoover, R.E. (1997). The Role of student affairs at Metropolitan Universities. *New Directions for Student Services, 79*, 15-25.
- Hu, S., Scheuch, K., Schwartz, R., Gaston Gayles, J., & Li, S. (2008). Reinventing undergraduate education: Engaging college students in research and creating activities. *ASHE Higher Education Report , 33*(4), Washington, DC: Association for the Study of Higher Education.

- Ishiyama, J. (2002). Does early participation in undergraduate research benefit social science and humanities students? *College Student Journal*, 36(3), 380-386.
- Ishiyama, J.T. & Hopkins, V.M. (2002/2003). Assessing the impact of a graduate school preparation program on first-generation, low-income college students at a public liberal arts university. *Journal of College Student Retention*, 4(4), 393-405.
- Jacoby, B. (1995) Adapting the institution to meet the needs of commuter students. In D.M. Johnson & D.A., Bell (Eds.) *Metropolitan Universities: An emerging model in American higher education* (pp.51-62). Denton, TX: University of North Texas Press.
- Jacoby, B. (2004). Engaging first-year commuter students in learning. *Metropolitan Universities: An International Forum*, 15(2), 12-30.
- Jacoby, B. & Garland, J. (2004-2005). Strategies for enhancing commuter student success. *Journal of College Student Retention*, 6(1), 61-79.
- Johnson, R.B. (1999). Examining the validity structure of qualitative research. In A.K.Milinki (Ed.), *Cases in qualitative research: Research reports for discussion and evaluation* (pp. 160-165). Los Angeles, CA: Pyczak Publishing.
- Kinhead, J. (2003). Learning through inquiry: An overview of undergraduate research. *New Directions for Teaching and Learning*, 93(Spring), 5-17.
- Kirk, C.M. & Lewis, R.K. (2013). Sense of community on an urban, commuter campus. *International Journal of Adolescence and Youth*, 18(1), 1-13.

- Krabacher, A.C. (2008). *Undergraduate research as a means of student engagement: A study of research's involvement in five areas of college life* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3313046).
- Krause, K.D. (2007). Social involvement and commuter students: The First-year student voice. *Journal of the First-Year Experience & Students in Transition*, 19(1), 27-45.
- Krefting, L. (1999). Rigor in qualitative research: The assessment of trustworthiness. In A.K. Milinki (Ed.), *Cases in qualitative research: Research reports for discussion and evaluation* (pp. 173-181). Los Angeles, CA: Pyrczak Publishing.
- Kuh, G.D. (2005). Student engagement in the first year of college. In M.L. Upcraft, J.N. Gardner, B.O. Barefoot (Eds.) *Challenging and supporting the first-year student: A handbook for improving the first year of college* (pp. 86-107). San Francisco, CA: Jossey-Bass.
- Kuh, G.D. (2009). What student affairs professionals need to know about student engagement. *Journal of College Student Development*, 50(6), 683-706.
- Kuh, G.D. (2008). *High-Impact Educational Practices: What They Are, Who Has Access To Them, and Why They Matter*. American Association for Colleges & Universities.
- Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2007). *Piecing together the student success puzzle: Research, propositions, and recommendations*. San Francisco, CA: Wiley Subscription Services at Jossey-Bass.
- Lancy, D.F. (2003). What one faculty member does to promote undergraduate research. *New directions for teaching and learning*, 93, 87-92.

