Biracial/multiracial student perceptions of student academic support services at a predominantly white public institution

Julie A. Fischer-Kinney

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A Dissertation

entitled

Biracial/Multiracial Student Perceptions of Student Academic Support Services

at a Predominantly White Public Institution

by

Julie A. Fischer-Kinney

Submitted to the Graduate Faculty as partial fulfillment of the requirements for the

Doctor of Philosophy Degree in Higher Education

Dr. Penny Poplin Gosetti, Committee Chair

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December 2012
An Abstract of
Biracial/Multiracial Student Perceptions of Student Academic Support Services at a
Predominantly White Public Institution

by

Julie A. Fischer-Kinney

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This study attempted to contribute to national research on biracial/multiracial
students, a growing diverse population in higher education. A lack of literature exists on
biracial/multiracial college students, particularly as it pertains to student academic
success at predominantly white institutions (PWI). The purpose of this study was to
explore the perceptions of biracial/multiracial college students regarding student
academic support services at one PWI. In order to address barriers to student success, the
voices of biracial/multiracial students are greatly needed by institutions to enhance and
develop services, programs, policies, and procedures.

This phenomenological study used Padilla’s Theoretical Framework for Modeling
Student Success to understand the barriers to student success perceived by
biracial/multiracial students at one PWI. The qualitative study employed triangulation
through three phases of research. In phase one, a demographic study was used to identify
students at the PWI who self-identify as biracial/multiracial. The demographic study
responses also guided conversations in the second phase of research, focus group
meetings. Phase two consisted of three focus groups comprised of 11 biracial/multiracial
students. Phase three consisted of member checking within and between focus groups,
and during data analysis, for clarification and agreement of findings. The culmination of the study was the creation of a Local Student Success Model (LSSM) for the PWI, a blueprint for biracial/multiracial student success consisting of recommended student and institutional actions.

The study found that focus group participants at the PWI were unaware of the location and function of some student academic support services. Participants believed that new student academic support services are needed, such as peer mentoring in the major, in addition to the evaluation and modification of existing student academic support services, such as faculty mentoring, to aid in biracial/multiracial student success.

Study participants (including demographic and focus group participants) at the PWI perceived there to be a total of over 15 barriers to student success. Financial and personal barriers were perceived to be the greatest barriers to biracial/multiracial student success. Focus group participants perceived 10 key barriers to success that fit into two major categories of barriers— institutional barriers and individual barriers. In order to overcome barriers to student success, focus group participants perceived that students must have knowledge in five key categories; must take action in two key categories; and recommended institutional actions in five key categories to ensure the student success of biracial/multiracial students.
I dedicate this dissertation to every biracial/multiracial college student who has ever been asked the question, “What are you?”
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I would like to thank the members of my committee for their expertise, time, and support of this study. I would especially like to thank my dissertation chair, Dr. Penny Poplin Gosetti, for her guidance and support not only of my dissertation, but of my educational and professional career. Her belief in my abilities gave me the confidence to pursue and complete my doctorate. I would also like to thank Dr. Jamie Barlowe, Dr. Debra Gentry, and Dr. Shanda Gore for their valued comments and recommendations. Their passion for students and my research have served as a great source of inspiration.

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List of Abbreviations

GPA…………………Grade Point Average
GSSM………………General Student Success Model
HBCU………………Historically Black Colleges and Universities
LSSM………………Local Student Success Model
NCES………………National Center for Education Statistics
OMB………………..Office of Management and Budget
PWI…………………Predominantly White Institution
QSSM………………Qualitative Student Success Model
SI…………………..Supplemental Instruction
SLSSM……………Simplified Local Student Success Model
TA…………………..Teaching Assistant
Chapter One

Background

In 1967, laws prohibiting interracial marriages were struck down by the United States Supreme Court (Love vs. Commonwealth of Virginia); the number of interracial marriages and biracial children has increased as a result. The term biracial is vague, and depending on the researcher, the term can be used interchangeably with words such as multiracial, biethnic, mixed, and interracial. Kerwin and Ponterotto (1995) define biracial as first-generation offspring of parents of different races and it most appropriately signifies the presence of two racial backgrounds in a non-judgmental manner. According to Kerwin and Ponterotto (1995) multiracial signifies the presence of two or more races. Since the 1970s, the number of biracial children has grown more than 260% (Root, 1996).

Prior to the year 2000, the United States Census Form did not have a multiracial category. Individuals were forced to self-select one of six race categories which included White, Black, American Indian and Alaska Native, Asian and Pacific Islander, Hispanic Origin (of any race), and Other Races. Asian American groups are often misrepresented in the census and in higher education due to diversity within the group; many Asian Americans are multiracial (Hune, 2002). For example, Japanese Americans are primarily U.S.-born, while Vietnamese, Cambodian, and Laotian individuals are largely foreign-born (Hune, 2002).

Beginning with the 2000 census, the Federal Government ruled that Americans could identify themselves as members of more than one race on government forms. In addition to the struggle of accurate federal reporting of race on the United States Census
Form, the National Center for Health Statistics classifies children at birth by the mother’s race; the father’s race is not reported.

According to Census 2010, there were 308,745,538 individuals in the United States. Census 2010 data revealed that 9,009,073 people in the United States (or 2.9% of the national population) self-identified as two or more races. Among people who reported more than one race, 8,265,318 people (91.7%) reported exactly two races. An additional 676,469 people (7.5%) of the two or more races population reported three races; 57,875 people (.6%) reported four races; 8,619 (.1%) reported five races; and 792 people reported six races. Of the individuals that self-identified exactly two races, 6.5 million individuals (75.5%) self-identified as White with one other ethnicity (see Table 1). In 2010, four groups were, by far, the largest multiple-race combinations in the United States: White and Black (1.8 million), White and Some Other Race (1.7 million), White and Asian (1.6 million), and White and American Indian and Alaska Native (1.4 million).

Under federal reporting guidelines established in 1997 by the Office of Management and Budget (OMB), a federal agency, public institutions of higher education are required to report their race and ethnicity data to the Department of Education. According to the OMB, institutions of higher education and the Department of Education are out of compliance. A study by the MAVIN Foundation (2005) found that 97% of the 298 institutions surveyed, which included private, public, and community colleges, did not collect and encode complete information about their students as it relates to racial self-identification in more than one category. Such information about student demographics is primarily collected by higher education institutions at the entry point
Table 1

Census 2010 – Self-identification of Two Races

<table>
<thead>
<tr>
<th>Racial self-identification</th>
<th>n</th>
<th>% of two races</th>
</tr>
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<tbody>
<tr>
<td>Two races</td>
<td>8,265,318</td>
<td>100.00</td>
</tr>
<tr>
<td>White; another race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White; American Indian and Alaska Native</td>
<td>1,432,309</td>
<td>15.9</td>
</tr>
<tr>
<td>White; Asian</td>
<td>1,623,234</td>
<td>18.0</td>
</tr>
<tr>
<td>White; Black or African-American</td>
<td>1,834,212</td>
<td>20.4</td>
</tr>
<tr>
<td>White; Native Hawaiian and Other Pacific Islander</td>
<td>169,991</td>
<td>1.9</td>
</tr>
<tr>
<td>White; Some other race</td>
<td>1,740,924</td>
<td>19.3</td>
</tr>
<tr>
<td>Black; another race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black; American Indian and Alaska Native</td>
<td>269,421</td>
<td>3.0</td>
</tr>
<tr>
<td>Black; Asian</td>
<td>185,595</td>
<td>2.1</td>
</tr>
<tr>
<td>Black; Native Hawaiian and other Pacific Islander</td>
<td>50,308</td>
<td>.6</td>
</tr>
<tr>
<td>Black; Some other Race</td>
<td>314,571</td>
<td>3.5</td>
</tr>
<tr>
<td>American Indian and Alaska native; Asian</td>
<td>58,829</td>
<td>.7</td>
</tr>
<tr>
<td>American Indian and Alaska native; Native Hawaiian and Other Pacific Islander</td>
<td>11,039</td>
<td>.1</td>
</tr>
<tr>
<td>American Indian and Alaska Native; Some other race</td>
<td>115,752</td>
<td>1.3</td>
</tr>
<tr>
<td>Asian; Native Hawaiian and Other Pacific Islander</td>
<td>165,690</td>
<td>1.8</td>
</tr>
<tr>
<td>Asian; Some other race</td>
<td>234,462</td>
<td>2.6</td>
</tr>
<tr>
<td>Native Hawaiian and other Pacific Islander; Some other race</td>
<td>58,981</td>
<td>.7</td>
</tr>
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of college through admissions data. Admission application forms can allow students to accurately reflect their identities, and provide means for an institution to track student data (Kellogg & Niskodé, 2008).

Statement of the Problem

Numerous studies have shown that the educational climate of predominantly white institutions (PWI) has impeded the academic success of the majority of multicultural students (Fleming, 1984; Hughes, 1987; Munoz, 1986; Olivas, 1986). African-American and other non-Asian students of color attending PWIs are less likely to
graduate within 5 years, have lower grade point averages, and experience higher attrition rates than their White counterparts (Smedley, Myers, & Harrell, 1993). According to Stage and Manning (1992), traditional approaches to program planning, teaching, and advising are based on theories from research on White student populations.

While the numbers of diverse student populations have continued to grow over the last few decades, the literature has focused primarily on issues such as campus climate and social alienation (Baber, 2012; Brown, 2005; Burbach & Thompson III, 1971; Gloria & Ho, 2003; Hurtado, Milem, Clayton-Pederson, & Allen, 1998; Loo & Rolison, 1986; Mitchell & Dell, 1992; Rankin & Reason, 2005); little research exists on student academic satisfaction and student academic success as it pertains to diverse student populations. Patterson and Sedlacek (1979) concluded that the attitudes and perceptions of one ethnic group cannot be generalized to all ethnic groups in a study comparing Hispanic, Asian, and African-American students. Researchers (Hune, 2002; Kim, DesJardins, McCall, 2009; Minatoya & Sedlacek, 1983) found that expectations and aspirations differ significantly by racial-ethnic groups; problems related to African-American students may not be consistent with those experienced by Asian-American students for example. There is a need at the national level for research on multicultural students’ attitudes and perceptions affecting academic areas, but despite this need, little research has been conducted in these areas (Loo & Rollison, 1986).

Due to struggles in federal reporting of biracial/multiracial individuals as noted in Census 2010 data, and identification of biracial/multiracial students in higher education (OMB data), literature and research regarding biracial/multiracial college students has been sparse at best. In addition to a lack of accurate biracial/multiracial demographic
reporting, literature has focused on adolescent biracial/multiracial students, and not on biracial/multiracial college students. There is a growing need for research on biracial/multiracial college students, particularly because national demographic data indicates that the largest percentage of biracial/multiracial individuals will reach college age in the very near future. It is estimated that by the year 2050, 1 in 5 Americans could claim a mixed race background (Lee & Bean, 2004).

Without specific information about the size and nature of biracial/multiracial student populations, colleges cannot assume that strategies and services that work for one diverse student population will be successful for other diverse populations. According to Tinto (2000, p. 3),

The inclusion of differing views and voices is not just a desirable state of affairs, a valued social goal; it is absolutely essential if we are to more fully understand how our collective actions in the university influence, perhaps unintentionally, our individual behaviors and those of our students.

**Purpose Statement**

The purpose of this study was to explore the perceptions of biracial/multiracial college students regarding student academic support services at a PWI. This qualitative study used Padilla’s Framework for Modeling Student Success as the theoretical framework. Padilla’s Framework for Modeling Student Success is discussed in greater detail in Chapter Two. Successful students are defined in this study as students who did not depart from their higher education institution before degree attainment. The study addressed the following research questions:
Primary Research Question

1. What are the perceptions of biracial/multiracial students regarding student academic support services at a PWI?

Secondary Research Questions

2. What student academic support service barriers to student success do biracial/multiracial college students perceive exist at a PWI?

3. What heuristic knowledge must biracial/multiracial students possess to overcome the identified barriers to success?

4. What collective behaviors and actions must be exhibited by biracial/multiracial students to overcome the identified barriers?

5. What set of actions might the PWI take (related to student academic support services) to help biracial/multiracial students overcome identified barriers?

Analysis Question

6. What are the possible problems or unintended consequences that might result if the institution implements the recommended actions?

Significance of the Problem

Too many students of color are leaving higher education before attaining a degree which presents a challenge for institutions based on research indicating significant levels of growth in multicultural student populations (Padilla, Trevino, Gonzalez, & Trevino, 1997). According to the National Center for Education Statistics (2012), African Americans and Hispanics all had gains in high school completion rates, but continue to lag behind Whites in degree completion in higher education. From 1980 to 2011, the gap in the attainment of a bachelor’s degree or higher between Whites and Hispanics widened
from 17 to 26 percentage points, and the gap between Whites and Blacks widened from 13 to 19 percentage points (NCES, 2012). According to Taylor (2000), society can no longer afford to exclude populations because they are different from the mainstream; furthermore, the United States cannot afford to provide higher education that does not meet the needs of diverse populations and their communities.

Voices of biracial/multiracial college students, a growing population in the United States and in higher education, are not reflected in the research and are greatly needed by institutions to best meet the needs of the changing student population in higher education. Before programs and services can be developed to aid biracial/multiracial students in being academically successful in higher education, higher education institutions need to understand the barriers to academic success biracial/multiracial college students experience at PWIs. Higher education institutions also need to understand what services biracial/multiracial college students want and need from their perspective, rather than imposing student academic support services based on assumptions that students of color are homogeneous.

Definition of Terms

For the purpose of the study the following terms were used:

**Academic advising.** Academic advising, based in the teaching and learning mission of higher education, is a series of intentional interactions with a curriculum, a pedagogy, and a set of student learning outcomes. Academic advising synthesizes and contextualizes students’ educational experiences within the frameworks of their aspirations, abilities and lives to extend learning beyond campus boundaries and time frames (National Academic Advising Association, 2006).
**Barrier.** Obstacles that must be overcome by the student in order to attain a college degree (Attinasi, 1986).

**Biracial.** First-generation offspring of parents of different races, and most appropriately signifies the presence of two racial backgrounds in a non-judgmental manner (Kerwin & Ponterotto, 1986).

**Ethnic culture.** Groups of people united by ancestry, language, physiology, and history as well as beliefs and practices. (Robins, Lindsey, R. B., Lindsey, D. B., & Terrell, 2002, p. 52).

**Faculty mentor.** A faculty member who maintains a relationship with a student to provide information, support, and guidance so as to enhance the student’s academic success at the institution, and facilitation of post-graduate plans (Campbell & Campbell, 2000).

**Foreign born.** The U.S. Census Bureau uses the term foreign born to refer to anyone who is not a U.S. citizen at birth. This includes naturalized citizens, lawful permanent residents, temporary migrants (such as foreign students), humanitarian migrants (such as refugees), and undocumented migrants.

**Heuristic knowledge.** Local or practical knowledge that is necessary for a student to function competently on campus (Padilla, 1991).

**Internalized racism.** Development of ideas, beliefs, actions, and behaviors that support or collude with racism against oneself. (National Association of Social Workers, 2002).

**Mixed.** Person who self-identifies as having more than one racial heritage and/or parents of different races, whether defined biologically or socially. (Davis, 2009, p. 33).
**Multiculturalism.** D’Andrea and Daniels (1995) define multiculturalism as the process of increasing awareness of, and knowledge about, human diversity in ways that are translated into respectful human interactions and effective interconnections.

**Multiracial.** Kerwin and Ponterotto (1995) define multiracial as first-generation offspring of parents of different races and it most appropriately signifies the presence of two or more racial backgrounds in a non-judgmental manner. This definition incorporates biracial individuals.

**Native born.** The term native born is used by the U.S. Census Bureau to refer to anyone born in the United States, Puerto Rico, or a U.S. Island Area, or those born abroad of at least one U.S. citizen parent.

**Peer mentor.** Defined in the context of this study as a process in which a more experienced student serves as a role model to a less experienced student, helping to guide the student protégé through academic hurdles (Young & Wright, 2001).

**Phenotypes.** Visible characteristics of an organism resulting from interaction between genetic make-up and the environment (Davis, 2009, p. 16).

**Service learning.** A form of experiential education that relies on reflection to ensure that learning occurs. Principles of service learning include: (a) integrated learning that ties the service activities to classroom knowledge; (b) reflection to help integrate students’ service experiences with academic content; and (c) prepares students to address a recognized community need. Service learning presents opportunities to interact with diverse groups, and provides an opportunity to teach about culture and privilege (Carter Andrews, 2009).
**Student academic support services.** Defined in the context of this study as incorporating academic advising, tutoring, faculty mentoring, peer mentoring, supplemental instruction, study abroad programs, undergraduate research programs, and service learning programs.

**Study abroad.** Studying at an institution outside of one’s home country for a period of time.

**Successful student.** Student success will be defined as progress toward graduation (Wirth & Padilla, 2008).

**Supplemental instruction.** Supplemental Instruction (SI) is a widely implemented academic-support program designed to provide optional, informal, peer- mentored learning support to students in large, survey, or general education courses (Bowles, McCoy, & Bates, 2008).

**Theoretical knowledge.** Knowledge that is learned through coursework and formal study (Padilla, 1991).

**Summary**

Numerous studies have shown that the educational climate of PWIs has impeded the academic success of the majority of multicultural students (Fleming, 1984; Hughes, 1987; Munoz, 1986; Olivas, 1986). There is a need at the national level for research on multicultural students’ attitudes and perceptions affecting academic areas, but despite this need, little research has been conducted in these areas (Loo & Rolison, 1986). Voices of biracial/multiracial college students, a growing population in the United States and in higher education, are not reflected in research and are greatly needed by institutions to best meet the needs of the changing student population in higher education. The purpose
of this study was to explore the perceptions of biracial/multiracial college students regarding student academic support services at a PWI. This qualitative study used Padilla’s Framework for Modeling Student Success as the theoretical framework.

Chapter Two presents a review of the literature. Chapter Three discusses the methodology of the study including the research design, research questions, site, participants, data collection methods, data analysis, assumptions, limitations, and delimitations of the study. Chapter Four examines the findings of this study. Chapter Five presents the Local Student Success Model created for the PWI institution. Finally, Chapter Six presents a summary and discussion of the study, implications for policy and practice, limitations of the study, contributions to the literature, and recommendations for further research.
Chapter Two

Literature Review

Discussion of Race

**Anthropological viewpoint.** Multiple interpretations and definitions of the word race exist. Many people believe race is based on physical features or phenotypes (Davis, 2009); others believe it is biologically or socially constructed. The American Anthropological Association issued a statement on race in 1998 in an attempt to clarify the various definitions. The Association believes it represents the contemporary thinking and scholarly positions of a majority of anthropologists (American Anthropological Association, 1998). The statement is as follows,

In the United States both scholars and the general public have been conditioned to viewing human races as natural and separate divisions within the human species based on visible physical differences. With the vast expansion of scientific knowledge in this century, however, it has become clear that human populations are not unambiguous, clearly demarcated, biologically distinct groups. Evidence from the analysis of genetics (e.g., DNA) indicates that most physical variation, about 94%, lies within so-called racial groups. Conventional geographic "racial" groupings differ from one another only in about 6% of their genes. This means that there is greater variation within "racial" groups than between them. In neighboring populations there is much overlapping of genes and their phenotypic (physical) expressions. (para. 1)

The American Anthropological Association defines phenotypes as (Davis, 2009, p. 16) “visible characteristics of an organism resulting from interaction between genetic makeup and the environment.” Phenotypes are physical traits such as hair texture and skin color, which are inherited independently, but bound together when used for racial profiling. Racial profiling, according to the American Anthropological Association (1998) is the practice of categorizing individuals based on phenotypes associated with
racial categories, and is used to target persons who appear to be members of a particular race.

In essence, the organization is stating that there are not distinct biological groups to define races. The Association states this because physical traits are inherited independently, and thus one trait does not predict the presence of other traits, and traits cannot be bundled together to be indicators of groups of people known as racial categories (Davis, 2009, p. 16).

**Sociological viewpoint.** According to many scholars (American Anthropological Association, 1998), the concept of race as we know it at the national level evolved as a social construction during the colonization of the United States in the 18th century. The concept of race was modeled after the Great Chain of Being, an ancient theory which stated that God or nature created classifications or hierarchies. It was used to justify the enculturation of slaves based on differences in traits whereby the European-Americans (colonists and slave holders) linked superior behavioral and cultural traits to themselves, and inferior traits to the slaves who were brought from Africa as well as the conquered natives (American Anthropological Association, 1998). The physical traits of the slaves were identifiers of their difference in status. This ideology spread across the world as a mechanism to perpetuate slavery.

The American Anthropological Association (1998) sums up the concept of race with the following statements:

The "racial" worldview was invented to assign some groups to perpetual low status, while others were permitted access to privilege, power, and wealth. The tragedy in the United States has been that the policies and practices stemming from this worldview succeeded all too well in constructing unequal populations among Europeans, Native Americans, and peoples of African descent. Given what we know about the capacity of normal humans to achieve and function within any
culture, we conclude that present-day inequalities between so-called "racial" groups are not consequences of their biological inheritance but products of historical and contemporary social, economic, educational, and political circumstances. (para. 11)

Historical and Societal Underpinnings of Race for Biracial/Multiracial Individuals

Despite the 1967 United States Supreme Court ruling in Loving v. Virginia that state laws banning interracial marriages were unconstitutional, it was not until the year 2000 that the last state in the United States of America, Alabama, repealed the law (Shang, 2008). Relationships involving individuals of different races existed long before the 1967 ruling, including notable couples such as Frederick Douglass and Anne Murray, Charbonneau and Sacagawea, and Desi Arnaz and Lucille Ball (Shang, 2008). Changes in laws do not always translate to changes in society or changes in the behaviors and treatment of individuals, however. Biracial and multiracial children have been the targets of hate crimes, faced opposition from churches, and endured racial injustice, segregation, ridicule, and social alienation for centuries.

Racial Identity Theories

There are differences within and between populations. Because differences exist between and among populations, it is important to understand the identity development process rather than make broad-based generalizations about racial or ethnic groups (Torres, Howard-Hamilton & Cooper, 2003). Through an understanding of similarities and differences in the identity development process of biracial/multiracial students, administrators and faculty in higher education can better understand, support, and communicate with diverse populations thereby helping students succeed in college (Torres et al., 2003).
Research and literature related to racial identity development has focused primarily on biracial adolescents. Nearly all studies have been small in sample size and qualitative in nature, thereby limiting the applicability of findings to biracial/multiracial college students at the national level.

**Early models of biracial/multiracial identity development.** The earliest theoretical models to describe biracial and multiracial identity development mirrored minority racial identity theories (Renn, 2008). Two theorists, Poston and Root, provided the earliest models of biracial identity development.

Poston (1990) offered an alternative to mono-racial minority identity development models called the Biracial Identity Development Model. Poston’s model was comprised of five levels which he felt more accurately reflected the experiences of biracial individuals than monoracial minority identity development models (Renn, 2008). The model (Poston, 1990) includes the following levels:

1. **Personal identity.** Young children hold a personal identity not necessarily linked to a racial reference group.

2. **Choice of group categorization.** An individual chooses a multicultural existence that includes either both parents’ heritage groups, or a dominant culture from one background, based on personal factors and factors defining perceived group status and social support.

3. **Enmeshment/denial.** Guilt at not being able to identify with all aspects of heritage may lead to anger, shame, or self-hatred; resolving the guilt and anger is necessary to move on to the next level.
4. **Appreciation.** Individuals broaden their racial reference group through learning about all aspects of their backgrounds, though individuals may choose to identify with one group more than with others.

5. **Integration.** A multicultural existence in which the individual values all of her or his ethnic identities.

According to Renn (2008), Poston’s model differed from prior racial identity models in that the middle three levels of the model acknowledged differences between monoracial and multiracial identities. Renn (2008) notes that Poston’s model lacks two key components, which include the impact of societal racism on the lives of people of color, and the possibility of multiple health identity outcomes for the diversity of multiracial people.

The other foundational model from which current biracial identity development models have built upon comes from Root. Root (2003a) proposed a five-level model that incorporated aspects pertinent to biracial identity development. Root’s previous biracial identity model incorporated only four identity choices. As a result of her published research regarding the Biracial Sibling Project Study in 1998, she determined a fifth identity choice stemming from generational differences. The later stages of Root’s model note that when biracial individuals with White heritage reach adolescence, they cannot fully reject majority culture and immerse themselves in a minority community. Root (1990) noted that dating and tokenism are issues that impact biracial adolescents. Tokenism is being asked to serve as the minority representative in a group or situation (Renn, 2008). Based upon personal experience as well as clinical experience, Root asserts that biracial teens may enter a period of dual existence where they may be popular
but feel they do not fit into a social group. Root’s model (2003a) includes the following five levels:

1. *Acceptance of the identity society assigns.* The belief that an individual is born into an identity. By accepting this identity, it perpetuates the myth of race and racial purity. Refusal to accept the identity that society assigns is misinterpreted as self-hatred or confusion rather than a reflection of duality. Family and a strong alliance with and acceptance by a (usually minority) racial group provide support for identifying with the group into which others assume the biracial individual most belongs.

2. *Choose a single identity.* The individual chooses one group, independent of social pressure, to identify himself or herself in a particular way. This level is perceived as a notion that choice exists. It does not mean that an individual is spared from society pressures to declare an identity. The active choice of a single identity may be an attempt to disavow the attachment to a parent who is not present such as a White parent not in the individual’s life.

3. *Choose a mixed identity.* This is an active identity choice. Depending on societal support and personal ability to maintain this identity in the face of potential resistance from others, the biracial individual may be able to identify with both (or all) heritage groups. The individual sees himself or herself as transcending color; support can come in all colors. Individuals who appear ambiguous or mixed may face rejection and feel unsafe or believe there is not a refuge in a single community. This level may be interpreted to mean a lack of identification with the social and political realities of race.

4. *Choose a new racial group.* The individual may move fluidly among racial groups but identifies most strongly with other biracial people, regardless of specific
heritage backgrounds. This level is declaration of a blended identity. It is an attempt to recreate another tier on the racial hierarchy.

5. Choose a white identity. In this level there is no emotional attachment to heritage. Choice is a result of isolation from ethnic family members and racially identified ethnic communities. The individual’s lifestyle is derived from and reflected by the community surrounding the individual. Another reason for choosing a white identity may be that the individual disavows the parent of color due to being absent in the individual’s life or various other reasons such as drug addition, mental illness, etc.

Root’s model advanced earlier theories by asserting that individuals may self-identify in more than one way at the same time or move fluidly among identities. She also introduced the possibility of a new identity group—biracial or multiracial.

Ecology models. Renn (2000) developed a model from a multiple institutional study that specifically focused on biracial and multiracial college students. This model incorporated four patterns of identity, and was built on the premise that the collegiate setting provides biracial and multiracial students with opportunities to explore their identity in academic, social, and peer involvement settings (Renn, 2008). Renn’s model (2000) includes the following patterns:

1. Student holds a monoracial identity. The individual chooses one of his or her heritage backgrounds with which to identify.

2. Student holds multiple monoracial identities, shifting according to the situation. Personal and contextual factors affect which of an individual’s heritage groups he or she identifies with at a given time and place.
3. Student holds a multiracial identity. The individual elects an identity that is neither one heritage nor another, but is a distinct multiracial group.

4. Student holds an extraracial identity by deconstructing race or opting out of identification with U.S. racial categories. The individual resists the categories that may have been socially constructed by the dominant, monoracial, White culture.

Additional studies have been conducted by sociologists and educational psychologists (Renn, 2000) which support the majority of Renn’s patterns. These studies entailed differences in regards to the population studied; Rockquemore and Brunsma (2002) surveyed college students self-identifying as African American and White, Kilson (2001) studied young adults including those not enrolled in college, and Wallace (2001) studied high school and college students. The data from these three studies in conjunction with Renn’s work suggests at least five ways that multiracial college students may self-identify (Renn, 2008).

Renn (2008) notes that the literature regarding how biracial and multiracial individuals come to arrive at their self-identities is even sparser than the literature on how biracial and multiracial individuals self-identify. Three ecological themes emerged throughout the literature on how biracial and multiracial individuals come to arrive at their self-identities including physical appearance, peer culture, and cultural knowledge. Given the fact that racial categories have been partially constructed based upon phenotypes, the ecological themes are not surprising.

Physical appearance including eye color, shape of the nose, skin color, and hair texture can impact how a biracial/multiracial college student self identifies (Renn, 2008). Identity choices may be made based on how peers, faculty, staff, and administrators
interpret the biracial/multiracial student’s appearance. Biracial/multiracial students face stereotypes and assumptions based on physical appearance that can create situations of hostility, disbelief, and disregard in the classroom setting as well as student organizational and other campus settings (Renn, 2008). The question of “what race are you?” abounds on college campuses, particularly due to lack of exposure to diversity by many college students.

Prior to coming to college, biracial individuals may have limited or extensive cultural knowledge of none, one, or two or more sides of their heritage and background most likely attained through family and community. Renn (2004) reports that students who speak Spanish or Chinese or Japanese for example, or who listen to certain types of music, might attain access to specific collegiate monoracial communities. Biracial/multiracial students with little or no cultural knowledge often report taking college courses, studying abroad, or participating in co-curricular activities focused on learning more about their backgrounds; this acquired knowledge may impact how the individual identifies based on the previously unknown aspect of self (Renn, 2004).

Numerous facets of the peer culture impact biracial identity development. The works of Renn (2008) and Wallace (2001) have shown that the availability of a biracial/multiracial community can support the development of biracial/multiracial identity. Racial prejudice and hatred from the dominant culture, and rejection from monoracial students of color can also impact the identity of biracial/multiracial college students (Renn, 2008).
We Do Not Know What We Do Not Know

Qualitative researcher Bonnie Davis (2009), an educator and consultant on culturally proficient instruction for schools and professional organizations, inspired much of the work of this dissertation through her discussion of the concept of race, and sharing the experiences of many self-identified biracial and multiracial individuals through their own words. A theme permeated throughout her work, the idea that “we do not know what we do not know,” and through the sharing of experiences, individuals can create relationships and understanding.

Davis (2009), like other researchers, discusses labels, the concept of race, and the idea that biracial/multiracial individuals fall outside of categories. One notion that Davis (2009) discusses is the lens through which we outline history. People tend to look at each other through contrasts or differences rather than through comparisons or similarities. Viewing the world through a lens of differences can lead to stereotypes and racial profiling. People do not fit neatly into racial groups; individuals experience race differently (Davis, 2009). It is easy to group individuals based on phenotypes, specifically skin color, rather than on culture and experiences. There is no singular multicultural experience, however, and singular conclusions based on stereotypes can deny the variety and richness of biracial and multiracial individuals (Davis, 2009).

Davis (2009) stresses to educators the importance of listening to individual voices as students come to classrooms from hundreds of cultures. Because faculty and administrators spend much of their time dealing with departmental or institutional issues and concerns, and often only deal with students on an as-needed basis, they may have a skewed perception of the institution or perceive the racial climate to be different than that
of the students (Watson, Williams, & Derby, 2005). Educators must examine their feelings about biracial/multiracial students and dispel myths and build their knowledge base for cultural proficiency. Specifically, Davis (2009) states that educators, particularly K-12 educators, need to: (a) become more culturally responsive; (b) build relationships with multiracial students; (c) provide continuous support; (d) provide safe environments; (e) provide opportunities for student to discover self; (f) provide space for student to explore and create their own identity; (g) listen and grow through shared experiences; (h) show patience, kindness, enthusiasm, etc.; (i) make students feel validated and welcomed; and (j) purposely arrange for interactions and group work. By reflecting on their own racial identity, educators and administrators may be “better prepared to assist student in their own personal journeys of identity development” (Ozaki & Johnston, 2008, p. 59).

**Biracial/Multiracial Voices**

Through listening to the voices of biracial/multiracial individuals we can learn a great deal about identity formation, challenges and obstacles faced by biracial/multiracial individuals, and coping mechanisms. One self-identified biracial individual was quoted in Davis’s (2009) book as saying “There is never complete satisfaction of belonging. You’re a drifter, a gray space, a neutral color, not loud enough to offend anyone either way” (p. 7). Other individuals in her book, made similar statements, such as

During my junior high and high school years, I stifled my voice because I didn’t know where I belonged. However, I eventually rediscovered myself during my late college years. I exposed myself not just to Puerto Rican culture but also to all cultures and I see a little girl (my daughter) who will benefit from being multicultural and who will cross all boundaries despite color and language. (p. 9)
Davis (2009) stresses to educators the importance of asking students how they feel. Brown and Dobbins (2004) noted that communicating to students that one is fair, open-minded, and knowledgeable about biracial/multiracial students will help in establishing rapport between educators and students. Jennifer Duncan, a biracial individual, stated (Davis, 2009) that educators should “Discourage use of “what are you?” and encourage students to allow their peers to describe themselves the way they want and when they want” (p. 123).

**Discussion of Cultural Proficiency as it Relates to Educators**

According to Davis (2009), educators “must create and leap into a space of not knowing in order to grow and learn how to provide an inclusive racial climate in which all students can thrive” (p. xii). Through racial narratives by students of color, we learn more about their individual experiences and how they are affected by racial classifications.

Davis (2009) lays out her work regarding biracial and multiracial students as a journey of discovery (see Figure 1); a journey to discover “what I did not know I did not know” (p. 8). Educators begin the journey by looking within themselves and end the journey with a call to action with the ultimate goal of cultural proficiency. Cultural proficiency is a “mindset for how we interact with all people, irrespective of their cultural memberships” (Terrell & Lindsey, 2009, p. 21). The multicultural professional who is culturally proficient can serve as a mentor, role model, and student advocate to biracial/multiracial students (Wong & Buckner, 2008).
Interactions with Peers

Many students entering higher education have little to no experience with students of color or diversity in general. Often the college campus setting is the first exposure or interaction with diverse student populations for students (Millem & Umbach, 2003; Rankin & Reason, 2005; Shang, 2008). Students with little exposure to diversity need increased opportunities to interact with peers of diverse backgrounds (Broido, 2004). Higher education is a terrific location and time for students to grow, develop, and challenge their belief systems. Like monoracial students, college is a time when questions and beliefs of biracial and multiracial students may be challenged away from the support of home and/or community (Shang, 2008).

A study by Talbot (2008) looked at the experiences and self-labeling of 10 individuals who self-identified as biracial, and whose parents self-identified as monoracial members of minority groups (i.e., as identified by the U.S. Census categories of race). The goal of the study was to explore the experiences of the biracial individuals
coming to terms with a racial label that felt comfortable, and the factors that influenced the self-labeling. Participants of the study had completed at least two years of college, and grew up in the United States. Participants were contacted via minority-focused listservs affiliated with higher education. Short screening interviews were conducted over the telephone to determine if the individuals met the definition of biracial. Ten individuals between the ages of 20-34 years old, most of whom were college graduates, were sent electronic interview questions at three intervals – an initial interview, then follow-up interview questions, and finally participants were sent responses of all the participants, and asked to share or comment.

Three themes emerged in the study—families and communities, omnipresence of phenotypes, and the process of self-labeling (Talbot, 2008). In regards to families and communities, participants stated that race was rarely discussed between parents and children, but discussions of race ensued between participants and their siblings. As it pertains to phenotypes, all participants discussed physical appearance, and in particular skin color, most notably by participants who were one-half African-American. Participants noted external labeling from friends, teachers, student affairs professionals, and others. Siblings of participants also often had different physical appearances as described by participants. Participants used descriptions of stereotypical behaviors associated with race, and physical attributes associated with race. The third theme, process of self-labeling, noted that racial self-labels changed from adolescence to adulthood. Talbot (2008) discussed the distinction of terminology between self-identity, or internalized sense of who participants felt they were as racial beings, versus self-labeling, or comfort with a label that participants could share with an external world.
Participants felt more prepared for discrimination from whites than members of their own group, and described the phenomenon of “not being enough.” Participants commented on the challenge of lack of role models, and the idea of creating their own self-labels which then empowered them when asked the question by others of “What are you?” Female participants of the study who self-identified as Asian and African-American, made up the self-label of “Korack” or Korean and black. Participants of the study came to understand their two cultural heritages through college courses, books, cultural celebrations, and grandparents. Embracing a label, and having the ability to discuss who they were, solidified during college in the late adolescence/early adulthood stage.

Implications and observations of Talbot’s (2008) study include the notion that biracial individuals do not come to college with racial identities formed; student affairs professionals need to provide opportunities for racial exploration and review policies that may reinforce a monoracial perspective; and biracial individuals should be provided with opportunities to be involved in race-based groups that do not require individuals to “choose a race” which will help them feel whole. Talbot’s study serves to validate the depth and complex nature of race and racial experiences on campuses. Racial ambiguity and discomfort is imposed on biracial individuals by demanding that they use a standard racial label. Talbot recommends that institutions of higher education create spaces that encourage open discussion and debate.

**Literature on Student Departure**

The literature is flanked with research on student departure and attrition. The focus of research has shifted over time from “blaming the student” in the 1960s (Tinto, 2006) whereby students were blamed for failure to be retained, not the institution, to
research in the 1970s when views of student retention shifted from the student to the role of the environment or institution. According to Tinto (2006), much of the early work on retention was based on quantitative studies on students of majority backgrounds. As research in the area of retention grew in breadth and depth, findings showed that involvement or engagement matters (Tinto, 1998), and it matters most during the critical first year of college.

Various models and theorists have offered explanations for student retention at four-year institutions, including Tinto’s Attrition Model (1975). According to Tinto (1998), and Wirth and Padilla (2008), the impact of the student departure research on graduation rates has been minimal with graduation rates remaining stable, but flat, at around 50% over several decades. In the last 10 years, a shift has occurred in the literature, moving from a focus of research on student departure to a focus of research on student success, persistence, and degree completion as noted in the works of Braxton (2000), Bourdon and Carducci (2002), Neutzling (2003), Rowland (2003), Swail, Redd, and Perna (2003), Thomas and Galambos (2004), and Wild and Ebbers (2002).

**Tinto’s student integration model.** Tinto’s Student Integration Model is comprised of six characteristics. Students develop attributes shaped by their familial upbringing, and academic and social skills and abilities prior to entering college (Swail, Redd, & Perna, 2003). These skills and attributes help form goals and commitments regarding college, the workforce, and their place within society. During college, formal and informal college experiences influence the student’s level of integration into the college, academically and socially. According to Tinto, the level of academic and social integration has an impact on the students’ development of goals and commitments,
resulting in either a decision to persist in or depart from college (Swail et al., 2003). Tinto, Russo, and Kadel (1994) found that involvement in the classroom is a proponent for involvement beyond the classroom. Tinto later acknowledged that he failed to include the interactions of students’ off-campus academic and social systems, and how these external variables might impact a student’s commitment to the institution. Tinto (2006) also expressed that what is needed is a model of institutional action that provides guidelines for the development of effective policies and programs to enhance the persistence of all students. Numerous researchers, such as Rendon, Jalomo, and Nora (2000) and Tierney (1992), have suggested that Tinto’s theory has limited application to students of color, specifically the notion that students of color will disassociate with their culture, beliefs, and support systems to integrate into their college campus (Swail et al., 2003).

**Student retention framework.** As noted by Swail et al. (2003), Tinto’s Attrition Model (1975) along with other retention models, are open for interpretation and cannot describe all people, organizations, or situations. Additionally, the relationship between college and student is “lost,” leaving institutions unable to understand how the models link to campus policy (Swail et al., 2003).

Swail (2003) lays out a conceptual framework, a triangular model of student persistence and achievement, which places the student at the center of the model, and focuses on student attributes and the relationship with institutional practice. The model focuses on the three forces that account for a spectrum of outcomes—the cognitive and social attributes a student brings to campus, and the institutional role in the student experience. The interior of the triangle represents the complex internal
processes within each student that fosters his or her abilities to persist and achieve, and the exterior of the triangle represents the outside variables impacting the decision-making of the student (Swail et al., 2003).

The cognitive factors relate to the student’s ability to comprehend and complete the academic portion of the curriculum. The factors can be measured by variables such as course selection and completion in high school, aptitude, and academically related extracurricular involvement (Swail et al., 2003). An important aspect of the cognitive factors relating to achievement and persistence is the decision-making and problem-solving ability of the student.

Social factors that impact students include parental and peer support, development of career goals, ability to cope in social situations, and education legacy (Swail et al., 2003). These factors are important to student stability. Students from less supportive environments may bring lack in their self-esteem and efficacy as it relates to academics as compared to students from supportive environments (Swail et al., 2003).

Institutional factors relate to the ability of the institution to provide appropriate support to students, both academically and socially. Factors such as course availability, content, instruction, and support systems such as tutoring, mentoring, and career counseling affect student persistence (Swail et al., 2003). How an institution reacts to students is important to retention, persistence, and completion. Swail (Swail et al., 2003), places institutional factors at the base of the model because campus participation and knowledge is important in the academic and social development of students, and forms the foundation for college success.
According to Swail et al. (2003), the strength of the model and subsequent conceptual framework is in its ability to help institutions work proactively to support student persistence and achievement. One example they noted, is that if the institution has knowledge of individual student backgrounds and goals, they can provide programs and support opportunities to make up for any social or academic shortcomings.