- Levitz, R. & Noel, L. (1990). The Retention challenge: It can be met. *Metropolitan Universities, 1*(1), 31-39.
- Longwell-Grice, R. & Longwell-Grice, H. (2007-2008). Testing Tinto: How do retention theories work for first-generation, working-class students? *Journal of College Student Retention, 9*(4), 407-420.
- Lynton, E.A. (1995). What is a metropolitan university? In D.M. Johnson & D.A., Bell (Eds.), *Metropolitan Universities: An emerging model in American higher education* (p. xi-xxi). Denton, TX: University of North Texas Press.
- Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (5th Ed.). Thousand Oaks, CA: Sage Publications.
- Martinez, A. (2009). Learning through research: How a summer undergraduate research experience informs college students' views of research and learning (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3367984).
- Maxwell, J.A. (2002). Understanding and Validity in Qualitative Research. In A.M. Huberman & M.B. Miles (Eds.), *The Qualitative Researcher's Companion* (pp.37-64). Thousand Oaks, CA: Sage Publications.
- McNamara Horvat, E. & Shaw, K.M. (1999). Redefining campus: Urban university and the idea of place. *New Directions for Higher Education, 105*, 101-107.
- Mehlhorn, J.E., Roberts, J., Cain, A. & Parrott, S. (2012, February). Developing cross disciplinary skills through an undergraduate research project. Paper presented at the Southern Agricultural Economics Association Annual Meeting, Birmingham, AL.
- Mekolichick, J. & Gibbs, M.K. (2012). Understanding college generational status in the

- undergraduate research mentored relationship. *Council on Undergraduate Research Quarterly*, 33(2), 40-46.
- Merkel, C.A. (2003). Undergraduate Research at the research universities. *New Directions for Teaching and Learning*, 93(Spring), 39-53.
- Miles, M. B., & Huberman, M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd Ed.). Thousand Oaks, CA: Sage Publications.
- Moneta, L. (1997). Future challenges and priorities. *New Directions for Student Services*, 79(Autumn-Fall), 67-77.
- Nagda, B.A., Gregerman, S.R., Jonides, J., von Hippel, W., & Lerner, J.S. (1998). Undergraduate student-faculty research partnerships affect student retention. *The Review of Higher Education*, 22(22), 55-70.
- National Center for Education Statistics. (2011). *Digest of Education Statistics, 2010* (NCES 2011-015). Washington, D.C.: Government Printing Office.
- Oldfield, K. (2007). Humble and hopeful: Welcoming first-generation poor and working-class students to college. *About Campus*, (January/February), 2-12.
- Pacheco, A. (1994). Bridging the gaps in retention. *Metropolitan Universities: An International Forum*, 5(2), 54-60.
- Pacific Northwest Metropolitan Commuter University, Office of Institutional Research and
 Planning (Fall, 2000. *Entering Student Survey*.
- Pacific Northwest Metropolitan Commuter University, Office of Institutional Research and
 and

- Planning (Fall, 2011). *Prior Learning Survey 2011*. Unpublished manuscript.
Pacific Northwest Metropolitan Commuter University, Office of Institutional Research
and
- Planning (Winter, 2006). *A comparison of the students of the McNair Program and their peers at PSU*. Unpublished manuscript.
- Pascarella, E.T. & Chapman, D.W. (1983). A multi-institutional, path analytic validation of Tinto's model of college withdrawal. *American Educational Research Journal*, 20(1),87-102.
- Pascarella, E.T. & Terenzini, P.T. (1991). *How college affects students*. San Francisco, CA: Jossey-Bass.
- Pascarella, E.T., Pierson, C.T., Wolniak, G.C., & Terenzini, P.T. (2004). First-Generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education*, 75(3), 249-284.
- Pascarella, E.T. (2006). How college affects students: Ten directions for future research. *Journal of College Student Development*, 47, 508-520.
- Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods* (2nd ed.). Newbury Park, CA: Sage Publishing.
- Pike, G.R. & Kuh, G.D. (2005). First- and Second-Generation college students: A Comparison of their engagement and intellectual development. *The Journal of Higher Education*, 76(3), 276-300.

- Pita, M., Ramirez, C., Joacin, N., Prentice, S. & Clarke, C. (2013). Five Effective Strategies for Mentoring Undergraduates: Students' Perspectives. *Council on Undergraduate Research Quarterly*, 33(3), 11-15.
- Plano-Clark, V., & Creswell, J. W. (2010). *Understanding research: A consumer's guide*. Upper Saddle River, NJ: Pearson Education Inc.
- Rhodes, F.W. & Lamar, A. (1990/1991). The Challenge for student life. *Metropolitan Universities*, 1(2), 85-96.
- Riposa, G. (2003). Urban universities: Meeting the needs of students. *The ANNALS of American Academy of Political and Social Science*, 585, 51-65.
- Seaberry, J. & Davis, J.L. (1997). The Metropolitan University: History, mission, and defining characteristics. *New Directions for Student Services*, 79, 5-13.
- Sfard, A., & Prusak, A. (2005). Telling identities: In search of an analytic tool for investigating learning as a culturally shaped activity. *Educational Researcher*, 34(4), pp. 14-22.
- Silverman, S.C., Aliabadi, S., & Stiles, M.R. (2009). Meeting the needs of commuter, part-time, transfer, and returning students. In Harper, S.R & Quaye, S.J. (Eds.), *Student Engagement in Higher Education: Theoretical Perspectives and Practical Approaches for Diverse Populations* (pp. 223-233). New York, NY: Routledge.
- Smith, C.K., Gauld, V.D., Tubbs, L., Correnti, R. (1997). Challenges and Opportunities. *New Directions for Student Services*, 79, 39-56.

- Stamatoplos, A. (2009). The role of academic libraries in mentored undergraduate research: A model of engagement in the academic community. *College & Research Libraries, 70*(3), 235-249.
- Strauss, A.L. & Corbin, J. (1998). *Basics of qualitative research techniques and procedures for developing grounded theory* (2nd ed.). London, Sage Publications.
- Terenzini, P.T., Cabrera, A.F. & Bernal, E.M. (2001). Swimming against the tide: The poor in American higher education. *College Entrance Examination Board*. Retrieved from www.collegeboard.com/research/html/RDReport2001_1.pdf
- Terenzini, P.T., Pascarella, E.T., Blimling, G.S. (2003). Students' out-of-classroom experiences and their influence on learning and cognitive development: A literature review. In K., Foster (Series Ed.) & F.K. Stage, D.F. Carter, D. Hossler, & E.P. St. John (Vol. Eds.) *ASHE reader series: Theoretical perspectives on college students* (pp. 455-468). Boston, MA: Pearson.
- Tinto, V. (1975). Dropout from higher education: A Theoretical synthesis of recent research. *Review of Educational Research, 45*(1), 89-125.
- Tinto, V. (1993). *Leaving College: Rethinking the Causes and Cures of Student Attrition*, (2nd Ed.). Chicago, IL: The University of Chicago Press.
- Torres, V., Glode, J., Ketcheson, K., Truxillo, D. (1999) An entering student survey for urban institutions. *Metropolitan Universities: An International Forum, 10*(3), 41-50.
- United States Department of Education. (2010, January 6). Retrieved from <http://www2.ed.gov/about/offices/list/ope/trio/incomelevels.html>

- Walpole, M.B. (2003). Socioeconomic status and college: How SES affects college experiences and outcomes. *The Review of Higher Education*, 27, 45-73.
- Wood-Wyatt, L.G. (2008). *A study of non-traditional undergraduate students at the University of Memphis* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3410187).
- Wozniak, C. (2011). Freshman Fellows: Recruiting and Retaining Great Students Through Research Opportunities. *Council on Undergraduate Research Quarterly*, 32(2), 9-15.
- Yazedjian, A., Toews, M.L., Sevin, T., & Purswell, K.E. (2008). "It's a whole new world": A qualitative exploration of college students' definitions of and strategies for college success. *Journal of College Student Development*, 49(2), 141-153.
- Yin, R. K. (2011). *Applications of case study research* (3rd ed.). San Francisco, CA: Jossey Bass.
- Zusman, A. (2005). Challenges facing higher education in the twenty-first century. In P.G. Altbach, R.O.Berdahl, & P.J.Gumport, (Eds.), *American Higher Education in the Twenty-First Century* (pp. 115-162). Baltimore, MD: The Johns Hopkins University Press.