Swail’s dissertation (1995) resulted in a retention framework which focused on minority student retention in the science, engineering, and mathematics areas. Swail developed a series of research-based institutional practices that were shown to effectively increase minority student persistence (see figure 2) and included five components: a) financial aid; b) recruitment and admissions; c) academic services; d) curriculum and instruction; and e) student services. Based on subsequent research and literature reviews, it was believed by Swail et al. (2003), that the framework could be modified to encompass other disciplines beyond science, engineering, and mathematics. This framework provides administrators with a strategy to build a retention plan that incorporates the individual needs of both the students and the institution. The framework is supported by a student-monitoring system. The system supports the linkage of campus services, and provides institutions with a picture of student experience in terms of academic and social development (Swail et al., 2003).
Looking specifically at component three, academic services, the focus is on providing supplementary support to students in addition to classroom practice (Swail et al., 2003). Academic services are divided into six categories (as noted in figure 3), including: (a) pre-college programming; (b) bridging programs; (c) academic advising; (d) tutoring/mentoring activities; (e) supplementary instruction; and (f) research opportunities.
Pre-college programs such as Trio, GEARUP, and Upward Bound, provide support to low-income and other students. These programs allow higher education institutions to work with K-12 education systems, and can help motivate students to enter and persist in college. Bridging programs at colleges, are typically offered the summer prior to college matriculation. The programs can develop the student’s knowledge, study
skills, and course strategies as well as ability to meet freshman requirements (Swail et al., 2003).

At the post-secondary level, academic advising is important to an effective student retention program. Effective advising (Beal & Noel, 1980; Forest, 1982) provides students with guidance that reflects their needs while incorporating the knowledge of campus programming and bureaucratic practices. Faculty advisers can provide role modeling and mentoring in addition to academic guidance.

In an effort to attract and retain students of color, colleges have implemented a variety of support programs including mentoring (Campbell & Campbell, 2000). There are multiple definitions of mentoring which encompass components such as nurturing; teaching; role modeling; encouraging; and coaching a student for individual career, personal, academic, or professional help. Mentoring involves a skilled or more experienced person (the mentor), and a less experienced or skilled person (the mentee). A mentor is someone who is knowledgeable in the desired field, and who can guide the mentee through hurdles of success (Young & Wright, 2000). What a mentor and mentee bring to a mentoring relationship, and do in a mentoring relationship, determine the success of the mentoring relationship; goals are accomplished if the mentee’s needs are being met (Young & Wright, 2000).

Tutoring and mentoring, including faculty-student contact outside of class, forms an academic support network for students and has implications to personal, social, and intellectual development (Griffen, 1992). Prior studies which have focused on monoracial students of color (Chavous, 2000; Ethier & Deaux, 1994), found that students who felt mentored were less likely to drop out of college. Students of color are often
unaware of the types of mentoring resources available to them, however (Budge, 2006). A study conducted by Campbell and Campbell (2001) on faculty mentoring, found that receiving guidance, advice, and information on academic matters were the main benefits to students in the faculty mentoring relationship.

According to Budge (2006), there is a lack of research on peer mentoring programs at the post-secondary level, particularly literature on non-traditional peer mentoring. Rodger & Tremblay (2003) found that students who used peer mentoring programs gained higher grade point averages than those who did not use peer mentoring programs. Many mentoring programs have different goals than academic achievement. Many programs focus on integration to aid students in identifying with their university or department, and social support to help students feel comfortable in a new university environment (Hall & Jaugietis, 2010).

Current research efforts have focused on cross-cultural mentoring and two opposing viewpoints. One view is that individuals who are different ethnically and racially (mentor and mentee), often feel uncomfortable with one another due to stereotypes; the other view supports cross-cultural mentoring which shows that same-culture mentoring is more beneficial and successful than mentoring based on differences (Budge, 2006). A study by Chism and Satcher (1998) found that African American students at HBCUs viewed African American professors as better able to mentor them as compared to white professors.

Current research has also looked at two models of mentoring programs—informal and formal. Informal mentoring is a developing relationship between two or more individuals by chance, where one individual provides support, advice, and guidance
Formal mentoring is the assignment of a mentee to a mentor and requires mentor training, matching of a mentor to a mentee, and planned meeting times (Budge, 2006).

Supplemental instruction programs (SI) provide supplementary support to aid with knowledge acquisition of academic/course content. SI is designed to provide optional, informal, peer-mentored learning support to students in large, general education courses (Bowles, McCoy, & Bates, 2008). SI attempts to improve course performance and increase retention and graduation rates. SI leaders are generally students who have successfully completed a course, and are considered “model students” (Bowles et al., 2008). SI leaders attend course lectures, take notes, and conduct SI review sessions outside of class for students in the course. SI review sessions can incorporate review of course lectures, hands-on exercises, question and answer sessions, and study strategies for the course.

Undergraduate research opportunities link classroom theory and real-world practice which can impact a student’s retention of knowledge and their marketability post-graduation (Swail et al., 2003). Students gain enhanced educational outcomes and career development; research skills; motivation and research self-efficacy; collaborative, interdisciplinary, and team skills; and enhanced scientific and critical-thinking skills from undergraduate research (Adedokun, Zhang, Parker, Bessenbacher, Childress, & Burgess, 2012). Undergraduate research programs have been shown to influence student aspirations for graduate education; for clarifying student career choices; and enhancing student preparation for graduate education, particularly in the areas of science, technology, engineering, and mathematics (Adedokun et al., 2012). Many colleges have
developed undergraduate research programs as a means to recruit and retain underrepresented groups in the science, technology, engineering, and mathematics disciplines.

Institutions often support a culturally deficient model of academic support services thereby placing the responsibility for success on the shoulders of the students. Such a model ignores the role that institutional policies, procedures, curriculum, services, and environment play on student success (McNairy, 1996). In a study conducted on Native American college students, Brown (2005) provided recommendations to address deficiencies in academic support services including: (a) a separate orientation for Native American students; (b) social and cultural events throughout the year for Native American students; (c) presidential leadership luncheons for Native American students; (d) student organizations for Native American students; (d) hiring Native American tutors to work in the tutoring center; (e) financial aid and scholarship assistance; (f) organization of a Native American advisory group to address concerns; (g) faculty mentors; and (h) academic enhancement programs for native Americans which includes advising, tutoring, study skills workshops, and mentoring.

Padilla’s Theoretical Framework for Modeling Student Success

Theoretical framework. The theoretical framework of this dissertation was based on Padilla’s Theoretical Framework for Modeling Student Success. Padilla (1999) postulates that the work of Rendon (1994), Tinto (1998), and others offers explanations of student success towards degree completion for students who may be advantaged in the context of familial support, academic talents, high levels of motivation, exertion of effort in their studies, and prior knowledge and experiences, but such research does not explain
the success of students who are not as advantaged such as students from lower socioeconomic backgrounds, students of color, or students lacking a support system. Padilla (2008) additionally notes that the work of Tinto and others have merit, but do not provide specific knowledge applicable to a given institution at a given point in time or to particular student populations within a given institution.

The “black box” concept (as seen in figure 4) is used by Padilla as the basis for an approach to the study of student success. Padilla considers the in-between processes or campus experience for a student the “black box.” Padilla (1999) states that students enter college (inputs) and exit college (outputs) in one of two ways, either as graduates or dropouts. What is unexplained is the “black box” experience that determines which path a student takes when exiting. The “black box” for most students is a myriad of obstacles or barriers that must be overcome by the student in order to complete a degree. When a student successfully overcomes barriers to degree completion the student can be considered successful (Padilla, 1999). When a student does not successfully overcome barriers and leaves college, they can be considered unsuccessful (Padilla, 1999).

![Figure 4](image_url)

*Figure 4.* Padilla’s “black box” conceptualization of the student experience.

*Note.* Adapted from Padilla (1999).
Padilla’s framework assumes that successful students take effective actions to overcome barriers they face and that the actions are based on specific, expert knowledge (Padilla, 1999). Padilla’s expertise model focuses on the knowledge that successful students possess and the actions they take to overcome barriers. The idea of student as expert conceptualizes knowledge in two ways— theoretical or formal knowledge learned through coursework or formal study, and heuristic knowledge which is acquired at the specific institution and is acquired experientially (Padilla, Trevino, Gonzalez, & Trevino, 1997) as noted in figure 5. Heuristic knowledge, or practical knowledge, is necessary to function on campus. Examples of heuristic knowledge include knowing when to drop a course rather than fail the course, and knowing specific financial aid deadlines (Padilla et al., 1997). Acquisition of heuristic knowledge is not systematic, but is informal in that it is typically passed along from experienced students to new students. Students need to acquire substantial amounts of heuristic knowledge very early in their college careers and to expand this knowledge over time at the institution to effectively navigate campus life. Students enter an institution with a certain amount of both theoretical and heuristic knowledge from prior experience, but it is “untested in the campus context” (Padilla, 1999, p. 136). As the student engages with the campus, they attempt to use both theoretical and heuristic knowledge to overcome barriers specific to the campus. The “black box” approach coupled with the assumptions of the expertise model “provides a general framework for understanding student success in college that can be applied to particular colleges to develop local models” (Padilla, 1999, p. 137).
Padilla’s framework focuses on the experiences of students as individuals, and employs a qualitative approach to ascertain the campus barriers that students must surpass at a specific higher education institution in order to succeed (Wirth & Padilla, 2008). Padilla’s Theoretical Model of Student Success consists of five qualitative parameters that “must be empirically determined for any given campus in order to create a local student success model (LSSM) and to provide suggestions for institutional change” (Wirth & Padilla, 2008, p. 689). The model is time bound to a moment in time, contextually bound because it is institutional specific, and participant bound (Padilla,
An LSSM is comprised of five parameters which include: a) barriers to student success; b) knowledge that successful students possess to overcome the barriers; c) actions that successful students undertake to overcome the barriers; d) changes that could be made on campus to diminish or eliminate the barriers; and e) the problems that might arise if the changes are attempted.

To develop an LSSM, data are collected using the unfolding matrix technique developed by Padilla (1994) as noted in figure 6. The parameters are used as the headers for the matrix. Each row includes examples of each parameter by participants; each row of the matrix is an example of a barrier.

Participants are organized into three small focus groups, called dialogical groups in a qualitative student success model (QSSM). Each group consists of 6 to 10 participants. The three focus groups complete an entire matrix, with each group completing a part of the matrix within about a one hour period. Participants are selected

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Frequency</th>
<th>Knowledge</th>
<th>Actions</th>
<th>Changes</th>
<th>Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 6. Padilla’s unfolding matrix*

*Note. Adapted from Padilla (1999).*

40
based upon significant experience on the campus. Padilla considers this approach a qualitative survey (1993) that is context bound.

The matrix data are organized into taxonomies that produce categories that are then organized into a LSSM. The LSSM can include data from other institutional sources beyond the matrix such as observations. Triangulation is then used by having advisers, faculty, and other campus personnel reflect and comment on the evolving LSSM. According to Denzin (1978), triangulation strengthens a study by revealing “different aspects of empirical reality” (p. 28). The objective is to create an LSSM that accurately portrays how students can be successful on a given campus.

**Qualitative Student Success Modeling Studies**

**Community college study.** Wirth and Padilla (2008) employed Padilla’s qualitative student success modeling in a study focusing on a community college to develop a LSSM. The study illustrates one approach to employing Padilla’s theoretical framework. In this particular study, informal round-table conversations were held with students (participants) so that they could get acquainted with each other and for the researcher to build trust. The project was explained fully along with the procedures for the focus group sessions. During the sessions, data were recorded on a large paper matrix completed by a scribe under the guidance of the moderator. Data were also audio-taped during the sessions. Triangulation with six academic advisers was used to refine and revise the evolving LSSM. The advisers were selected based on length of service, frequent/regular contact with students, understanding student challenges, and comparability to the student sample in terms of demographic composition. The study found three taxonomies—barriers to success, heuristic knowledge, and actions. The
barriers to success included six categories—personal, financial, coursework, learning, institutional, and student support barriers. The taxonomy of heuristic knowledge that successful students possess to overcome barriers included experiential knowledge, knowledge about studying and study skills, relational and comparative knowledge, and motivational knowledge. The participants understood that focusing on studying contributed to their success, and the interconnectedness and right balanced of health, personal life, studies, and work is important to student success. The third taxonomy was a result of the reported actions that successful students took to overcome barriers. The actions were strategic (i.e., systemic approach to achieving goals), pragmatic actions (i.e., practical approach to overcoming barriers), persuasive (i.e., inciting action in others), and supportive actions towards peers.

Successful students are successful because they become expert students on their campus. Students enter college with heuristic knowledge and formal knowledge from prior educational experiences and socialization experiences (Wirth & Padilla, 2008). Each student may not face all barriers, but face some set of barriers. The barriers noted through the taxonomies are distributed across heuristic and formal knowledge. As noted at the top of the model, students must possess sufficient heuristic knowledge and take effective actions when facing barriers to be successful towards degree completion. If knowledge is lacking, students must either acquire additional heuristic knowledge or take more effective actions in order to make progress towards degree completion or face the risk of departure from the institution. The formal knowledge, as noted at the bottom of the model, is typically expressed by the number of credit hours to graduate, specific
degree requirements, and the grading system. Students who cannot meet the formal knowledge requirements will drop out of college.

The LSSM can be used to improve student success at the institution through an implementation model. The key to implementation is the reshaping of student service programs as driven by the data from the LSSM. The services should be driven by the institutional mission and values, the framework, and the data which include the barriers, knowledge, and actions determined through the study. Student services staff then provide services and referrals to students on an individual student basis to assist them in overcoming the barriers determined. The implementation model requires that student services staff and advisers remain knowledgeable at all times about barriers that students may face as well as actions that successful students take to overcome the barriers. This can ultimately lead to a student successfully graduating or to a student dropping out of college.

Wirth and Padilla (2008) conclude that the approach of creating an LSSM is consistent with Tinto’s (2002) concept of social support within an educational community, and incorporates the voices of students in existing assessment practices at the institution. Further, this approach provides a way to design and implement campus change based on the needs of current students, including a deeper understanding of the barriers faced by diverse student populations on the campus (Wirth & Padilla, 2008).

**Students of color study.** Padilla et al. (1997) used the unfolding matrix technique to assess heuristic knowledge of successful college students of color. In this study, students were recruited from the general population of students of color at the institution. Two criteria were applied—students had to be sophomores, juniors, or
seniors, and self-identified as Latino, African American, Asian American, or American Indian. Freshmen were excluded because they lacked the experiences necessary to generate data. Fifteen staff members at the institution helped recruit students for the study. There were 28 participants which included 12 males and 16 females, and fairly even distribution across the four student populations under study. Students were informed the understanding of “success” would emerge from the groups, thus student grade point average was not a determining factor, only that “success” should be thought of as a student who is making progress towards a degree or who has already completed a degree. As in Padilla’s framework, three tandem group interviews were conducted with each session lasting about one hour, and each group contributing to the entire matrix.

The study found four categories of barriers that successful students of color had to overcome: (a) discontinuity barriers; (b) lack-of-nurturing barriers; (c) lack-of-presence barriers, and (d) resource barriers. Discontinuity barriers included obstacles that hindered a smooth transition from high school to college such as coming to terms with the value of education versus the value of a job out of high school and learning to be independent. The students developed expectations that they would not receive the same emotional support on campus as they had at home as a result of being a student of color. Actions employed by students in the study to overcome discontinuity barriers included building a support base by joining organizations related to their backgrounds; promoting independence by sacrificing, taking risks, and making their own decisions; and researching the profitability of their chosen careers. Lack-of-nurturing barriers dealt with the absence of supportive resources on the campus needed to facilitate the adjustment and development of students of color. Specific actions the participants used to successfully
overcome these barriers included creating a supportive network on campus and including biological family; participating in ethnic student organizations and attending events; seeking out nurturing persons such as peers and staff; and using resources such as tutors, faculty advisers, and support programs. Lack-of-presence barriers are related to the absence of students of color in the general university population, in the curriculum, and in programs. Successful students overcame these barriers by seeking out the presence that existed on campus; developing academic skills; participating in ethnically based organizations; and being culturally grounded in their own ethnicity to cope with the lack of presence. Resource barriers relate to the lack of money and difficulties associated with financial aid. Successful students overcame these obstacles by completing financial aid processes early, networking with people who understood the processes, and developing time management skills, and performing well academically to be eligible for scholarships.

In determining implications for theory and practice as a result of the LMSS that emerged from this study, Padilla et al. (1997) surmised that successful students of color learned how to obtain the support they needed within their campus environment; they created the personal and environmental supports that were lacking in the institution. The researchers went on to compare the findings of this study against the work of Tinto. Like Tinto’s theory, the LMSS of this study was consistent with the premise that students who are well integrated socially and academically are successful on their campus (Padilla et al., 1997). The study went beyond this theory in providing strategies students can employ to become involved in the social and academic aspects of their campus. While Tinto’s (1993) model of student departure focuses on the institutional and individual
factors leading to student departure, the expertise model of student success and
subsequent LMSS presented by Padilla et al. (1997), emphasizes the individual and
institutional factors that result in graduation.

Some additional similarities and differences between the Padilla et al. (1997)
study and Tinto’s work were also noted. Tinto’s (1993) model suggests students separate
from their home community as they integrate into their campus community. The findings
of the study conducted by Padilla et al. (1997) suggest that students of color attempt to
incorporate their cultural community and home community by participating in ethnic
events and organizations at their institution, and seek out the presence of other students of
color on the campus. This study supports Tinto’s (1993) view that “retention efforts must
be conducted on an institution-by-institution basis and be student centered” (Padilla et al.,
1997, p. 134). This study differs from Tinto in regards to the focus of evaluation,
however. Tinto focuses on institutional impact on student experiences and changes that
can be made at the institutional level to increase student retention, whereas Padilla et al.
(1997) use a student perspective to identify institutional changes that may eliminate
barriers to student success, and empower individual students by helping them overcome
barriers at the institution. The application of the expertise model and LMSS in this study
can help individual students independent of institutional change.

Summary

This chapter provided a review of literature pertaining to historical and societal
underpinnings of race, racial identity theories, cultural proficiency, student departure,
student academic support services, and Padilla’s Theoretical Framework for Modeling
Student Success. Chapter three will discuss the research design for this study.
Chapter Three

Methodology

This study was designed to explore the perceptions of biracial/multiracial college students regarding student academic support services at a PWI. The study was qualitative in nature, and used a phenomenological approach. The primary source of data collection was focus groups.

Research Design

This study was conducted using qualitative research methods, specifically a phenomenological approach. Phenomenology is the study of phenomena from the perspective of those experiencing the phenomena (Creswell, 1998). Phenomenology is a school of thought that emphasizes a focus on people's subjective experiences and their interpretations of the world. Phenomenology attempts to understand what the behavior means to the persons being studied, and does not presume to know what things or ideas mean to the participants. In this study, I attempted to understand the barriers to success that domestic biracial/multiracial undergraduate college students face at one four-year, public, research PWI by focusing on their interpretations of, and their experiences with, student academic support services. A local student success model was then developed for the institution.

Padilla’s (1999) Theoretical Framework for Modeling Student Success, or expertise model, assumes that successful students take effective actions to overcome barriers they face at a higher education institution, and that the actions are based on specific, expert knowledge. Padilla espouses that students take on the role of expert on their campus through the attainment of theoretical knowledge and heuristic knowledge.
Heuristic knowledge is local or practical knowledge that is necessary for a student to function competently on campus (Padilla, 1991). Theoretical knowledge is book knowledge that is learned through coursework and formal study (Padilla, 1991). Students enter college with prior educational and socialization experiences. Students must take effective actions when facing barriers at a higher education institution in order to be successful. Success is defined as progress toward graduation (Wirth & Padilla, 2008). If knowledge is lacking, students must either acquire additional heuristic knowledge and/or theoretical knowledge, or take more effective actions in order to make progress towards degree completion.

According to Padilla (1997), in order to successfully apply the expertise model, heuristic knowledge must be assessed. Unlike theoretical knowledge, heuristic knowledge is not acquired systematically or in a formal process. It is typically passed down from student to student at the campus on an informal basis. Padilla (1993) states it is the heuristic knowledge that enables a student to survive the college environment and to master the theoretical knowledge. Heuristic knowledge must be assessed both as an indicator of the barriers students must overcome on the campus, and as a means for identifying the knowledge and actions that students use to overcome the barriers, in order to be successful and attain degree completion. By assessing the heuristic knowledge at a given institution for a specific population of students, a local model of student success can be created for the institution which can serve as a blueprint for success by the specific student population.