Appendix A
Human Subject Research Review Committee Documentation

SECTION I

▲ Investigator's Assurance ▲

Principal Investigator Jolina Kwong Caputo E-Mail [REDACTED]
 Co-Principal Investigator _____ E-Mail _____
 Other Personnel (GA, Project Mgr., etc.) _____ E-Mail _____
 Dept GSE PI ID No. [REDACTED] Date of Application 10/30/08
 Mailing Address [REDACTED] Campus Extension 5-9740
 Home or Work # [REDACTED]
 Title of Proposed Study Undergraduate Research Experiences at Urban Universities: An Approach to Improving Student Success
 Proposed Duration of Project (months/years) 18 months Anticipated Start Date January 2009
 Type of Funding (Federal/Federal pass-through/State/Foundation/Other/None) None
 Funding Agency _____

Please note that data collection cannot begin until approval is granted by the HSRRC

INVESTIGATOR'S ASSURANCE

- A. I will promptly report changes in the proposed study and any unanticipated problems involving risk to subjects, including adverse reactions, to the Human Subjects Review Committee. In case of DHHS supported activities, I will also report these problems to the Department of Health and Human Services (through the respective granting office).
- B. I assure that documentary evidence of informed consent will be retained for at least three years after the proposed study has been completed or discontinued.
- C. Since the Committee is obligated to review this activity at least on an annual basis, I will furnish it with a progress report no later than six weeks prior to the expiration of my project's approval.
- D. I, the undersigned, will be responsible for the ethical standards of this project, and for protecting the rights and welfare of the subjects.

[REDACTED] Signature of Principal Investigator

Date

10/30/08

I have read and approved this proposal: [REDACTED]

Department Head (PRINT)

Signature

Date

12/16/08

If this is part of a thesis/dissertation/project, the proposal must be approved PRIOR to HSRRC Review.

Masters Thesis

Masters Project

Doctoral Dissertation

Special Project

MICHAEL J. SMITH [REDACTED] Signature

12.11.08 Date

Dissertation/Thesis/Project Advisor (PRINT)

Signature

Date

Advisor's E-Mail Address: mjsmith@pdx.edu

Revised 6/06

Please complete and return this form, along with your HSRRC application, and copies to the HSRRC, Office of Research & Sponsored Projects (ORSP), 600 Unitus Bldg., Portland State University
 Phone: (503) 725-4288 / 1-877-480-4400

Appendix A (continued)



Human Subjects Research Review Committee

Post Office Box 751
Portland, Oregon 97207-0751

503-725-4288 tel
503-725-3416 fax
hsrrc@lists.pdx.edu

December 30, 2008

To: Jolina Kwong-Caputo

From: Nancy Koroloff, HSRRC Chair [REDACTED]

Re: Approval of your application titled, "Undergraduate Research Experiences at Urban Universities: An Approach to Improving Student Success" (HSRRC Proposal # 08741).

Dear Jolina,

In accordance with your request, the Human Subjects Research Review Committee has reviewed your proposal referenced above for compliance with DHHS policies and regulations covering the protection of human subjects. The committee is satisfied that your provisions for protecting the rights and welfare of all subjects participating in the research are adequate, and your project is approved. Please note the following requirements:

Changes to Protocol: Any changes in the proposed study, whether to procedures, survey instruments, consent forms or cover letters, must be outlined and submitted to the Chair of the HSRRC immediately. The proposed changes cannot be implemented before they have been reviewed and approved by the Committee.

Continuing Review: *This approval will expire on December 30, 2009.* It is the investigator's responsibility to ensure that a Continuing Review Report (available in ORSP) of the status of the project is submitted to the HSRRC two months before the expiration date, and that approval of the study is kept current.

Adverse Reactions: If any adverse reactions occur as a result of this study, you are required to notify the Chair of the HSRRC immediately. If the problem is serious, approval may be withdrawn pending an investigation by the Committee.

Completion of Study: Please notify the Chair of the Human Subjects Research Review Committee (campus mail code ORSP) as soon as your research has been completed. Study records, including protocols and signed consent forms for each participant, must be kept by the investigator in a secure location for three years following completion of the study.

If you have questions or concerns, please contact the HSRRC in the Office of Research and Sponsored Projects (ORSP), (503) 725-4288, 6th Floor, Unitus Building, 4th & Lincoln.

Appendix A (continued)

To: Doctoral Committee Members

From Cathleen Gal
Research and Sponsored Projects

Date May 24, 2011

Subject Petition for IRB review prior to proposal defense

As a follow up to meeting with Jolina Kwong Caputo, Michael Smith and Nancy Koroloff, I am documenting the petition process and timeframe of Jolina's IRB review.

PSU's policy on IRB review of human subjects research for doctoral dissertation work is that the doctoral committee approve the students dissertation proposal prior to the submission of the human subjects research application. This ensures that the doctoral committee is in approval of the involvement of human subjects in research and has input into the process.

However, it is within the purview of the IRB to accept in rare cases a petition from a doctoral student's advisor to have the human subjects research application reviewed and approved prior to the committee's approval of the dissertation proposal. This is done on a case-by-case basis. The petition can only be accepted if the advisor can assure there is a justified rationale and assures support of the petition and protection of the human subjects in the research.

The IRB approved such a petition for Jolina. In December 2008, we received a memo from Michael Smith explaining the need to collect data on the [REDACTED] Program participants. Her proposal defense was not anticipated until after the timeframe in which she could collect baseline data for the project. The IRB found the rationale sufficient. The human subjects research application was approved December 30, 2008 and has been kept in an active and approved status since that time. Graduate studies was informed of the petition approval and HSRRC approval.

In terms of PSU policy, IRB review, and human subjects protections, there are no non-compliance issues involved with the timeframe of Jolina's human subjects application submission and approval.

Please feel free to contact me if you have any questions.

Appendix B
Description of Participants

	Participant A Ava	Participant B Beverly	Participant C Camille	Participant D Darcy	Participant E Elise
Age	28	27	24	31	34
Year in School	Senior	Junior	Junior	Senior	Senior
Major	Sociology & social science	Community Development	Community Development	Art History	Geography
Enroll	Full-time	Full-time	Full-time	Full-time	Full-time
Prev School	Local, metropolitan community college	Local, metropolitan community college	Traditional, Residential State University	Local, metropolitan community college	Rural community college
Eligib Status	First-generation, low-income	First-generation, low-income	First-generation, low-income	First-generation, low-income	First-generation, low-income
Ethn.	White/Caucasian	White/Caucasian	White/Caucasian	White/Caucasian	White/Caucasian
Work	Yes, off-campus	Yes, off-campus	Yes, off-campus	Yes, off-campus & on-campus	Yes, on-campus
Family	Mother, one son				Mother, one son
Housing	Off-campus, commuter	Off-campus, commuter	Off-campus, commuter	Off-campus, commuter	Off-campus, commuter
Term of Grad	Summer 2009	Winter 2010	Summer 2010	Summer 2009	Summer 2009
Grad School Enroll	Enrolled	Enrolled	Enrolled	Not Enrolled	Completed graduate degree

*Graduate Program Enrollment status provided to researcher after initial data collection.

Appendix C
Data Collection and Timeline for Study

Data Collection for Case Study	Tool Used to Collect Data	Time Implemented during Program
Pre-Program Interview	Semi-Structured Interview Protocol	Winter Term
Post-Program Interview	Semi-Structured Interview Protocol	End of Summer Term following program
Participant Journals	Participants will be asked to record their personal and academic experiences throughout the program	Winter Term through end of Summer Term; submitted at the end of each term.
Participant Observations	Memos	Periodically throughout Winter through Summer Term

Appendix D

Data Collection Protocols

Pre-Program Interview Protocol

What is your definition of a college student?

What is your current year in school? How long have you attended PNMCU?
Please talk about your path to PNMCU and why you decided to attend this institution.

Describe your overall experience at PNMCU thus far.
Describe your academic experience at PNMCU thus far.
On a scale of 1 to 10, how would you currently rate your academic ability?
Describe your campus involvement at PNMCU thus far.
On a scale of 1 to 10, how you would currently rate your campus involvement?

How much time do you spend on campus each week? Describe your typical week.
While at PNMCU have you experienced living on campus?

While at PNMCU have you experienced frequent interaction with faculty or PNMCU staff? If so, please describe the interaction.

While at PNMCU have you experienced significant interactions with peers? If so, please describe the interaction.