Using Padilla’s expertise model as the theoretical framework for this study, and employing a phenomenological research design approach, the student then takes on the
role of expert. Specifically in this study, the importance is placed on understanding the barriers to success at a PWI as perceived by biracial/multiracial college students.

**Research Questions**

The study addressed the following research questions:

**Primary research question.**

1. What are the perceptions of biracial/multiracial students regarding student academic support services at a PWI?

**Secondary research questions.**

2. What student academic support service barriers to student success do biracial/multiracial college students perceive exist at a PWI?

3. What heuristic knowledge must biracial/multiracial students possess to overcome the identified barriers to success?

4. What collective behaviors and actions must be exhibited by biracial/multiracial students to overcome the identified barriers?

5. What set of actions might a PWI take (related to student academic support services) to help biracial/multiracial students overcome identified barriers?

**Analysis question.**

6. What are the possible problems or unintended consequences that might result if the institution implements the recommended actions?

**Site**

A study by the MAVIN Foundation (2005) found that 97% of the colleges surveyed did not collect and encode complete information about their students as it relates to racial self-identification in more than one category. Due to this struggle in
higher education institutional reporting regarding racial self-identification, locating participants for this study who self-identify as biracial/multiracial was a challenge. To address this challenge, I selected a site where I have affiliations with various constituents at the institution, thereby allowing for greater ability to locate participants who self-identify as biracial/multiracial. In addition, I have an understanding of the various student academic support services available at the institution.

This phenomenological study took place at a four-year, public, PWI in the Midwest. The institution has an enrollment of more than 20,000 students. Some of the student academic support services available to students at the institution included, but were not limited to: (a) tutoring; (b) peer mentoring; (c) faculty mentoring; (d) undergraduate research; (e) study abroad; (f) academic advisors; (g) service learning; and (h) supplemental instruction.

Participants

An institutional report dated October 15, 2010 entitled, Common Data Set for 2010-2011, stated that the undergraduate population at the site was comprised of 17,626 undergraduate, degree seeking students (see Table 2). Institutional demographic data for the Common Data Set report came from the admission application form that students completed prior to acceptance for admission by the institution.

It is important to note that students may self-identify as a member of two or more racial categories on the admission application form as noted by the multiracial category in Table 2. Students may leave the racial category question blank on the admission application form if they do not wish to self-identify with a racial category. Students may also self-identify with only one racial category on the form even though they may meet
the definition of biracial or multiracial used in this study. Biracial is defined as first-generation offspring of parents of different races, and most appropriately signifies the presence of two racial backgrounds in a non-judgmental manner (Kerwin & Ponterotto, 1995). Kerwin and Ponterotto (1995) define multiracial as first-generation offspring of parents of different races and it most appropriately signifies the presence of two or more racial backgrounds in a non-judgmental manner. This definition incorporates biracial individuals.

Table 2

2010-2011 Institutional Enrollment by Racial/Ethnic Category

<table>
<thead>
<tr>
<th>Racial/Ethnic Category</th>
<th>n</th>
<th>% of total population</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>11,710</td>
<td>66.0</td>
</tr>
<tr>
<td>Black or African American</td>
<td>2,657</td>
<td>15.0</td>
</tr>
<tr>
<td>Unknown</td>
<td>1,457</td>
<td>8.2</td>
</tr>
<tr>
<td>Non-resident (International)</td>
<td>585</td>
<td>3.3</td>
</tr>
<tr>
<td>Hispanic</td>
<td>593</td>
<td>3.3</td>
</tr>
<tr>
<td>Asian</td>
<td>310</td>
<td>1.7</td>
</tr>
<tr>
<td>Multiracial (two or more races)</td>
<td>267</td>
<td>1.5</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>43</td>
<td>.2</td>
</tr>
<tr>
<td>Native American or other Pacific Islander</td>
<td>10</td>
<td>.05</td>
</tr>
<tr>
<td>Total Undergraduate Degree Seeking Students</td>
<td>17,626</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Due to the difficulty in locating individuals who may self-identify as biracial/multiracial, student organizations, administrators, faculty, and staff were asked for assistance in locating appropriate participants for the study. Specifically, administrators, faculty, and staff who were aware of students self-identifying as biracial/multiracial, were asked to provide students with my student e-mail address and cellular phone number to volunteer to participate in the study. This protected the confidentiality and rights of the participants. Students who contacted me were asked for their e-mail address. Students were e-mailed a brief explanation of the study, a link to an electronic statement of consent to participate in the study, and the brief demographic survey.

Individuals who self-identify as biracial/multiracial, and who volunteered to participate in the study, were asked to encourage other students who met the criteria to participate in the study. Additional means for locating participants included the posting of information from the flyer (see Appendix A) on student organization group pages on Facebook, the distribution of flyers through student organizations and university departments, and e-mails sent to student e-mail addresses publicly available in the university directory.

Approximately 11 undergraduate students who self-identify as domestic biracial/multiracial were interviewed via focus groups. Students with a class standing of sophomore, junior, or senior were selected due to exposure to, or expertise with, student academic support services at the site. Students who have a class standing of freshman have limited exposure or experience with student academic support services at the site and were not included in the study.
Data Collection

Data collection methods of qualitative research can encompass surveys, field notes, interviews, focus groups, observations, journals, documents, and more (Oliver-Hoyo & Allen, 2006). To strengthen the conclusions of the research conducted, triangulation was used in this study. Triangulation compares data that are collected to cross-validate or corroborate the findings (Wiersma, 2000).

Denzin (1978) identified several types of triangulation. One type of triangulation identified by Denzin most applicable to this study was methodological triangulation, which involves the convergence of data from multiple data collection sources. As noted in figure 7, this study employed methodological triangulation and used a demographic survey, focus groups, and member checking to triangulate findings.

![Figure 7. Triangulation of data](image)

Figure 7. Triangulation of data
**Demographic Survey**

An electronic statement of consent (see Appendix B) and demographic survey (see Appendix F) were sent to participants via email using Survey Monkey, an electronic/online survey tool. The survey ensured that individuals selected for participation in the focus groups were appropriate, and self-identified as biracial/multiracial, according to the aspects of the research design. Additionally, the survey was used to guide the focus group conversations and was analyzed during the data analysis phase.

Survey participants were presented with a statement of consent in Survey Monkey (see Appendix B) when initially clicking on the survey link in their email message. Should an individual not provide consent for participation, he or she was not able to complete the survey. Should an individual provide consent for survey participation, he or she was directed to the survey questions.

The survey used skip logic. Skip logic directs respondents through different paths in the survey based on a response. For example, one question posed asked respondents if they resided on campus (either currently or in the past). If the respondent selected the response of yes to the question, a text box would appear asking an open-ended follow-up question. If the respondent selected the response of no to the question, the survey skipped to the next question. By using skip logic, students who did not self-identify as biracial/multiracial in question number one of the survey were directed to a disqualification thank you page. This ensured that students who did not meet the research design criteria were spared from completing the survey.
The survey (see Appendix F) asked the following multiple choice and open-ended questions for data analysis purposes: (a) racial/ethnic self-identification; (b) class standing (i.e., freshman, sophomore, junior, or senior); (c) gender (i.e., male, female, transgender); (d) age; (e) academic college (i.e., business, engineering, nursing, etc.); (f) anticipated graduation date; (g) cumulative grade point average; (h) on and off-campus student employment history; and (h) an e-mail address and phone number for contact purposes. The question pertaining to student employment provided context for data analysis. For example, if a student indicated that he or she served as a tutor in the tutoring center, it provided context regarding the student’s perceptions of tutoring services.

The survey asked the following multiple-choice and open-ended questions for focus group conversation purposes: (a) academic support services utilized—past/current; (b) campus involvements/student organizations; (c) residential or off-campus housing—past/current; and (d) barriers to academic success—past/current. The question regarding residential housing provided additional student support service options for focus group discussion, such as services provided through residence life (i.e., peer mentoring, etc.).

Each survey participant received a random number for survey identification and completion purposes, as well as for coding purposes during data analysis. As an incentive for survey completion, participants were entered into a drawing for a $50 Amazon gift card. The participant randomly selected as the winner of the drawing was e-mailed the electronic gift card.
Focus Groups

Focus groups were used as the primary means of data collection. According to Vaughn, Schumm, and Sinagub (1996), a phenomenological approach is the most common approach to focus group interviews. Focus groups are “useful when working with categories of people who have historically had limited power and influence; this includes people of color” (Morgan & Krueger, 1993, p. 152). Focus groups can add rich information to data collected through other means such as surveys.

Like any research method, focus groups offer both strengths and weaknesses. Focus groups offer four key strengths: (a) the production of concentrated amounts of data on the topic of interest; (b) data targeted to the researcher’s interests; (c) a quick and easy means of gathering large amounts of information in a brief period of time as compared to individual interviews; and (d) insights into participants’ opinions and experiences as a result of group interactions (Morgan, 1997). The presence of others in a focus group can thus enhance the intensity of interaction and richness of the data (Jarrett, 1993).

Focus groups offer four key weaknesses: (a) unnatural settings for observation; (b) strong personalities may overpower the group and influence the data produced; (c) group dynamics may limit the honesty of participants or limit the ability of a participant to discuss a particular topic; and (d) “group think” whereby several strong personalities may overpower the group and influence the data produced (Morgan, 1997). The weaknesses of focus groups served as some of the limitations to this study discussed later in this chapter.

Because this study was specifically employing Padilla’s theoretical framework and attempting to replicate Padilla’s research design (Padilla, 1999, 1997, 1991; Padilla,
Trevino, Gonzalez, & Trevino, 1993), participants were organized into three focus groups. In each of Padilla’s studies (1999, 1997, 1993, and 1991), three focus groups were used. Using any more than three focus groups may provide few new insights into the topic due to data saturation (Morgan, 1997). Data saturation is the point at which additional data collection no longer generates new understanding.

According to Morgan (1997), a group size of 6-10 participants is a typical size for focus groups. The focus groups in Padilla’s studies were comprised of 6-8 students each. The participants in this study were divided into three focus groups with a target goal of approximately 6-8 students per group, and a target total of 18-24 focus group participants overall. The final size of the focus groups was between 3-5 students per group, and an overall total of 11 focus group participants. The groups were comprised of male and female students to provide an array of perspectives.

Each focus group was comprised of biracial or multiracial students. Final determination of the three focus group populations was based on data from the demographic survey. A minimum of 4 participants per group was the target goal for the research design. Because the percentage of students self-identifying as Native American or Pacific Islander according to institutional data was quite small, it was anticipated that none of the focus groups would be comprised of this demographic.

A total of 30 survey participants were selected from the pool of completed demographic surveys, and contacted for participation in the focus groups. Selecting 30 participants ensured adequate focus group sizes in the event that some participants elected to drop out of the study, as the objective was participation of approximately 18-24 focus group participants. The 30 participants were contacted via e-mail and phone
regarding the location, date, and time of the focus group meeting. As an incentive for participating in the focus groups, participants were entered into a drawing for a $100 gift certificate to the retailer of his or her choice.

At the start of each focus group meeting, the participants were asked to sign a second statement of consent (see Appendix C). The data obtained from the focus groups was used in the aggregate. The pseudonym given to each participant for the focus group meetings was used to identify participants during data analysis and when reporting results. No names, identifying characteristics, or identifying quotes are mentioned in the study; all information is completely confidential.

Each focus group convened for 60 – 90 minutes in duration in a centrally located, confidential site. Vaughn et al. (1996) offer the following recommendations regarding the site: (a) the location should be soundproof; (b) the location should be adequately sized for the group and any equipment required; (c) the location should be free from interruptions; and (d) the location should offer comfortable seating for participants around a table so that participants can see each other and the moderator. Based on these recommendations, a conference room in an academic building or the student union was used. Refreshments and food were offered at the location to set the participants at ease, and to thank them for their participation.

As the researcher, I served as moderator of the focus groups. Because there was a strong, pre-existing agenda for the research, and I have a deeper understanding of the topic under study as compared to a moderator unfamiliar with the topic, I was able to keep the focus groups on task. I used a moderator’s guide (see Appendix G) to facilitate the focus group interviews. The five primary and secondary research questions of this
study served as the five specific focus group questions (see Appendix H) posed to the three focus groups. The data collected from the demographic surveys helped guide the direction of the conversations in the focus group meetings to ensure questions were ultimately addressed.

A fellow doctoral student with research experience was asked to serve as scribe of the sessions, and to observe verbal and non-verbal cues of the participants. The scribe declined any monetary compensation for her time. I met with the scribe in advance of the focus group meetings to discuss the goals of the study and explain focus group procedures.

At the conclusion of each focus group interview, both I and the scribe jotted down observations of the participants and sessions. Additionally, the focus groups were audio-taped with participant consent; sessions were transcribed. Should a participant not have provided consent for audio-taping, the session would not have been recorded thereby putting the reliance of data collection and data analysis on written documents.

**Unfolding Matrix: Data Collection Method for Assessing Heuristic Knowledge**

Padilla (1991) developed a technique, called the unfolding matrix, to assess the heuristic knowledge of successful college students. The unfolding matrix is used for the initial collection of data from the three focus groups. According to Padilla (1997), a study begins with an empty matrix, or table, which is gradually filled as data are collected. Each focus group contributes to completing the matrix. After data collection is completed, a filled matrix becomes a data set that is analyzed to develop a local model for student success at the institution.
Because this study employed Padilla’s theoretical framework and methodology, an unfolding matrix was used to collect data during the focus group interviews. Each focus group reflected and built on the data collected from the prior focus group(s) to fill in the matrix. The secondary research questions served as the headings of each column of the matrix (as noted in Figure 8). The rows of the matrix captured the perceptions of the participants regarding the various barriers to student success at the site. The focus group responses filled the cells of the matrix. The ultimate size of the matrix (number of rows) depended upon the breadth and depth of responses from the focus group participants.

The scribe drew the matrix on paper taped to the wall, and filled in the cells of the matrix based on the focus group discussions. The scribe used three different colors of marker to record responses. Each marker color represented a different focus group. This aided in determining where group responses began and ended during data collection and data analysis.

Because one focus group cannot complete a matrix in a one to two-hour timeframe, the first focus group began to fill the matrix and contributed as much as possible (Padilla, 1994). The second focus group began where the first group ended, and attempted to saturate the cells of the matrix. The third focus group then began where the second group ended to complete the matrix (data set). According to Padilla (1994), the use of three focus groups has an advantage over a singular participant interview because it “expands the base of experiences represented” (p. 275) and is more likely to capture the multiple facets “usually present in the phenomenon of interest” (p. 275).
Figure 8. Unfolding matrix: data collection method for assessing heuristic knowledge
Note. Adapted from Padilla (1999).

Padilla (1994) states that the unfolding matrix accomplishes three key objectives. First, it sets data collection boundaries by specifying a domain of relevant data for each vector—this is defined by the column headings which represent the secondary research questions. Second, it provides a structured way of collecting data. Third, it codes raw data as data are collected.

After data collection was complete, the filled matrix became a qualitative data set that was subjected to interpretive analysis to answer the primary and secondary research
questions in order to construct a local model for student success (LSSM) at the institution.

**Member Checking**

Member checking occurred during the focus group meetings for data analysis purposes. During the focus group meetings, I asked the participants if they agreed with data recorded in the matrix to determine if there was agreement in responses within the focus groups. I also asked the participants if they agreed with data recorded in the matrix from the prior focus group(s) to determine if there was agreement in responses between the focus groups.

During data analysis, emerging themes and findings were shared via e-mail with focus group participants for clarification and verification of interpretation. Participants were asked to provide an e-mail response indicating that they either (a) agreed with the local model of student success, or (b) provided clarifying responses if they disagreed with the local model of student success. As an incentive for responding to my e-mail, participants were entered into a drawing to receive a $100 i-Tunes gift card. The randomly selected winner received the gift card electronically via their e-mail account.

**Pilot Study**

Prior to conducting the three focus groups, a pilot study was conducted comprised of a group of college students to ensure questions were understandable and appropriate for use in the study. I served as moderator of the pilot focus group.

**Data Transcription**

Focus group interviews were transcribed by me. Each audiotaped focus group interview was transcribed as fully and completely as possible (word-for-word).
According to Vaughn et al. (1996), all information and data collected in qualitative research is relevant to data analysis; it provides context and assists in the interpretation of findings. Focus group transcriptions were reviewed against the unfolding matrix to see if data were missing and needed to be added to the matrix.

**Data Analysis**

To answer the primary research question, I analyzed the demographic survey, transcriptions of the focus group interviews, completed matrix, and participant observation notes. To analyze the demographic survey, I created a table with the results of the survey responses (discussed in Chapter Four). The table provided additional context to the data obtained from the focus groups, and additionally served as a source of member checking against the focus group interview data. Field notes from the scribe were also analyzed to make assessments of observations of verbal and non-verbal participant cues. From the data analysis, I drew conclusions regarding the primary research question.

Using Padilla’s (1999) concept modeling, an analytic tool applied to qualitative data, I analyzed the unfolding matrix data and focus group transcriptions in order to answer the secondary research questions. The LSSM was then developed for the site after the data analysis was complete. Concept modeling entails data reduction and interpretation. Data reduction involves summarizing details in the data through the organization of information into categories and sub-categories of meaning (Padilla). A taxonomic analysis (Padilla) was conducted on all of the cells under each column of the matrix. The analysis resulted in a set of categories for each column that included all or most of the exemplars given in the column. The matrix was ultimately reduced to
categories and sub-categories that summarized barriers faced by the students on the campus, and how successful students overcome the barriers thus answering the secondary research questions. The analysis research question was addressed by analyzing the type of actions that the institution might take and the unintended consequences or problems of taking the actions.

The LSSM was developed as a result of the analysis of the matrix. The local model was a graphic representation of the answers to the secondary research questions and analysis question, and looks similar to Figure 9. The local model attempted to identify and analyze the secondary research questions which included: (a) the set of barriers to student success perceived by the focus group participants at the institutional site; (b) the knowledge that successful students collectively possess that allow them to overcome the barriers; (c) the set of behaviors exhibited, and the actions taken, by successful students to overcome the barriers; (d) the actions that the institution might take to help students overcome the barriers; and the analysis research question which is (e) the unintended consequences or problems that may result if the institution implements the recommended actions.

As noted earlier, member checking occurred in the data analysis phase. The LSSM for the site was shared with participants to ensure that interpretations and conclusions that were drawn were as accurate as possible.

**Assumptions**

The research assumptions upon which this dissertation was based included:

1. Participants of the focus groups would be honest and truthful in their responses during the focus groups, and on the demographic surveys.
2. The research design would provide adequate time for research questions to be addressed by each focus group.

3. Participants would understand terminology of the study, including the phrase “student academic support services,” to best respond to research questions.

4. Participants of the focus groups would not object to audio-taping of the focus group meetings.

5. Adequate representation of male and female students would be present in each of the focus groups.

*Figure 9*. Example local student success model
6. The number of individuals that self-identify as Native American or Other Pacific Islander at the site would be small based on institutional data and U.S. Census data in the Midwest.

**De-Limitations**

While this dissertation could incorporate all biracial/multiracial compositions represented in the U.S. Census, it specifically focused on racial compositions represented in the geographic area of the institution (site). Additionally, this study delimited the biracial/multiracial population studied to native born individuals (domestic students), and not foreign-born individuals (International students), to reflect U.S. Census Bureau reporting measures.

This study purposefully delimited the participants to sophomores, juniors, and seniors due to the likelihood of more exposure and experience with student academic support services than freshmen at the institution. In addition, this study could certainly incorporate more participants and more sites, but that would have proven to be difficult given the constraints of demographic reporting of institutions of higher education, self-identification of students, and lack of current research on biracial/multiracial college students. This study also sought to replicate Padilla’s expertise model, thereby, delimiting the number of focus groups to three and site locations to one location to develop a LSSM for the specific site of the study.

**Limitations**

There are a number of limitations to the study. This dissertation was based on the assumption that students participating in the focus groups would be honest and truthful in their responses. If participants were not honest, it would limit the inferences and
conclusions of the study as it relates to perceptions of biracial/multiracial college students.