While at PNMCU have you been able to experience in- and out-of-classroom learning? If so, please describe the experience.

While at PNMCU have you been able to utilize services that aid students in negotiating higher education systems? If so, describe the services.

While at PNMCU do you feel that you have connected with PNMCU socially and academically? If so, how?

As a student at PNMCU, an urban university, have you experienced any challenges?

As a student at PNMCU, an urban university, have you experiences any benefits?

Why would you like to conduct an undergraduate research project?

What expectations do you have for your undergraduate research experience?

What would you like to research?

Why is it important for you to research this topic?

Who will you ask to be your mentor? Why?

What is your definition of a researcher?

Would you like to make any addition comments about undergraduate research or your experience at this urban university?

*Additional prompts may be included in the interview protocol in order to clarify responses.

Appendix D (continued)

Post-Program Interview Protocol

What is your definition of a college student?

Did your definition of the college experience change since participating in undergraduate research?

Describe your overall experience at PNMCU thus far

Describe your academic experience at PNMCU thus far

On a scale of 1 to 10, how would you currently rate your academic ability?

Describe your campus involvement at PNMCU thus far

On a scale of 1 to 10, how would you currently rate your campus involvement?

How much time do you spend on campus each week? Describe your typical week?

While at PNMCU have you experienced frequent interaction with faculty or PNMCU staff? If so, please describe the interaction

While at PNMCU have you experienced significant interaction with peers? If so, please describe the interaction

While at PNMCU have you been able to experience in- and out-of classroom learning? If so, please describe the experience

While at PNMCU have you been able to utilize services that aid students in negotiating higher education systems? If so, describe the services.

While at PNMCU do you feel that you have connected with PNMCU socially and academically? If so, how?

As a student at PNMCU, an urban university, how important do you think it is to connect with faculty? With Peers? With the campus community in general?

Do you think these connections have influenced the college experience? Do you think these connections have influenced YOUR college experience?

As a student at PNMCU, an urban university, have you experienced any challenges?

As a student at PNMCU, an urban university, have you experienced any benefits?

Do you believe you have had a true college experience at PNMCU?

Why did you want to conduct an undergraduate research project?

What expectations did you have for your undergraduate research experience? Were they met?

What did you research?

Why was it important for you to research this topic?

Describe your undergraduate research experience.

Describe your relationship with your faculty mentor

Appendix D (continued)

Describe your relationship with your fellow scholars

How did your undergraduate research experience impact your experience at PNMCU?

Do you think you would have the same level of satisfaction from your time at PNMCU or from your degree from PNMCU if you had not participated in undergraduate research? How so?

*Given your definition of the college experience mentioned earlier, do you believe that having participated in undergraduate research you have had a college experience? Or, does that not relate to your definition?

Do you think that participating in undergraduate research contributes to having the college experience?

Participant Journal Prompts

Please address the following writing prompts each week, or as often as you feel comfortable:

- What task or part of your research project are you currently working on for the undergraduate research program?
- With who have you interacted with about the task or your research?
- How much time have you spent on campus this week?
- How much time on campus have you devoted to the undergraduate research program task?

- Reflect on your experience this past week,
As a student in an urban university
As a researcher
On a personal level

Free write for as long as time allows.

Appendix E

Informed Consent Letter

*Undergraduate Research Experiences at Urban Universities:
An Approach to Improving Student Success*

You are invited to participate in a research study conducted by Jolina Kwong Caputo from Portland State University, Graduate School of Education. The researcher seeks to investigate the ways in which institutionalized undergraduate research programs at urban universities may relate to successful student involvement and development. This study is being conducted in partial fulfillment of the requirements for the Doctor of Education in Educational Leadership and is under the supervision of Dr. Michael J. Smith, faculty member at PNMCU. You were selected as a possible participant in this study because you have been accepted into an undergraduate research program. The duration of the study will be from January 2009 to October 2009. The data will be used to write a paper describing the findings of the researcher.

If you decide to participate, you will be asked to take part in two personal interviews. The interview sessions will consist of several questions and will be tape recorded for accuracy. **Audio taping during the two personal interviews is voluntary. If you chose to decline audio taping you can still participate in the research.**

-Please initial here _____, if you are willing to be audio recorded during both of the two personal interviews.

-Please initial here _____, if you are *not* willing to be audio recorded during both of the two personal interviews, yet still agree to participate in the study.

You will also be asked to allow the researcher to observe your participation throughout the program, and also write weekly about your undergraduate research experience in a participant journal. While participating in this study, you will be asked personal questions regarding your educational background, socioeconomic class, and possibly race or ethnicity, but you are not obligated to answer the questions that make you uncomfortable. Though you may not receive any direct benefits from taking part in this study, your responses to interview questions may contribute to the existing research and knowledge of undergraduate research programs at urban universities, as well as first-generation, low-income female students enrolled in higher education.

Any information that is obtained in connection with this study and that can be linked to you or identify you will be kept confidential. This information will be kept confidential by assigning a code number to participants, and no names will be used in the final project. Data will be stored at the researcher's home office during the course of the study, and will be kept permanently at the undergraduate research office. **Data which is eventually stored at the University will *not* include any personal names or identifiers.**

Your participation is entirely voluntary. Your decision to participate in the study or not will not affect your relationship with the researcher or with the undergraduate research program or with Portland State University in any way. If you decide to take part in the study, you may choose to withdraw at any time without penalty. Please keep a copy of this letter for your records.

If you have any concerns or problems about your participation in this study or your rights as a research subject, please contact the Human Subjects Research Review Committee, Office of Research and Sponsored Projects, Portland State University, (503) 725-4288. If you have any questions about the study itself, contact Jolina Kwong Caputo at (503) 970-7259.

Your signature indicates that you have read and understand the above information and agree to take part in this study. Please understand that you may withdraw your consent at any time without penalty, and that, by signing, you are not waiving any legal claims, rights or remedies. The researcher will provide you with a copy of this form for your own records.

Signature _____

Date _____

Appendix F
Strategies for Promoting Qualitative Research Validity and
Establishing Rigor and Trustworthiness

Based on Krefting, 1999; Lincoln & Guba, 1985

Strategy to Establish Trustworthiness/Rigor	Criteria	Research Project Actions
Credibility	<ul style="list-style-type: none"> -Reflexivity (Interpretive, Internal Validity) -Triangulation -Member checking (Interpretive Validity) -Peer Examination (Descriptive Validity) -Multiple Data Sources (Internal Validity) 	<ul style="list-style-type: none"> -Writing memos of personal accounts as it relates to research -Using multiple procedures and sources -Obtaining participant feedback -Discussion with other researchers -Collection of data over time period
Transferability	<ul style="list-style-type: none"> -Dense description 	<ul style="list-style-type: none"> -Rich recollection of all data captured and interpretations
Dependability	<ul style="list-style-type: none"> -Code-Recode Process 	<ul style="list-style-type: none"> -Recode data after first coding and compare the two results
Confirmability	<ul style="list-style-type: none"> -Reflexivity -Triangulation 	<ul style="list-style-type: none"> -Writing memos of personal accounts as it relates to research -Using multiple procedures, sources

Appendix G

List of Codes and Themes

Open Codes

- Path to PNMCU and Acclimation to a Metropolitan University
- Defining the College Experience from a Non-traditional student's point of view
- The Specific Nature of Academic and Social Involvement
- Faculty Interactions
- Peer Interactions
- Expectations for the Undergraduate Research Experience
- Undergraduate Research Project and Experience
- Reflecting on the Undergraduate Research Experience
- Faculty Mentor Interactions
- Undergraduate Research Program Peer Interactions
- Final Thoughts on the Undergraduate Research Experience
- Concluding Thoughts

Axial & Selective Codes

- Always, Always, Always: The Perceived Luxury of the Traditional Undergraduate Student Experience vs. The Burden of the Actual Non-Traditional, Commuting, Working Student Experience at a Metropolitan University
- Establishing an Academic Home and Building Relationships with Faculty and Peers
- Entering the Culture of the Academy: Development of a Scholar Identity