Weaknesses of the research design using focus groups could include the unnatural settings for observation; “group think” whereby several strong personalities may overpower the group and influence the data produced; and the group dynamic may limit the honesty of opinions of individual group participants or limit the ability of a participant to discuss a particular topic (Morgan, 1997). To address the unnatural setting for observation, the location for the focus group meetings incorporated comfortable seating, refreshments, and food. To balance group dynamics and minimize the influence of strong personalities in the focus groups, I adhered to the moderator’s guide thereby keeping the groups on task (Morgan & Krueger, 1993). Additionally, I encouraged participant self-disclosure and discouraged disclosures not pertinent to the study while moderating the focus groups. According to Morgan and Krueger (1993), a good moderator “will strive to create an open and permissive atmosphere in which each person feels free to share his or her point of view” (p. 7). During the opening instructions with each focus group, I emphasized the importance of hearing a diversity of student experiences and perceptions. I sought alternative viewpoints through probing follow-up questions during focus group meetings.

By nature of the theoretical framework and research design, the study was context bound, participant bound, and time sensitive bound. The study occurred at one institution (site) with a group of participants at one specific moment in time. Results of the study, including the LSSM developed for the site, may not be applicable to other institutions
given the internal and external characteristics of the site and demographics of the participants of the study.

**Summary**

In summary, this chapter described the research design for this phenomenological study. The study employed methodological triangulation using Padilla’s Theoretical Framework for Modeling Success. Through the use of a demographic survey, three focus group meetings, and member checking, conclusions were drawn regarding the perceptions of student academic support services at one predominately white, four-year, public, research institution in the Midwest. Chapter Four presents the findings of the study. The LSSM developed for the PWI from the findings will be discussed in Chapter Five.
Chapter Four

Study Findings

This study employed methodological triangulation and used a demographic survey, three focus groups, and member checking to triangulate findings. The three focus groups served as the primary means of data collection. This chapter discusses the methodology, protocols, and research findings through each of the three phases of the research case study including: Phase 1—the demographic survey; Phase 2—three focus group interviews; and Phase 3—member checking. Due to the complexity of the framework and methodology for the study, a summary of the study findings will be provided. Conclusions are drawn from the case study findings regarding the perceptions of student academic support services at one predominately white, four-year, public, research institution in the Midwest. The summary of findings will address the following research questions:

**Primary research question.**

1. What are the perceptions of biracial/multiracial students regarding student academic support services at a PWI?

**Secondary research questions.**

2. What student academic support service barriers to student success do biracial/multiracial college students perceive exist at a PWI?

3. What heuristic knowledge must biracial/multiracial students possess to overcome the identified barriers to success?

4. What collective behaviors and actions must be exhibited by biracial/multiracial students to overcome the identified barriers?
5. What set of actions might a PWI take (related to student academic support services) to help biracial/multiracial students overcome identified barriers?

The first phase of the study provided demographic data that set a foundation for data gathering in phase two. Phase two of the study provided the data that was used to answer the research questions. In phase two of the study, 11 college students who self-identified as biracial/multiracial, participated in one of three focus groups comprised of 3-5 students each. Padilla (1991) developed a data collection technique, called the unfolding matrix, to assess the heuristic knowledge of successful college students. Because this study employed Padilla’s theoretical framework and methodology, an unfolding matrix was used to collect data during the focus group meetings. The secondary research questions served as the headings of the column of the unfolding matrix (see Figure 10). The rows of the matrix captured the perceptions of the participants regarding the various barriers to student success at the site. The focus group

<table>
<thead>
<tr>
<th>Secondary Research Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers</td>
</tr>
<tr>
<td>Barrier 1</td>
</tr>
<tr>
<td>Barrier 2</td>
</tr>
<tr>
<td>Barrier 3</td>
</tr>
<tr>
<td>Barrier 4</td>
</tr>
<tr>
<td>Barrier 5</td>
</tr>
<tr>
<td>Barrier 6</td>
</tr>
</tbody>
</table>

*Figure 10.* Unfolding matrix: data collection method for assessing heuristic knowledge

Note. Adapted from Padilla (1999).
responses filled the cells of the matrix. The ultimate size of the matrix (or number of rows) depended upon the breadth and depth of responses from the focus group participants.

The first focus group meeting began with an empty matrix, or table, which was gradually filled as students responded to the focus group questions. Each focus group contributed to completing the matrix by reflecting and building on the data collected from the prior focus group(s) to fill in the matrix.

Because one focus group cannot complete an unfolding matrix in a one-hour timeframe, the first focus group contributed as much as possible (Padilla, 1994). The second focus group began where the first group ended, and continued to fill the rows and columns of the matrix. The third focus group began where the second group ended to complete the matrix (data set). Padilla (1994) stated that the unfolding matrix provides a structured way of collecting data. It codes raw data as data are collected. After data collection was complete, the filled matrix became a qualitative data set that was subjected to interpretive analysis to answer the primary and secondary research questions in order to construct a LSSM at the institution.

Pilot Focus Group

A group of students was asked to participate in a pilot focus group. The purpose of the pilot focus group was to ensure that focus group questions were understandable, and that the protocol using the moderator’s guide would run smoothly within the timeframe specified for the focus group meetings. The pilot group was comprised of three students I had an affiliation with at the institution including one male and two females. The male
student self-identified as multiracial, and the female students self-identified as monoracial.

Prior to the pilot focus group meeting, participants were asked to complete the demographic survey for this study to collect initial data to assist in guiding the pilot focus group meeting conversation. The pilot focus group met for 80 minutes in a conference room at the institutional site. The focus group consent form was explained, and pilot participants were asked to sign the consent form. Using the focus group moderator’s guide developed for this study (see Appendix G), the pilot focus group meeting began with an explanation of terms, and study summary.

Because this study employed Padilla’s theoretical framework and methodology, an unfolding matrix was used to collect data during the pilot focus group meeting. The unfolding matrix was drawn on white paper and taped to the wall in the conference room. The secondary research questions served as the headings of each column of the matrix (see Figure 10). The rows of the matrix captured the perceptions of the participants regarding the various barriers to student success at the institutional site. The pilot focus group responses filled in the cells of the matrix. Pilot focus group participants were provided with pseudonyms and asked to make reference to the pseudonyms when speaking.

Data from the completed demographic survey were used to begin the pilot focus group discussion. For example, all three participants noted personal barriers. This provided the initial starting point for discussion. After 60 minutes of pilot focus group discussion, the meeting was stopped to allow time for debriefing regarding logistics and
process of the focus group including understandability of the questions posed. Pilot focus group participants provided the following recommendations:

- Any food provided at focus group meetings should be provided at the conclusion of the meetings so as not to distract the flow of conversation.
- The moderator should be seated with participants and not stand, to reduce the intimidation factor for participants. Pilot participants stated this would remove any feelings of a faculty-student interaction.
- The moderator should dress casually to make participants feel at ease.
- Participants should be provided with a copy of the last question from the survey regarding barriers for reference, as well as a pen and notepad to make any notes.
- The scribe should note the initials of the participant on the matrix as comments are made; this was suggested as a better alternative to asking participants to reference pseudonyms throughout the meeting and slow down the conversation.
- A more thorough explanation of the relevance of the focus group data derived from biracial/multiracial students should be explained at the beginning of the meeting; the moderator should provide more explanatory information regarding the purpose and goals of the study.
- Allow participants to come to their own conclusions and provide their own definitions.
- Start each focus group meeting with a clean data matrix to begin the conversation, and allow participants to ease into the conversation naturally. It was noted that the second or third focus groups may be hesitant to speak if they feel many ideas have already been provided to the student researcher by showing the data matrix from the
prior meeting(s). As the focus group meeting concludes, member checking between and among focus groups can occur by displaying the other matrices.

- It was recommended that all focus group participants be given a $5 gift card to Subway for their time and participation, in addition to the $100 gift card drawing.

All of the recommendations of the pilot focus group participants were implemented into the three focus group meetings.

**Phase I of the Study: Demographic Survey**

The first phase of the study was the demographic survey. An electronic statement of consent and demographic survey were sent to participants via e-mail using Survey Monkey, an electronic/online survey tool. Participants were college students who responded to the demographic survey seeking students who self-identified as biracial/multiracial. The survey ensured that individuals selected for participation in the focus groups met the criteria for participation, and self-identified as biracial/multiracial, according to the aspects of the research design. Additionally, information obtained from the survey was used to guide the focus group conversations.

Survey participants were presented with a statement of consent in Survey Monkey (see Appendix B) when initially clicking on the survey link in their email message. If an individual did not provide consent for participation, he or she was not able to complete the survey. The survey used skip logic. This ensured that students who did not meet the research design criteria were spared from completing the survey.

The research methodology and framework described in Chapter Three was employed, and was slightly altered based upon lack of initial student response to the demographic survey. Five different methods of advertising were used to reach potential
study participants including: (a) advertisements of the demographic survey via Facebook postings on institutional pages and student organization pages; (b) referrals from students of color that I knew at the institution; (c) posters advertising the study (see Appendix A) in student organization offices such as the Black Student Union; (d) e-mails to administrators asking for referrals (see Appendix D); and (e) e-mail communications sent out through student organizations such as the Black Student Union and the Latino Student Union. After the five different advertising methods evoked only a few students interested in the study, numerous e-mail messages (see Appendix E) were sent out to the undergraduate student population at the institution. The e-mail messages briefly explained the study and included a link to the demographic survey. The e-mails were sent to student e-mail addresses publicly available in the university directory. E-mails were sent to over 4,700 undergraduate students.

Demographic survey participants. A total of 142 students clicked on the SurveyMonkey link included in the e-mail they received, of which 135 attempted to complete the survey. A total of 86 students left their personal contact information, and were eligible for entry into the drawing for the $50 Amazon gift card. The winner was contacted and electronically sent the gift card.

Through the skip logic embedded within the survey, a total of 89 students ultimately completed the survey, of which 75 students met the requirements of the study. Fourteen students were excluded from the study for (a) self-identifying as biracial and/or multiracial, but selecting only one racial/ethnic category, or (b) self-identifying as an international student and not a domestic, native-born student. The majority of qualified respondents (65.3% of the total) self-identified as biracial, with the largest percentage
(57.3% of the total) self-identifying as White with one other race/ethnic background (see Table 3). A total of 18 students (24% of the total) self-identified as multiracial, with the largest percentage of multiracial students self-identifying as White, Black, and Native American (9.3% of the total). Students completing the survey had the option of selecting “other” as a racial/ethnic category response and inserting an open-ended response. One unanticipated racial/ethnic category emerged, Arab, of which three students (4% of the total) self-identified in this category. A total of eight students (10.7% of the total) selected biracial on the survey, but self-identified in three or more racial/ethnic categories or selected multiracial on the survey, but self-identified in only two racial/ethnic categories.

**Demographic survey data.** In analyzing other demographic survey parameters, the majority (61%) of qualified survey respondents were female; nearly all respondents (96%) self-reported good academic standing of at least a 2.00 cumulative GPA; 90.6% of respondents were between the ages of 18-22; 55% of respondents had a class standing of sophomore; 25% of respondents had held an on-campus job; and 43% of respondents had been commuter students living off-campus during their entire college career.

Two questions on the survey provided information that was used to guide focus group conversations—barriers to academic success, and academic support services used on the campus. Students had the option to select more than one response for each question and enter additional barriers in an open ended question. As noted in Figure 11,
Table 3

Racial/Ethnic Self-Identification of Survey Participants (N = 75)

<table>
<thead>
<tr>
<th>Racial self-identification</th>
<th>n</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two races (Biracial)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White; another race</td>
<td>49</td>
<td>65.3</td>
</tr>
<tr>
<td>White; Black or African-American</td>
<td>43</td>
<td>57.3</td>
</tr>
<tr>
<td>White; Hispanic</td>
<td>16</td>
<td>21.3</td>
</tr>
<tr>
<td>White; Asian</td>
<td>16</td>
<td>21.3</td>
</tr>
<tr>
<td>White; Arab</td>
<td>7</td>
<td>9.3</td>
</tr>
<tr>
<td>White; American Indian</td>
<td>3</td>
<td>4.0</td>
</tr>
<tr>
<td>White; American Indian</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Black; another race</td>
<td>5</td>
<td>6.7</td>
</tr>
<tr>
<td>Black; Hispanic</td>
<td>3</td>
<td>4.0</td>
</tr>
<tr>
<td>Black; Native American</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Black; American Indian and Alaska Native</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Hispanic; another race</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Hispanic; Native American</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Three or More Races (Multiracial)</td>
<td>18</td>
<td>24.0</td>
</tr>
<tr>
<td>White; Black; Native American</td>
<td>7</td>
<td>9.3</td>
</tr>
<tr>
<td>White; Black; Hispanic</td>
<td>3</td>
<td>4.0</td>
</tr>
<tr>
<td>White; Asian; Native American</td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>White; Hispanic; Black; Native American</td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>Black; Hispanic; American Indian</td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>White; Hispanic; Native American</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>White; Black; American Indian</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>10.7</td>
</tr>
<tr>
<td>Reported Biracial; Selected Three Races/Ethnicities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black; Hispanic; Native American</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>White; Black; Native American</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Reported Multiracial; Selected Two Races</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White; Hispanic</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>White; Black</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>White; Native American</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Black; American Indian</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Black; Native American</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Asian; American Indian</td>
<td>1</td>
<td>1.3</td>
</tr>
</tbody>
</table>
regarding barriers to academic success, personal barriers were reported by the majority (64%) of survey participants, with financial barriers also reported by over 50% of all participants. Only one open ended response was noted which included wanting the library to be open extended hours on the weekends.

*Figure 11. Barriers to academic success*
As noted in Figure 12, survey participants reported using tutoring services and academic advisors more than any other academic support service on campus. Open-ended responses regarding services used included the Office of Accessibility and community mentoring.

Figure 12. Academic support services used on campus
Phase II of the Study: Focus Groups

Perhaps one of the greatest challenges in conducting research for this study was recruitment for participation in the second phase of the study—focus group participation. The names of the 75 qualified survey participants were entered into an Excel spreadsheet. Through a randomization function available in Excel, 30 students were selected for inclusion in three focus groups.

The 30 students randomly selected were contacted via e-mail to participate in one of three focus group meetings. The e-mail explained the second phase of the study, provided details about the location and time of a specific focus group meeting, and included an incentive for participation. The initial e-mails sent to the randomly selected students cited an incentive of entry into a drawing for a $100 gift card to the retailer of their choice as outlined in the research protocol. After repeated e-mail attempts and lack of a positive response, additional e-mails were sent to the students stating that all participants would receive a small gift for their time, and additionally would be entered into a drawing for the $100 gift card to the retailer of their choice.

Due to scheduling conflicts for the scribe, the individual taking notes during the focus group meetings, all three focus groups had to take place over the course of one specific weekend. Part of the difficulty with positive response to participation was scheduling conflicts with the students themselves. As a result, e-mails were sent to additional randomly selected participants from the pool of 75 qualified students. The determination of focus group composition was made based on survey demographics; one focus group was comprised of multiracial students, and two focus groups were comprised of biracial students.
One week before the scheduled focus group meetings, reminder e-mails were sent to the students who responded to the invitation for participation in a focus group meeting. A few students withdrew themselves from the study due to work schedule conflicts, and two students asked to switch focus group meetings due to time conflicts. One week before the focus group meetings, the group compositions included a minimum of four students per group for a total of 13 participants. Within 2-3 days of the focus group meetings, the composition changed as follows:

Focus Group 1: 5 students—1 multiracial; 4 biracial
Focus Group 2: 4 students—all biracial
Focus Group 3: 4 students—all multiracial

Preparations were made prior to each focus group meeting including (a) preparation of pseudonym table tent name cards; (b) preparation of food orders; and (c) preparation of documents to be distributed to focus group participants including consent forms (see Appendix C), a list of barriers from the survey instrument (see Appendix F), and handouts describing the purpose of the study and definitions of key terms (see Appendix I).

**Focus group one.** In preparation for the first focus group meeting, the demographic survey data for the participants in the first group were analyzed to note responses to two key questions—academic support services used and barriers encountered. The responses to the two key survey questions were used to guide the overall discussion of the focus group meeting.

The first focus group meeting occurred in a conference room inside an academic building at 5pm on a Friday evening. Table tent cards with the pseudonyms of the
participants were placed around the rectangular table in the room prior to their arrival. As each participant arrived, I, as moderator of the focus group meetings, greeted the participant outside of the room, asked for his or her name, and provided the participant with his or her pseudonym. Participants were assigned seats in the room at the rectangular table. I arbitrarily placed the two females on one side of the table, and the three males on the other side of the table. I sat at the head of the table. I did not give consideration to gender in regards to placement of the participants at the table; I only gave consideration to splitting the group in half thereby placing one half of the group on each side of me at the table. The scribe, a female who self-identifies as African-American, stood at the front of the room with blank pieces of paper taped to the wall. Each piece of paper represented a column of the unfolding data matrix including barriers, frequency, knowledge, student actions, and institutional actions.

**Focus group one participants.** The composition of the first focus group included two female students, and three male students. One female student self-identified as multiracial on the survey; the other four students self-identified as biracial (see Table 4).

At the start of the focus group meeting, four of the five participants were in attendance. Sharon, one of the female participants, arrived 20 minutes late. I began the meeting by introducing myself, and explaining that I am a graduate student. I did not disclose my affiliation with the institution nor my racial/ethnic self-identification, but from the standpoint of phenotype, I appear to be a white female. I introduced the scribe as a fellow graduate student, but did not state how the scribe racially/ethnically self-identifies. From a phenotype perspective, the scribe appears to be an African-American female.
### Focus Group One: Demographic Survey Data

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Jeff</th>
<th>John</th>
<th>Mark</th>
<th>Stephanie</th>
<th>Sharon</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Range</strong></td>
<td>18-22</td>
<td>18-22</td>
<td>22-25</td>
<td>18-22</td>
<td>25-30</td>
</tr>
<tr>
<td><strong>Class Standing</strong></td>
<td>Sophomore</td>
<td>Sophomore</td>
<td>Senior</td>
<td>Sophomore</td>
<td>Junior</td>
</tr>
<tr>
<td><strong>Biracial/Multiracial</strong></td>
<td>Biracial</td>
<td>Biracial</td>
<td>Biracial</td>
<td>Multiracial</td>
<td>Biracial</td>
</tr>
<tr>
<td><strong>Racial/Ethnic Self-Identification</strong></td>
<td>• White</td>
<td>• White</td>
<td>• White</td>
<td>• White</td>
<td>• White</td>
</tr>
<tr>
<td></td>
<td>• Hispanic</td>
<td>• Hispanic</td>
<td>• African-American</td>
<td>• African-American</td>
<td>• Asian</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>Male</td>
<td>Male</td>
<td>Male</td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td><strong>Academic Major</strong></td>
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<td>• Political Science</td>
<td>• Health Care Administration</td>
<td>• Nursing</td>
<td>• Human Resources</td>
</tr>
<tr>
<td><strong>Cumulative GPA Range</strong></td>
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<td>1.0 – 2.0</td>
<td>3.0 – 4.0</td>
<td>2.0 – 3.0</td>
<td>3.0 – 4.0</td>
</tr>
<tr>
<td><strong>Campus Involvements</strong></td>
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<td>• Black Student Union</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>• Varsity Cheerleader</td>
<td>• Fraternity</td>
<td></td>
<td></td>
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<td></td>
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<td>• College Democrats</td>
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<td></td>
<td></td>
<td>• Honors College/Council</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Employment</strong></td>
<td>Off-Campus</td>
<td>N/A</td>
<td>Off-Campus</td>
<td>Off-Campus</td>
<td>Off-Campus</td>
</tr>
<tr>
<td><strong>Campus Housing</strong></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Year in Housing</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>3 yrs: So, Jr, Sr</td>
<td>1 yr: Fr</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Academic Support Services Used</strong></td>
<td>• Tutoring</td>
<td>• Tutoring</td>
<td>• Tutoring</td>
<td>• Supplemental instruction</td>
<td>• Academic advising</td>
</tr>
<tr>
<td></td>
<td>• Academic advising</td>
<td>• Supplemental instruction</td>
<td>• Peer mentoring</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Barriers</strong></td>
<td>• Lack of faculty support</td>
<td>• Financial</td>
<td>• Financial</td>
<td>• Financial</td>
<td>• Financial</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Lack of faculty mentors</td>
<td>• Lack of Faculty Mentors</td>
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<td></td>
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<td></td>
<td>• Personal</td>
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<td>• Institutional</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>• Lack of advising</td>
<td></td>
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<td></td>
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<td></td>
<td>• Lack of info on campus activities</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>• Financial</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Personal</td>
<td></td>
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</tbody>
</table>
I provided handouts to explain the purpose and significance of the study, and reviewed terms and definitions (see Appendix I). I also explained ground rules of the focus group meeting (see Appendix J) including referencing fellow participants by their pseudonym. Focus group participants were asked to sign the focus group consent form (see Appendix C) after an explanation of the form. All five participants consented to participate in the survey, and consented for the session to be audio-recorded. Because Sharon was 20 minutes late to the meeting, she was not present for the initial discussion of study definitions, purpose, and ground rules. When Sharon entered the room, I stopped discussion for a moment to allow Sharon to read and sign the focus group consent form.

**Focus group one: managing the flow of discussion.** I explained each of the columns on the unfolding matrix which was taped to the wall to the focus group participants. The scribe captured comments on the unfolding matrix, and placed the pseudonym initials of the appropriate participant next to each of his or her comments on the matrix. For example, to introduce the column of frequency, I stated,

You see the columns on the wall—frequency means how often you feel you encounter these barriers. Infrequent may mean once a year. Frequent may mean more often. If you state frequent, please explain if you mean monthly, weekly, or daily. I’ll begin with Mark.

As noted in Table 4, four of the five participants noted financial barriers in the demographic survey, and three of the five participants cited lack of faculty mentoring or faculty support. As a result of the majority of participants noting financial barriers to academic success on the survey, this was used as the starting point for discussion at the focus group meeting. I began by asking the participants how they would like to define financial barrier. The group members responded that they preferred to use a broad, all-
encompassing definition of financial barrier rather than a narrowly defined definition such as lack of financial aid. As comments from participants regarding the financial barrier were captured on the unfolding matrix in each corresponding column (i.e., frequency, knowledge, actions, institution), I summarized key points and asked if they had any other thoughts before moving on to another barrier. For example,

Has anyone thought of anything else related to frequency, knowledge successful students need, etc.? We will keep this topic open so if you think of something and want to come back to it we will, but we’ll keep moving forward. Another barrier that was cited quite a bit by this group was lack of faculty mentors.

As the meeting progressed, I called on individual participants to ensure that each participant had an opportunity to speak, particularly if one participant attempted to monopolize the time on a given question; for example, “John or Jeff, do you have any thoughts?” As participants spoke during the meeting, I asked for clarification to ensure comments were clear to me and to the other participants; for example, “Stephanie, do you mean, seeking out information? I want to make sure I understand.”

Sharon deviated from the financial barrier at one point and raised the concern of racial discrimination as it relates to admission. Because this was a qualitative, phenomenological study, I let the participants take the conversation in the direction they wanted to take it, such as discussing other barriers or support services not mentioned in the demographic survey, provided it was related to the study.

The discussion on faculty mentoring opened the door to three unanticipated key barriers for the group not listed on the demographic survey, teaching assistants (TAs), the impact of commuting to school, and racial discrimination. Jeff opened the discussion of TAs while talking about institutional actions regarding faculty mentoring by stating, “I
feel like it should be an option where all classes should have, like a lot of math classes have, a TA who grades the quizzes/tests anyway for them, so I feel like the TA could get not only the grading experience, but the teaching experience.” This singular statement began a 15-minute discussion involving all of the participants about TAs and the impact of TAs on academic success.

The barrier of commuting evolved in a similar manner. While discussing faculty mentoring, Mark stated,

I think it’s important for the student to make that connection with the faculty if you feel they are not helping you if you are struggling, you need to go their office hours, get to know that person, because that’s helped me personally. I’ve been a little bit behind in some of my classes in the past and just going there and talking with them, creating that basis, really helped me personally.

In response to a follow-up question, Mark began to discuss his experiences as a commuter student, and the challenge of connecting with faculty due to not living on campus. Because the survey data showed that the participants were all commuter students at some point during their educational careers, we explored the concept of commuting to school further as it related to faculty mentoring.

Racial discrimination was a topic raised by Sharon in the context of discussing financial barriers. She discussed the topic specifically as it related to admission.

**Focus group one: member checking.** After the participants spoke for 60 minutes, I began to wrap up the conversation, and summarized key discussion points from the unfolding matrix. Member checking within the group session was employed to assess congruence with the data by individual participants. I asked if each participant individually agreed or disagreed with the list of barriers developed by the group as a whole, and if they had any additional comments or thoughts to be shared.
All students agreed with the barriers discussed as a representation of their overall group, but not as individual students. The frequency of most barriers differed between and among participants as noted in Table 5 for financial barriers, lack of faculty mentoring, and teaching assistants. Racial discrimination was a topic discussed by Sharon, but other participants did not offer commentary on the subject. At the conclusion of the meeting, I told the group members to feel free to contact me with follow-up thoughts, comments, or questions as they reflected back on the meeting. I did not hear from any of the participants after the focus group meeting.

**Focus group one: findings.** The focus group one session audio-recording was transcribed. The scribe had difficulty writing fast enough to capture all participant statements verbatim on the unfolding matrix paper during the focus group meeting, thus the transcription of the focus group was used in conjunction with the unfolding matrix for data analysis.

A total of three key barriers to academic success (see Table 5) were discussed exhaustively by the group as a whole including financial, lack of faculty mentoring, and teaching assistants (TAs). Two additional barriers, commuting and racial discrimination, were also discussed by the members of the group, but the barriers were not discussed exhaustively. Commuting was discussed as a contributing factor to the barrier of lack of faculty mentoring, but it was also a barrier, in and of itself. Racial discrimination was discussed by only Sharon, once during discussion of financial barriers, and again during discussion of lack of faculty mentors. Racial discrimination was not fully explored in the session across the columns of the matrix as other participants did not provide comments on this barrier.
<table>
<thead>
<tr>
<th>Barriers</th>
<th>Frequency</th>
<th>Knowledge</th>
<th>Student Action</th>
<th>Institutional Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial</strong></td>
<td>Mark, John, Stephanie:</td>
<td>Support groups</td>
<td>Self-Confidence</td>
<td>More on-campus jobs</td>
</tr>
<tr>
<td></td>
<td>Time-to-Quarterly</td>
<td></td>
<td>Go to support system</td>
<td>More scholarships (for biracial/multiracial)</td>
</tr>
<tr>
<td></td>
<td>Jeff: More often</td>
<td>Knowing financial aid</td>
<td>Networking (peers/others)</td>
<td>Make opportunities for funding readily accessible/known</td>
</tr>
<tr>
<td></td>
<td>Sharon: Not present during this topic</td>
<td>On-campus jobs</td>
<td></td>
<td>Provide funds to fill financial aid gap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Talking to parents/family</td>
<td>Use online resources</td>
<td>Base financial aid on student income</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How to be proactive</td>
<td>Talk to friends</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>How to network</td>
<td>Proactively seek out help</td>
<td></td>
</tr>
<tr>
<td><strong>Lack of Faculty Mentoring</strong></td>
<td>Stephanie, Jeff, John:</td>
<td>Know other options if mentor is not available</td>
<td>Self-confidence in abilities</td>
<td>Require off-campus faculty office hours for commuters or meet in central location</td>
</tr>
<tr>
<td></td>
<td>Not every day, but frequent</td>
<td>Tutoring center or major specific tutoring help</td>
<td>Seek out information</td>
<td>Require diversity training/course for faculty</td>
</tr>
<tr>
<td></td>
<td>Sharon, Mark: Frequently</td>
<td>Commuter center</td>
<td>Use tutoring or online help resources/online tutoring</td>
<td>Re-evaluate/improve commuter student services/programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faculty office hours</td>
<td>Get to know faculty/make connections</td>
<td>Assessment and training center/role playing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Know other students who have taken course</td>
<td>Use office hours</td>
<td>Hire knowledgeable faculty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Know peer mentor or friend</td>
<td>If commuting, make time/adjust schedule to attend office hours</td>
<td>Department Chair office/mentoring hours</td>
</tr>
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<td></td>
<td></td>
<td>Know upper-class student for guidance</td>
<td>If commuting, go to commuter center/office</td>
<td>Review sessions open to students from other sections of a course</td>
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<tr>
<td></td>
<td></td>
<td>Someone who understands/relates to ethnic background</td>
<td>Set up groups on Facebook for group study sessions</td>
<td>Limit number of courses each faculty member teaches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hands-on learning opportunities</td>
<td>Seek out peers for help/upper-class students</td>
<td>More office hours per faculty member</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strengths and teaching abilities of faculty members</td>
<td></td>
<td>Require faculty hours in tutoring center</td>
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<tr>
<td></td>
<td></td>
<td>Study habits</td>
<td></td>
<td>More hands-on teaching examples</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Know how faculty want work done (math, etc.)</td>
<td></td>
<td>Create Blackboard groups/pages by course subject area</td>
</tr>
<tr>
<td>Barriers</td>
<td>Frequency</td>
<td>Knowledge</td>
<td>Student Action</td>
<td>Institutional Action</td>
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<td>--------------------------------</td>
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<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Lack of Faculty Mentoring</td>
<td></td>
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<td>Class list contact information distribution</td>
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<td>Facilitate discussion chat groups online</td>
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<td></td>
<td>Offer recitation sections for all courses</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Select more qualified teaching assistants</td>
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</tr>
<tr>
<td>Teaching Assistants</td>
<td>Sharon: Not a barrier</td>
<td>Know who else to turn to for help in the department</td>
<td>Go to a different teacher/section</td>
<td>Departmental faculty listings by course</td>
</tr>
<tr>
<td></td>
<td>Others: Frequent in general education/foundation classes</td>
<td>Knowledgeable faculty in that subject area</td>
<td></td>
<td>University standard of teaching to ensure consistency</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Train TAs in different ways to solve problems (math)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Standardized evaluation tool/process</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Assessment program that incorporates student input, faculty/TA observation, and formal reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Place more emphasis on student input</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Improve supplemental instruction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Evaluate SI instructors</td>
</tr>
<tr>
<td>Commuting to School</td>
<td>Frequently (daily)</td>
<td>How to connect and network with faculty/peers/school</td>
<td>Requires student effort to be on campus and make connections</td>
<td>Faculty office hours should be flexible</td>
</tr>
<tr>
<td></td>
<td>Stephanie: No comments on topic</td>
<td>Where commuter center/office is located</td>
<td>Adjust schedule to make office hours/events</td>
<td>Offer office hours in convenient locations (on/off-campus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Re-evaluate and improve commuter programs</td>
</tr>
<tr>
<td>Racial Discrimination</td>
<td>Sharon: Frequently, not every day</td>
<td>Knowledge of different cultures</td>
<td>Open-minded</td>
<td>Require diversity training/course for faculty</td>
</tr>
<tr>
<td></td>
<td>Other participants: no comments</td>
<td>Exposure to different cultures</td>
<td></td>
<td>Assessment and training center/role playing</td>
</tr>
</tbody>
</table>

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Barrier 1: financial. As noted in the frequency column in Table 5, Jeff stated that financial barriers were almost a daily struggle in his life as compared to the other participants. He commented that the number of one’s siblings in college can be a factor in financial struggles. He has three brothers who are also in college right now, his parents make just enough money to disqualify him from possible loans, and his parents do not assist with his educational expenses. He and his three brothers all work while attending school full-time, and all “struggle trying to get through school, and it’s just really hard for all of us to make the money to stay in school.”

The idea of seeking help, networking, and being proactive emerged on a number of topics with respect to actions that successful biracial/multiracial students must take to overcome barriers to academic success, particularly as it pertained to financial barriers. Participants stated it was important to know where to go for financial advice and assistance. Participants also stated successful biracial/multiracial students must take action by being proactive in finding employment to offset college expenses through networking on and off-campus; seeking out information from a variety of resources including parents and/or family members, financial aid counselors, and online resources; and connecting with friends or peers. John best summarized actions that successful biracial/multiracial students must take by stating, “If you need help, help is not going to go towards you, you should be actively looking for help and not wait for someone to say it, because by then it may be a little too late.”

Participants developed numerous ideas for institutional action to overcome financial barriers. One of the ideas for institutional action focused on scholarship opportunities for biracial/multiracial students. Mark stated, “I think an institution in
general could provide more scholarship opportunities, and even specifically for biracial students, because I don’t know that many that are specifically just for biracial students.”

Jeff agreed with Mark by stating,

I think they need to be more easily accessible or well known. Even if there are scholarships out there, not many people know about them. They are not posted anywhere. You have to go looking through files or look on pages of the Internet to find any scholarship whatsoever. I feel like you need to be more open and out there so everyone has an opportunity to see it and apply for it.

Other suggestions for institutional action included offering more on-campus job opportunities as many off-campus employers are not as flexible working around class schedules, offsetting gaps in financial aid at the institutional and/or governmental level, and basing aid off of the student’s income rather than the family’s income. Stephanie stated it “was not right” that aid is based on parental income because “who is to say your parents are really going to help you pay for school.” In Sharon’s case, an adult student who is self-employed, she must still report her familial income despite their lack of financial support. Due to the funding formula for student financial aid, which incorporates familial income, she is eliminated from possible financial aid sources. Additionally, Sharon stated that the system of awarding aid is not very fair and that standards should be changed, because “unless you are very low income in the bottom say 20% of the population, they won’t give you any financial aid.”

*Barrier 2: lack of faculty mentoring.* The barrier of lack of faculty mentoring, while only cited by half of the group on the demographic survey, was the topic that elicited the most discussion and data from focus group one participants. The discussion on faculty mentoring comprised 30 minutes of the focus group meeting time. Within the overall discussion of faculty mentoring, arose a multitude of topics such as the impact of
commuting to school on connecting with faculty, lack of understanding as it relates to racial or ethnic background and heritage, and the impact of limited quality faculty resources on the academic success of the students.

The term faculty mentor did not have one singular definition across the group. Some participants attributed the term solely to classroom instruction; others used a broader definition. Stephanie defined it in this way, “When I think of faculty mentor, I think of a teacher, professor that would sort of help you or aid you. That’s what I think of. I feel like me personally, there are professors that don’t give me the help I need.”

Participants were candid in sharing their personal student experiences, and the experiences of friends and peers at the institution regarding faculty mentoring and instruction. Sharon related her comments specifically back to her self-identification as a biracial student by saying,

I would say the majority of times on campus I can’t find someone who understands my background, or my heritage, or my way of thinking to mentor me in a way that I feel is beneficial, to learn, and to strive and to become a better person, sometimes, to figure out where I want to go in life.

The knowledge a successful biracial/multiracial student needs to overcome the barrier of lack of faculty mentoring, according to the group, is primarily based on knowing that other options and resources exist on the campus. Some of the major points shared included knowing that there is a tutoring center on campus, and finding fellow peers as Jeff said, “Ask the right questions and you get people that have already been in the class with the teacher who can help push you that way.” Mark does not look to faculty for mentoring at all, but rather, as he stated, “I look to my friends, my peers, and my fraternity brothers more as mentors.” Campus resources such as tutoring and peers
also present their own limitations in higher level courses, particularly in math, as noted by Jeff, because it “becomes really hard to find someone to help you”.

The participants presented numerous examples of actions and behaviors that successful biracial/multiracial students can take to overcome the barrier of lack of faculty mentoring. As was the case with financial barriers, the ability to be proactive and seek outside resources was a prevalent theme in overcoming lack of faculty mentoring. When it comes to help with course content, Jeff discussed how online tutoring and websites that help with math problem solving are of value, but they also come with financial implications such as subscription fee charges.

The topic of faculty office hours evoked lots of discussion from all of the participants. Mark stressed the importance of having self-confidence, and of students connecting with faculty by visiting faculty during office hours whether for content clarification or when, as he stated, “I’ve been a little bit behind in some of my classes and going there and talking with them really helped me personally.” Jeff discussed faculty not booking enough office hours to allow for the volume of students and high volume teaching loads, and the difficulty of obtaining help from faculty, given the limited office hours, with difficult or complex problems in advanced level courses.

Being a commuter student also played a role in participants’ perceptions regarding the ability to access faculty office hours and lack of faculty mentoring. Mark who commuted his first year to college and now lives on-campus stated, “When I was a commuter student it was a lot harder. I think as a commuter student you have to put more effort into making those connections with people and everything just because you’re not there as often.” Jeff later added, “If you work that day and you only have five minutes to
get home, get changed, and get to office hours before they end and the office is filled up, then it’s going to have an effect.”

Of the five barriers discussed in focus group one, the list of institutional actions developed by the group in response to lack of faculty mentoring, evoked the most passionate and personal responses from the participants. In offering the institutional suggestion of reducing the faculty teaching load and equalizing office hours to teaching load, Sharon linked the concern of office hours to financial implications for students by saying, “we are paying thousands and thousands of dollars a semester to go here, to go to college to actually learn stuff, and we don’t get office hours or the help we need. I feel we are not getting the most of our education to become the best we can be.” Sharon also offered ways that an institution can combat the discrimination she has faced personally, such as requiring teachers to take courses on diversity and using role playing techniques to teach faculty about differences and ethnic heritage.

As a commuter student, Mark’s responses focused on ways to improve programming through evaluation of commuter services. He also discussed how technology can aid in making information “more readily accessible” to commuter students who struggle to make it to limited office hours.

Jeff’s frustration with finding academic help for higher level math classes prompted some creative recommendations such as (a) requiring academic deans and/or chairpersons to have office hours for one-on-one mentoring; (b) requiring instructors to extend office hours to students who are taking similar courses taught by other faculty; and (c) “having teachers go to the tutoring center every now and then to help kids out.” Jeff has taken much of the burden upon himself to learn course content given lack of
faculty mentoring by creating Facebook groups to establish peer group study sessions. Jeff, Sharon, and Mark suggested that the institution should use available technology to the full extent through institutional Blackboard pages and class distribution lists focused on specific degree programs or majors, thereby facilitating large study groups and interactions between and among faculty and peers in content areas.

**Barrier 3: teaching assistants.** While discussing institutional actions to overcome the barrier of lack of faculty mentoring, the participants raised the topic of TAs. Jeff believes that all courses should have recitation sections led by TAs. In response, John raised concerns regarding the quality of TAs by stating, “I think that some of the TAs they pick are some of the smartest people in the class, but they are not necessarily good at explaining things.” Stephanie agreed with John, and raised additional concerns regarding the quality of teaching assistants which opened up the topic for others to comment by stating,

I have a TA and it’s pointless to go to her or recitation because she is terrible. . . . maybe better pick the TAs. The whole point of a TA is to assist the teacher and assist us so we can learn the subject. What’s the point of having someone teach us the wrong way and then we screw our grades up because we do something the wrong way and we don’t understand the subject. I have plenty of friends that say they have unqualified TAs.

The participants perceived TAs as a barrier more frequently in general education and foundation courses taken during the first two years of college such as psychology, English, and mathematics. Mark had experienced a TA only one time in a psychology course; Sharon had no personal experience with TAs; and Stephanie and John experienced TAs in numerous courses. Jeff expressed his concerns with the impact of
TAs on a student’s GPA, “especially since the first and second year is critical for your GPA. If you start out bad, it’s going to be tough to get that back up.”

The participants believe that successful biracial/multiracial students need to know who else to seek help from such as other faculty within the department or knowledge experts in the given content area. The only student action item discussed was attending an alternate recitation section of a course if the TA teaching a specific section was not knowledgeable or helpful. Jeff stated that he “took the advice of a friend who said their TA was really good, and so I ended up going to their recitation class. I know it sounds bad, but I just switched recitation classes and didn’t tell anyone.”

Sharon opened up a discussion on the consistency of TAs in teaching courses which engaged all of the participants. Sharon felt that consistency is needed between the teacher and the TA, and if there are multiple TAs for a class, then there should be consistency in teaching between all of the TAs and the primary instructor. When she suggested a university-wide standard of teaching for TAs, she mentioned the adoption of a business model whereby the institution could “institute some type of corporate culture” to create consistency throughout the campus. John believes there should be a standardized evaluation tool used for evaluating TAs, just as there are evaluation tools for evaluating faculty. John also stated that “TAs should be knowledgeable that there are different ways to solve problems, like in math and chemistry, there are different ways to approach a problem. . .to get the same answer.” Jeff interrupted John while speaking to say that TAs are forcing students to solve problems using the same methods, because it is “easier to grade for the TAs.” Stephanie suggested that TAs should be more engaged with the students and what students are “struggling with in order to best help them,
because there are not many students in my (recitation) classes and it is easier to receive one-on-one attention.” Four additional institutional actions were raised by the participants including a program for undercover evaluation by teachers, which is similar to a secret shopper program; an assessment program to ensure hiring of qualified TAs following set university standardized guidelines; placing more weight on the opinions of students because as Sharon said, “If you don’t have students, how can you have a university?”; and expanding evaluation to include that of tutors and supplemental instructors who are fellow undergraduate students/peers who provide students with assistance in courses.

\textit{Barrier 4: commuting to school.} Commuting to school, and the challenges that commuter students face in connecting with faculty, staff, peers, and the campus community, were raised by participants within the context of discussing financial barriers and lack of faculty mentoring. The living situation of the participants, whether on or off-campus, was indicative of their perceptions of commuting as a barrier to academic success for biracial/multiracial students. Jeff, John, and Sharon have never lived on-campus and thus had no frame of reference to point out distinctions between living on and off-campus; they could only speak of their own experiences as commuter students. Mark lived off-campus his first year, and has lived on-campus from his sophomore year until the present day. Mark stated that as a commuter student it was more difficult for him to make connections with people due not to physically being on campus as often as a student who lives on-campus. In response to the issue of connecting with faculty, Sharon offered an institutional action item by recommending that faculty meet commuter students off-campus such as “at Starbucks down the street.”
The participants perceived the services available to commuter students at the institution not to be helpful. Mark summed it up best when he stated, “They have a commuter office and stuff, and a lot of different programs that they say are supposed to help you, but it never really helped me at all, and just being a commuter was a barrier.” One way to improve commuter services and programming according to Mark is, to “re-evaluate what’s working, what’s not, and what areas need to be improved.”

Participants recommended that students can overcome the barrier of commuting by adjusting life schedules to make time to be on campus, networking with individuals on and off-campus, and putting forth the effort to connect with others. Through networking with an individual off-campus, Jeff found off-campus employment at a local restaurant which has helped to alleviate some of his financial struggles in paying for school.

**Barrier 5: racial discrimination.** As noted in Table 5, racial discrimination was a topic raised during the meeting in relation to financial barriers and lack of faculty mentors. The topic of racial discrimination was raised only by Sharon. Further discussion in the meeting elicited few comments from other participants, other than an affirming “yeah” by Jeff, in response to Sharon’s comments. Specifically, in the context of financial barriers, Sharon stated, “Race is a barrier even for admissions. A lot of colleges base it off you know, your race. . . .they have so many people that are say Asian, or African-American, or whatever. Once they meet their quota, they don’t let anyone else in.”

Sharon raised racial discrimination again while the group was discussing faculty mentoring by stating,

I know I have suffered discrimination because I’m mixed. I’m Asian and White. I’ve suffered discrimination from both sides because they say ‘well, you should
conform to being this way.’ No, that’s not who I am. I am this way, and you should accept me for who I am. I think that’s a big problem. A lot of people, even students, aren’t exposed to different cultures. They don’t know how to react to people’s differences or their personalities.

Sharon did not offer any specific thoughts related to knowledge successful biracial/multiracial students need, or actions that successful students or institutions can take, regarding the barrier of racial discrimination. The items noted in Table 5 under racial discrimination all directly related back to the barrier of lack of faculty mentoring. While racial discrimination was not fully explored by participants in the first focus group meeting, it should not be discounted as a barrier to academic success given the impact on Sharon as noted through her comments.

Observation notes regarding focus group one. After the participants of focus group one left the conference room, the scribe and I discussed our thoughts and perceptions of the session including group dynamics, demeanor, and body language of participants. I audio-taped the conversation with her permission, and then transcribed the recording.

Our observations focused on group dynamics. The four initial focus group participants contributed equally to the overall focus group conversation prior to Sharon’s late arrival. The scribe and I both concluded that the overall dynamic of the group dramatically changed once Sharon arrived. Sharon began speaking immediately upon arrival, and was fairly outspoken and lengthy in her comments. It was initially difficult to interrupt Sharon in order to allow other participants to speak. Stephanie contributed less to the conversation after Sharon’s arrival. I continued to call on individual students to ensure their voices were heard for the remainder of the session time such as “Stephanie, how do you feel?” or “Mark, what do you think?” Sharon shared with the
group that she is a 28-year old student who runs her own business. The other students were of a traditional college age between 18-22 years old. The scribe and I concluded that the change in both the group dynamic and demeanor of the other four participants resulted from how outspoken Sharon was in the session, Sharon’s late arrival to the meeting, and/or Sharon’s disclosure of being a non-traditional/adult student.

Food was served at the conclusion of the 60-minute focus group conversation, and participants engaged in a lively conversation for nearly 30 minutes beyond the stated meeting time. The participants spoke as if forming a friendship with one another. The students disclosed that they did not know each other’s true identity or name prior to the session. The focus of the conversation included participant self-disclosure of racial self-identification, and a discussion of how each participant believed that people viewed him or her from the perspective of physical appearances (phenotypes). Mark stated to the group that he self-identifies as White and African-American. He disclosed how people in general often thought he was Hispanic due to his physical appearance. Sharon commented that he “looked Arab.” The participants used phenotypes to assess each other in making their own assumptions and judgments regarding fellow biracial/multiracial students. John, who physically appears white, stated that his mother is from Costa Rica, and he self-identifies as White and Hispanic. In observing the participants, it appeared to me that the group members viewed John as a less authentic biracial student, as they did not acknowledge his comments or include him in remaining casual conversation.

The participants also discussed involvements, and career and personal goals. Based on the casual conversation between participants, the institution was an affordable choice for a few of the students, and may not have been a first choice of college. Mark
plans to pursue a medical degree at Howard or Morehouse. He did not share if his experiences as an undergraduate biracial student at a PWI influenced his decision to want to attend an historically black institution for post-graduate work.

Focus group two. In preparation for the second focus group meeting, the demographic survey data from the participants of group two were analyzed to note responses to two key questions—academic support services used and barriers encountered. The responses to the two key survey questions were used to guide the overall discussion of the focus group meeting.

The protocol used for the focus group one meeting was employed for the second focus group meeting. The second focus group occurred in a meeting room inside the Student Union at 12pm on a Saturday. All logistics from the first focus group meeting including room set-up, use of table tent cards with the pseudonyms of the participants, greeting of the participants, and seating of the participants were the same. A different color of marker was used on the unfolding matrix during the second focus group meeting for ease of distinction between the focus group one and focus group two comments. The unfolding matrix papers from focus group one were taped to another wall in the room.

Focus group two: participants. The composition of the second focus group was to include two female students, and two male students, all of whom self-identified as biracial (see Table 6). Only one of the female students, however, participated in the focus group meeting; the other female student contacted me minutes before the meeting was scheduled to state that she was unable to attend.
### Table 6

**Focus Group Two: Demographic Survey Data**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Brian</th>
<th>Peter</th>
<th>Ramona</th>
<th>*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Range</td>
<td>18-22</td>
<td>18-22</td>
<td>18-22</td>
<td>18-22</td>
</tr>
<tr>
<td>Class Standing</td>
<td>Sophomore</td>
<td>Junior</td>
<td>Senior</td>
<td>Junior</td>
</tr>
<tr>
<td>Biracial/Multiracial</td>
<td>Biracial</td>
<td>Biracial</td>
<td>Biracial</td>
<td>Biracial</td>
</tr>
<tr>
<td>Racial/Ethnic Self-Identification</td>
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<td>•White</td>
<td>•White</td>
<td>•African-American</td>
</tr>
<tr>
<td></td>
<td>•Arab</td>
<td>•African-American</td>
<td>•Asian</td>
<td>•Hispanic</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>Male</td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Academic Major</td>
<td>Mathematics</td>
<td>Undecided, Pre-Med</td>
<td>Communications</td>
<td>Accounting/Marketing</td>
</tr>
<tr>
<td>Cumulative GPA Range</td>
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<td>3.0 – 4.0</td>
<td>3.0 – 4.0</td>
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<td>N/A</td>
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<td>•Filipino American Association</td>
<td>•Miniya</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>•Writer’s Guild</td>
<td>•Co-Ed Business Fraternity</td>
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<td></td>
<td></td>
<td></td>
<td>•Campus TV Station</td>
<td>•Black Student Union</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>•Catholic Student Association</td>
<td>•Latino Student Union</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•Minority Student Business</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dev. Network</td>
</tr>
<tr>
<td>Employment</td>
<td>N/A</td>
<td>Off-Campus</td>
<td>On-Campus (Writing Center, academic dept., newspaper)</td>
<td>On-Campus (Copy Center)</td>
</tr>
<tr>
<td>Campus Housing</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year in Housing</td>
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<td>2 yrs: So, Jr</td>
<td>2 yrs: Fr, So</td>
<td>2 yrs: Fr, So</td>
</tr>
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<td>Academic Support Services Used</td>
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<td>•Academic Advising</td>
<td>•Peer Mentoring</td>
<td>•Peer Mentoring</td>
</tr>
<tr>
<td></td>
<td>•Academic Advising</td>
<td></td>
<td></td>
<td>•Academic Advising</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•Tutoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•Faculty Mentoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•Service Learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•Community Mentoring</td>
</tr>
<tr>
<td>Barriers</td>
<td>•Personal</td>
<td>•Personal</td>
<td>•Personal</td>
<td>•Learning</td>
</tr>
<tr>
<td></td>
<td>•Financial</td>
<td>•Financial</td>
<td>•Lack of peer support</td>
<td>•Limited library hours</td>
</tr>
<tr>
<td></td>
<td>•Learning</td>
<td>•Lack of info on campus activities</td>
<td>•Insufficient study areas</td>
<td>•More library hours on weekends</td>
</tr>
</tbody>
</table>

*Student did not show up for focus group meeting*
I began the meeting in the same manner that I began focus group one, with an introduction of myself and the scribe, and an explanation of the purpose and the significance of the study, the ground rules, and the consent form. The three participants in attendance consented to participate in the focus group meeting, and consented for the session to be audio-recorded.

**Focus group two: managing the flow of discussion.** Once consent was granted from participants to begin the second focus group meeting, I used the unfolding matrix from focus group one and the example of financial barrier to explain the columns and terminology to focus group two.

As noted in Table 6, three of the four participants cited personal barriers on the demographic survey. Personal barriers were used as the starting point for discussion at the second focus group meeting. The participants chose to define the barrier of personal as racial discrimination and justification of self-identification to others. Participants were individually called upon to ensure that each participant had an opportunity to respond to focus group questions posed. All three participants in focus group two contributed to the conversation equally, although Ramona was generally the individual to respond first when the group was asked a question.

The conversation in focus group two was difficult to follow. It often veered off course and went in circles around a topic. Some comments were raised out of context to the questions posed. The scribe attempted to capture all of the comments on the unfolding matrix for focus group two, but it proved to be difficult given the flow of conversation.
The focus group spent the majority of time discussing personal barriers. The discussion on personal barriers led to a discussion on the lack of peer mentoring in the major, a barrier that was not identified by participants of focus group two on the demographic survey.

**Focus group two: member checking.** After the participants spoke for 60 minutes, I began to wrap up the conversation, and summarized key discussion points from the unfolding matrix. Member checking within the group session was employed to assess congruence with the data by individual participants. I asked each participant individually if he or she agreed or disagreed with the list of barriers developed by the group as a whole (see Table 7), and if there were any additional comments or thoughts to be shared.

As with focus group one, all students agreed with the barriers discussed as a representation of their overall group, but not as individual students. Ramona agreed with the group’s overall discussion, but questioned if there might be some things missing, because all of us are mixed with half-white. I feel if someone was mixed with say Hispanic and Black, maybe they would feel differently. I feel from our perspective, at least from my perspective, those are the biggest concerns, mostly financial and peer mentoring.

Peter agreed by stating,

Everyone has personal issues, but with the biracial most of your issues are based on financials, or people’s comments, and once you get into college you get lost in the shuffle. . . .so if we had mentoring programs within our major, we might actually realize what we like, what we don’t like, and find ways to make it through our major.

The frequency of the barriers differed slightly between and among participants as noted in Table 7 for the barriers of personal and peer mentoring in the major. Peter and Brian experienced personal barriers, specifically racial discrimination, more frequently.
Table 7

*Focus Group Two Unfolding Matrix*

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Frequency</th>
<th>Knowledge</th>
<th>Student Action</th>
<th>Institutional Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>Often during K-12, particularly high school years; not as frequent in college</td>
<td>How you self-identify</td>
<td>Educate others and self on diversity/cultures</td>
<td>Better integration of multicultural education into curriculum</td>
</tr>
<tr>
<td>Defined as: Racial discrimination and justification of self-identification/stereotyping</td>
<td>Varies in college; sometimes frequent (weekly) and sometimes monthly</td>
<td>Definition of biracial/multiracial</td>
<td>Do not judge or classify others</td>
<td>Discuss race in a classroom environment that is diverse; reduce discomfort for students of color</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diversity</td>
<td>Do not push culture/beliefs on others</td>
<td>Explain multicultural education requirements to students</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expect to encounter discrimination and understand that ignorance, discrimination, and stereotyping exist in the world</td>
<td>Ignore the ignorance of others</td>
<td>Reduce multicultural curricular requirements regarding U.S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How to use race for personal advantage/gain (employment, educational opportunities, etc.)</td>
<td>Determination to do well</td>
<td>Diversity aspects; focus on other countries/cultures (Europe, etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do not take comments personally</td>
<td>Seek out support of peers</td>
<td>Peer mentoring programs based on similarities (pair biracial together)</td>
</tr>
<tr>
<td>Lack of peer mentoring (in major)</td>
<td>Every day</td>
<td>When/where departmental (major) events are held</td>
<td>Attend cultural events/programs sponsored by institution</td>
<td>Peer mentoring based on major</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Knowledge of campus resources</td>
<td></td>
<td>Peer mentoring based on cultural differences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Knowledge of educational opportunities/ internships</td>
<td></td>
<td>Housing assignments based on major rather than race</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Buildings (locations)</td>
<td></td>
<td>Opportunities for interaction with peers in major</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Professors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Institutional Action:
- Create opportunities for peer interaction/departmental events
- Create opportunities for interdisciplinary interactions/events
- Educate students on resources/streamline information
- Place campus maps in better locations/improve maps
- Improve building signs/locations
- Tour of student class schedule/buildings prior to start of first semester
during their adolescent years, while Ramona has experienced racial discrimination more frequently while in college. As a biracial female, Ramona experienced racial comments on a different frequency than the male participants. She shared many experiences of harassment in the form of verbal comments from male students at the institution such as,

> I don’t think Peter or Brian would have this happen to them. I have really strange remarks made to me when men find out I’m Asian. It’s very creepy. . .next thing out of his mouth was that “it’s not one of my life goals to date an Asian” and I thought that was inappropriate and creepy. It borders on harassment, and makes me uncomfortable.

Additionally, because Ramona’s legal name is of a Spanish origin, people often mistake her for an Hispanic female and not as she self-identifies, which is Asian. Receiving invitations to Hispanic history month events and Latino events from the institution “irritates and annoys me, and I hate having to explain myself all the time.”

**Focus group two: findings.** The focus group two session audio-recording was transcribed. The scribe had difficulty writing fast enough to capture all participant statements verbatim on the unfolding matrix paper during the focus group meeting, thus the transcription of the focus group was used in conjunction with the unfolding matrix for data analysis. Two key barriers to academic success (see Table 7) were discussed exhaustively by the group as a whole including personal and lack of peer mentoring in the major.

**Barrier 1: personal.** Participants of focus group two shared many personal experiences of how they are perceived by others as biracial individuals. The overriding theme that permeated throughout all of their stories was that of dealing with the ignorance of others, and encountering stereotypes and racism, particularly as biracial adolescents and young adults in higher education.
The participants viewed the ignorance of others as an annoyance in their lives more so than a barrier to their academic success. They also shared that as compared to their K-12 educational experiences, their peers in college ask different questions of them regarding their race, and are not as hurtful or mean in their comments. Occurrences of racism and remarks in college for the participants tended to occur in social settings more than in academic settings such as the classroom.

Ramona has struggled with having to explain that she is “not one thing or another thing,” and with being classified by others as only one race. In fourth grade she was informed that she was not biracial, because she was not half-black, and that “only individuals that are half-white and half-black are biracial.” Peter’s experiences have involved stereotypes such as what he calls “being a thug” or “being ghetto” due to being raised in a predominantly white neighborhood in a predominantly black town in the south. He has endured statements that he is “going to hell because you’re biracial” from classmates as a child, and people asking if he has been incarcerated.

Phenotypes were a large part of the discussion regarding personal barriers. Peter has been asked if he is Asian because of having small eyes, or if he is an illegal immigrant or knows how to speak Spanish, due to his ethnic appearance. Brian is routinely asked if he is “Jewish or Black because I have an afro and a big nose. I’m not, I’m Arab and Caucasian.” Ramona has faced lewd comments from male college students and questions from international students asking if she speaks Chinese due to her physical appearance as an Asian female.

With respect to phenotypes and seeking employment as a student on campus, Peter believes that his Anglo-Saxon name has helped open the door for interviews, but
his appearance of what he calls “looking Black” then closes the door on employment due to stereotypes. Ramona believes that her biracial status has opened the door for on-campus employment, because of her appearance and ability to understand “Asian professors” due to understanding her father’s Philippine accent.

To overcome personal barriers such as racial discrimination, Peter feels that the knowledge required is that “you can’t take it too personal. People are people. Some people ask because they genuinely want to know, and other people find some reason to make fun of you for a reason, but you can’t take it personal.” Brian echoed Peter’s comments by saying, “Take it worth [sic] a grain of salt. You can educate some people, but you can’t change everybody.” Ramona believes that the problems biracial students face are facets of societal education that should be addressed long before students get to college. According to the participants, attending cultural events and programming can help educate college students about other cultures, as well as taking multicultural education courses. The knowledge that diversity exists and an understanding of cultural differences are needed to overcome assumptions and stereotypes. One example cited was differences among and within Asian or Hispanic cultures.

Participants commented that innate human characteristics, such as the ability to be stubborn and determined, are behaviors and actions that will help biracial students overcome personal barriers. Other recommended behaviors and actions from participants included surrounding oneself by others from the same cultural background, and not feeling ashamed of who or what you are through recognizing that the problem does not lie within oneself, but with the ignorance of others.
Focus group two participants discussed many institutional actions that could occur to help biracial/multiracial students overcome personal barriers. The group spent about 10 minutes discussing multicultural courses within the context of the curriculum and degree requirements. Discussions surrounding race, according to participants, should be intentional, discussed in an environment where diversity exists in the setting of the conversation, and explained to students as it relates to applicability to one’s life and education. Ramona commented that most of her friends take whatever course is easiest in the curriculum, and that requiring additional multicultural courses would anger students. Brian also stated that while it’s important to know about diversity, it should not be forced upon students, as it will create more animosity. When questioned about a curriculum option such as offering courses on biracial/multiracial student development, the participants expressed sentiments such as “I don’t see how it would be different. I feel like I’m just like the other students” and “I don’t feel that I’m different than anyone else who is trying to get through college.” Ramona believes that intentionality is important when incorporating multicultural coursework into the curriculum as noted by her statement, “Saying you should learn about people that are a different color just because they are a different color is not the right reason to learn about something.”

When asked if there are academic support services an institution can have in place to help overcome personal barriers, Ramona raised the topic of peer mentoring. Ramona participated in a peer mentoring program at the institution, but stated she quit out of frustration. She discussed her thoughts on the ineffectiveness of pairing peer mentors solely by randomization and not by similarities in racial identification by stating,

I feel like I would have benefited more if I had a mentor who was mixed or Asian, and I’m pretty sure that the students I was mentoring probably would have
benefited more from having a black mentor because they both identified as African American. I know the one girl was mixed, but she identified as African American. It’s like, if you’re going to have a peer mentoring program, you should pay more attention to what students are going where, because otherwise it’s kind of pointless.

Participants all agreed that intentionality of peer mentoring programs based on similarities was important. Brian offered an opposing opinion in that perhaps having a mentor who is similar to oneself is counter-productive to enhanced multiculturalism and understanding of diversity.

Barrier 2: lack of peer mentoring (in major). As the conversation continued regarding peer mentoring, the topic of lack of peer mentoring specifically in the major was determined to be a barrier for biracial/multiracial students according to participants. Peter discussed how a peer mentoring program within his major would have helped him “realize what I like, what I don’t like, and ways to make it through the major.” Participants commented that the college course structure in many majors, such as a lecture style classroom format, is not conducive to meeting other students; students go to class, do what needs to be done in the classroom, and then leave the classroom without peer interaction. Ramona commented on the irony of lack of communication between peers in her major—communication. Not knowing other students within the major, and lack of a peer mentoring program to connect students within a specific major or degree program, are barriers that focus group two members experience on a daily basis.

To overcome the barrier of lack of peer mentoring (in the major), knowledge of activities on campus and within the major are critical to encourage interaction of peers. The participants discussed how the action of attending both major and college events to interact with peers positively impacted their knowledge of professors and educational
opportunities such as internships, enhanced understanding of the major and career path, and encouraged interaction within and between majors to spark interdisciplinary research.

Knowing that educational opportunities and resources exist is critical to student success according to participants, but taking the initiative to attend major events is required to ensure success. Ramona shared some of her frustrations with the amount of information and knowledge that students must know their freshmen year to overcome barriers (heuristic knowledge), and how it can be a struggle “to find out where you need to go to class” due to confusion on campus maps and poor building signage. Peter discussed how taking the initiative to walk through campus to find where classes are located prior to the start of a semester can overcome such frustrations.

Participants recommended that institutions should encourage attendance at major and college events through regular communications such as faculty e-mail announcements. Participants all expressed how institutional actions such as the production of enhanced campus maps, improved signage on buildings, and creating opportunities for peer and faculty interactions, could improve knowledge of educational opportunities to enhance student success.

**Observation notes from the moderator regarding focus group two.** At the conclusion of focus group two, the scribe left for a period of time and did not return to the meeting room until it was time for the third focus group to begin. Between the focus group two and three meetings, I audio-taped my observations of the focus group two meeting and transcribed the taping.

The second focus group raised many philosophical questions during the meeting, and provided numerous recommendations for both student and institutional actions to
overcome the two barriers discussed in the group. As compared to focus group one, more conversation was related to being a biracial student rather than to being a student in general, and how prior life experiences (pre-college) have impacted them such as dealing with ignorance and discrimination. Much of the conversation did not focus on what the barriers mean to the students in regards to their academic success, thus they struggled with defining the knowledge a successful biracial/multiracial student needs to overcome the barriers.

**Focus group three.** In preparation for the third focus group meeting, the demographic survey data from the participants were analyzed to note responses to two key questions—academic support services used and barriers encountered. The responses to the two key survey questions were used to guide the overall discussion of the focus group meeting.

The protocol used for the first two focus group meetings was employed for the third focus group meeting. The third focus group meeting occurred on the same day, and in the same meeting room as the second focus group meeting, inside of the Student Union. The third focus group meeting occurred at 3pm, just shortly after the second focus group meeting ended. All logistics from the prior focus group meetings including room set-up, use of table tent cards with the pseudonyms of the participants, greeting of the participants, and seating of the participants were the same.

The scribe stood at the front of the room with blank pieces of paper representing each of the columns of the unfolding matrix taped to the wall. A different color of marker was used for the third focus group meeting for ease of distinction between the
first and second focus group unfolding matrices. The unfolding matrix papers from focus
group one and two were taped to another wall in the room.

**Focus group three: participants.** The composition of the third focus group was
to include one male student, and three female students. The four students self-identified
as multiracial (see Table 8), but one student selected only two racial/ethnic categories on
the demographic survey. Two of the female students participated in the focus group
meeting; the third female student did not show up.

I began the meeting with an introduction of myself and the scribe. I provided
handouts to explain the purpose and significance of the study, and reviewed terms and
definitions. I also explained ground rules of the focus group meeting. The three
participants in attendance consented to participate in the focus group meeting, and
consented for the session to be audio-recorded.

**Focus group three: managing the flow of discussion.** Once consent was granted
from participants to begin the third focus group meeting, I used the unfolding matrix
from focus group one to explain the columns and terminology to focus group three. I
began the meeting asking if the participants had encountered financial, faculty mentoring,
or TA barriers. As noted in Table 9, participants added some institutional actions to the
barrier of financial from the unfolding matrix of focus group one. I then referenced focus
group two’s unfolding matrix, and asked each participant if he or she had encountered
personal or peer mentoring barriers. After 20 minutes of member checking comments,
we began to explore the perceptions of focus group three participants.

As noted in Table 8, three of the four participants cited lack of information on
campus activities as a barrier on the demographic survey. Lack of information on
Table 8

Focus Group Three: Demographic Survey Data

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Robert</th>
<th>Rachel</th>
<th>Laura*</th>
<th>**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Range</td>
<td>18-22</td>
<td>18-22</td>
<td>18-22</td>
<td>18-22</td>
</tr>
<tr>
<td>Class Standing</td>
<td>Junior</td>
<td>Sophomore</td>
<td>Sophomore</td>
<td>Sophomore</td>
</tr>
<tr>
<td>Biracial/Multiracial</td>
<td>Multiracial</td>
<td>Multiracial</td>
<td>Multiracial</td>
<td>Multiracial</td>
</tr>
<tr>
<td>Racial/Ethnic Self-Identification</td>
<td>• White • Asian • Native American</td>
<td>• White • African-American • Hispanic</td>
<td>• White</td>
<td>• White • African-American • Native American</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>Female</td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Academic Major</td>
<td>• Philosophy • Religious Studies</td>
<td>• Social Work</td>
<td>• Environmental Science</td>
<td>• Law and Social Thought</td>
</tr>
<tr>
<td>Cumulative GPA Range</td>
<td>3.0 – 4.0</td>
<td>3.0 – 4.0</td>
<td>2.0 – 3.0</td>
<td>2.0 – 3.0</td>
</tr>
<tr>
<td>Campus Involvements</td>
<td>• Catholic Student Association • Rowing • Student Activities Committee</td>
<td>N/A</td>
<td>N/A</td>
<td>• Miniya</td>
</tr>
<tr>
<td>Employment</td>
<td>On-Campus (transit, writing center, library)</td>
<td>On-Campus (work study)</td>
<td>Off-Campus</td>
<td>N/A</td>
</tr>
<tr>
<td>Campus Housing</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Year in Housing</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>2 yrs: Fr, So</td>
</tr>
<tr>
<td>Academic Support Services Used</td>
<td>• Undergraduate research</td>
<td>• Tutoring</td>
<td>• Tutoring • Academic advising</td>
<td>• Peer mentoring • Academic advising</td>
</tr>
<tr>
<td>Barriers</td>
<td>• Insufficient study areas • Institutional • Personal • Lack of friend support</td>
<td>• Lack of info on campus activities • Insufficient study areas</td>
<td>• Lack of info on campus activities • Personal • Financial • Learning • Lack of faculty support</td>
<td>• Lack of info on campus activities • Institutional • Learning</td>
</tr>
</tbody>
</table>

*Student self-reported multiracial, but only self-selected two racial categories
**Student did not show up for focus group meeting
campus activities was used as the starting point for discussion at the third focus group meeting. Participants were individually called upon to ensure that each participant had an opportunity to respond to focus group questions posed. All three participants in focus group three contributed to the conversation equally, although Rachel was generally the individual to respond first when the group was asked a question.

The focus group spent the majority of time discussing two key barriers—lack of information on student activities and campus events, and institutional barriers that focused on institutional infrastructure. One additional barrier, “tenured” faculty as the participants called it, arose towards the end of the meeting, but there was not enough time remaining in the session to fully explore.

Focus group three: member checking. After the participants spoke for 60 minutes, I began to wrap up the conversation, and summarized key discussion points from the unfolding matrix. Member checking within the group session was employed to assess congruence with the data by individual participants. I asked each participant individually if he or she agreed or disagreed with the list of barriers developed by the group as a whole (see Table 9), and if there were any additional comments or thoughts to be shared.

All students agreed with the barriers discussed as a representation of their overall group. All three of the participants individually commented on how well they felt the group interacted, and how each member contributed to the overall conversation. I then asked the group a question that I did not ask the other two focus groups during member checking. I asked if they believed the barriers and discussion points discussed during the
<table>
<thead>
<tr>
<th>Barriers</th>
<th>Frequency</th>
<th>Knowledge</th>
<th>Student Action</th>
<th>Institutional Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Base scholarships off of community involvement, merit, service, and/or GPA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Remove or reduce race as scholarship criteria</td>
</tr>
<tr>
<td>Lack of information about student activities/campus events</td>
<td>Very Frequent</td>
<td>Campus resources</td>
<td>Learn where resources are located</td>
<td>E-mail students event calendars</td>
</tr>
<tr>
<td></td>
<td>Daily</td>
<td>Places to go to obtain information (commuter lounge, activities fair, etc.)</td>
<td>Adjust schedule to attend events</td>
<td>Post flyers/calendars in all buildings/everywhere</td>
</tr>
<tr>
<td></td>
<td></td>
<td>College newspaper</td>
<td>Read flyers/campus newspaper</td>
<td>E-mail students college/major specific events</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Who you are as a person, what you believe in</td>
<td>Attend cultural events, fairs or group meetings</td>
<td>Create a student organization for biracial/multiracial students</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stay true to who you are as a person/what you believe in</td>
<td>Adjust the days/times of student activities and campus events to accommodate student schedules</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Jump in and try new things</td>
<td>Modify applications/forms to list “multiracial” rather than “other” or an option to select multiple racial categories</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Detach slightly from family to experience new things in college</td>
<td>Use application data about race/ethnicity to tailor communications/events to biracial/multiracial students</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Read e-mail</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Visit buildings to read flyers/postings</td>
<td></td>
</tr>
<tr>
<td>Institutional Infrastructure Barriers</td>
<td>Daily</td>
<td>Know where alternative study spaces/resources can be found on and off-campus</td>
<td>Seek help/advice from upper-class students</td>
<td>Ensure fiscal responsibility--devote funds to students</td>
</tr>
<tr>
<td>• Library</td>
<td></td>
<td></td>
<td>Go to alternative places (Kinkos, public libraries)</td>
<td>Invest in books, periodicals, journals, student employees (work study), and library support staff</td>
</tr>
<tr>
<td>• Computers</td>
<td></td>
<td></td>
<td></td>
<td>Add study spaces</td>
</tr>
<tr>
<td>• Printers</td>
<td></td>
<td></td>
<td></td>
<td>Increase number of printers</td>
</tr>
<tr>
<td>• Lack of staff</td>
<td></td>
<td></td>
<td></td>
<td>Improve printer maintenance</td>
</tr>
<tr>
<td>• Study spaces</td>
<td></td>
<td></td>
<td></td>
<td>Take some computer labs offline to avoid class conflicts/use of facilities</td>
</tr>
</tbody>
</table>

116
<table>
<thead>
<tr>
<th>Barriers</th>
<th>Frequency</th>
<th>Knowledge</th>
<th>Student Action</th>
<th>Institutional Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow conference rooms to be used as study spaces</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post printer locations/study spaces</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Tenured” Faculty</td>
<td>Daily</td>
<td>Know alternative faculty</td>
<td>Seek advice of other faculty</td>
<td>Hire faculty with real-world experience</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Form relationships with other faculty – mentor/adviser</td>
<td>Hire faculty who can bring diversity to the curriculum</td>
</tr>
</tbody>
</table>

meeting were specific to biracial/multiracial students, or if they were global issues that all students encountered. Robert stated, “I think that there are a lot of institutional barriers built into the system. It’s not like they are saying ‘wow, today we are going to pick on the biracial people’. . . . it’s a system not designed for us.” Rachel agreed with Robert, and stated that she did not expect the institution to cater to biracial/multiracial students, but that biracial/multiracial students should be “heard more.” Laura concurred with the other participants as well, and felt that the focus needs to be on people as individual students.

**Focus group three: findings.** The focus group three session audio-recording was transcribed. Two key barriers to academic success (see Table 9) were discussed exhaustively by the group as a whole including lack of information about student activities and campus events, and institutional infrastructure barriers. A third barrier, “tenured” faculty, was introduced by the group, but not exhaustively discussed due to time constraints.

**Barrier 1: lack of information about student activities and campus events.** All three participants in focus group three discussed how they were unaware of student activities and events occurring on campus. Rachel discussed how her status as a
commuter student, and her lack of interaction with other students in her on-campus job, as well as the physical location of her employer, impeded her ability to know what is happening on campus. Laura and Robert both referenced a student activities fair that takes place at the beginning of the semester, but that the timeframe and location of the event make it impractical for students to attend due to class and work schedules.

When asking participants about the frequency of the barrier of lack of information on student activities, all three concurred that it was a frequent and daily experience. The timing of events (late evening), lack of advertising, and on-campus employment that keep the participants busy during the day, made participation inconvenient according to the group. The barrier of financial constraints also impacted the ability of students to participate in student activities and events, because of the need to work to pay for school. Robert expressed sadness and regret by saying, “It made me miss out on a huge part of being in college that I can never get back, and it’s too late to get back now. . . . I feel detached.”

Rachel expressed her hesitation in attending multicultural events over fear of lack of acceptance from other students due to her appearance, and having to choose (or reject) part of her self-identity. She discussed receiving event invitations from the Latino Student Union, but due to her self-identification as a multiracial student, she feels she would have to deny part of her identity in order to participate, a choice she is not willing to make at this time. Laura stated that she wants to meet new people who are different from her, and who do not care about race. Robert shared that he does not participate in events related to his mother’s ethnic culture, because his father’s family (Caucasian) does
not understand it. While Robert relates to his mother’s ethnic heritage, he stated he is “not willing to explore it.”

To overcome the barrier of lack of information on student activities, participants feel that it is important to be willing to try something new, but to stay true to who you are and what you believe in, as a student who self-identifies as biracial or multiracial. Robert stated that he would encourage students to jump in and become active, which may mean detaching a little bit from your family in order to experience new things in college.

According to the participants, the knowledge needed to overcome the barrier is knowledge of campus resources, knowledge of where to find information, and knowledge of the student newspaper.

Rachel initially began the discussion of behaviors needed to overcome the barrier from the framework of a student who does not self-identify as biracial/multiracial. She believes that students at the collegiate level should ask questions about a biracial/multiracial student’s background (whether at a student activity or not) in a polite and respectful way through sharing of information about one’s own heritage and background. She passionately shared numerous experiences whereby peers have approached her at the institution asking her “what are you?” and “is your hair real?” for which she replied using profanity due to her own outrage at being asked a “close-minded” question. Other suggested actions and behaviors from the participants included (a) being proactive and finding out about campus resources including reading event postings on bulletin boards; (b) visiting the Student Union and other buildings for information; (c) participating in major specific student organizations and events;
(d) asking other students for information; (e) altering work schedules to allow for participation; and (f) reading campus e-mails.

The list of suggested institutional actions from the participants was lengthy. Suggestions included (a) creating and emailing a calendar of events out regularly to students that includes major specific events and scholarship opportunities; (b) encouraging participation in academic and social groups through e-mails; (c) posting flyers in all buildings on campus; (d) adjusting the days and times of student activities and campus events to accommodate student schedules; (e) creating a biracial/multiracial student organization that protects anonymity of race/ethnicity; (f) modifying institution applications and forms to provide a multiracial racial/ethnic category; and (g) targeting invitations and mailings based on racial/ethnic self-identification.

**Barrier 2: institutional infrastructure barriers.** The participants of focus group three talked about their frustration regarding lack of spending of institutional funds on infrastructure. Specifically, the participants believe that administration is misappropriating funds on items that will benefit the institution or people in power, rather than on items that would directly benefit the students such as multicultural scholarships, new printers, and books in the library. According to Laura, “It’s not really about multiracial, it’s all about money and power here. . . . they just want more money to themselves.” The participants discussed how the lack of infrastructure in the library detracts from possible student enrollment as demonstrated by Robert’s comments, “If I walked into the library and saw it was understaffed, and there were no books or periodicals or resources and it looked like an Internet café, I wouldn’t want to go here.” Rachel also discussed the impact on student retention by stating,
I’ve had thoughts of leaving and going to a different school . . . try to get a computer in the library and you can’t get one. You try to find a table to study . . . good luck trying to get one. . . . they don’t care that we are more than one race or ethnic background. They just care about the one race that we check off that helps them get more federal money.

The participants spent time in the focus group meeting discussing the abundance of resources in libraries at nearby community colleges and four-year institutions, and the investment other schools have made in their infrastructure as compared to this institution.

According to the group, there are many major aspects to infrastructural barriers at the institution that impede student academic success including (a) ordering and waiting several weeks for books and articles to arrive from neighboring institutional libraries, thereby impacting the completion of class assignments; (b) using paper printing quota and funds to print articles only accessible online; (c) a decrease in library student staffing due to funding cuts of federal work study positions for students; (d) loss of secretarial support in academic departments who assist students with access to rooms and provide information on educational opportunities; (e) lack of sufficient study spaces on campus; (f) reduction in the number of printers and computer labs accessible for student use in the library and the academic buildings; and (g) the lack of maintenance of printers and computers on campus, thereby reducing the number of functional machines. Laura expressed great fear of how the lack of printers may negatively impact her grades by stating,

I need to use printers here because I don’t have one at home . . . . there are not a lot of printers around campus, and I can’t ever print anything out. I’ve had to tell my teachers I cannot turn in a hard copy of my work, but can send it electronically. Many of my teachers have been very mad. I’m afraid I’m going to get points taken off next time I can’t print something.
The knowledge required to overcome the lack of infrastructure can best be summed up with one word—alternatives. Knowing that alternatives exist such as where to go on or off-campus to study, to find books, or to print, is the best way to overcome the lack of resources according to participants. Alternatives can come in many creative forms such as seeking advice from upper-class students. Alternatives can also include student behaviors and actions of visiting a public library to find books, as Laura has done; paying for print copies at Kinkos, as Rachel has done; or studying in a department conference room, as Robert has done in the past. These alternatives are often neither cheap nor convenient for students, but they have worked for the participants in overcoming the infrastructure barrier.

In asking the focus group participants about institutional actions, investment in resources was the key response. Participants believe that the institution should ensure fiscal responsibility within administration so that funds are benefiting students. Investing funds in full-time and student staff, books, journals, printers, and maintenance of technology will provide students with tools for academic success. Additional recommendations included (a) the posting of campus printer locations and study spaces; (b) taking computer labs offline for student use to avoid scheduling conflicts with classroom instructional use; (c) allowing academic spaces such as conference rooms to be used for study spaces; and (d) creating additional study spaces across campus. All three participants commented on the current study spaces on campus which are configured in small clusters or group spaces in most buildings. The participants prefer individual study spaces to avoid distraction, and as Laura stated, “spread out more so people are not bumping into each other.” Rachel currently studies at home rather than on-campus as she
feels uncomfortable studying across from other students who she considers to be strangers.

**Barrier 3:** “tenured” faculty. Participants raised a third barrier which could not fully be explored due to lack of time—“tenured” faculty. Participants used the term “tenured” faculty when discussing this barrier in the focus group meeting. Participants cited that they encounter “tenured” faculty at the institution on a daily basis. Participants indicated that they encounter “tenured” faculty “who are truly fantastic and really care about diversity,” and “tenured” faculty “who lack connection to real people and do the bare minimum.” Robert shared that his academic department is comprised of primarily white, male “tenured” faculty who “are afraid to step out of the box and explore diversity.” They teach only from the basis of theory and historical knowledge. Rachel believed the “tenured” faculty members in her academic department do what is comfortable for them and not for the students, and do not want to adjust to the changing world. She also believed they lack real-world experience.

The knowledge of knowing alternative faculty, and taking action by seeking out alternative faculty for advice and to form relationships with outside of the classroom setting, is critical to overcome the barrier of tenured faculty according to the group. The participants believe the institution should hire faculty with real-world experience who can bring diversity to the curriculum in order to prepare students for our diverse global world.

**Observation notes of focus group three.** After the participants of focus three left the conference room, the scribe and I discussed group dynamics, demeanor, and body language of the participants. From a phenotype perspective, Laura appears to be white, and Rachel has darker skin and appears to be African-American. I noticed a change in
verbal tone and a disapproving look passed from Rachel to Laura during an interaction; the scribe did not notice this change or interaction. During the interaction, Rachel’s facial expression, which included a disapproving look, appeared to discount Laura’s comments regarding a reference to discrimination based on skin color. In observing the body language and demeanor of the participants, it appeared that Rachel viewed Laura as a less authentic multiracial student. The reaction, discounting authenticity due to phenotypes, was reminiscent of what was observed in focus group one with reference to John who also looks white.

Concluding observation notes from the scribe. The scribe believed the focus group participants were open and honest in their comments; she attributed the openness to the small intimate size of the focus groups. She believed the small group sizes allowed the participants to vocalize concerns and ideas more freely than in a larger group setting. The scribe stated that she could see how the unfolding matrix evolved during Phase II of the study as a result of each focus group viewing the comments of the prior focus group(s) during the member checking process.

Phase III of the Study: Member Checking Between Focus Groups

Phase three of the study entailed member checking during the focus group meetings for data analysis purposes. This phase of the study involved member checking between focus groups. During the second and third focus group meetings, I asked the participants if they agreed with data recorded in the matrix on the flipchart from the prior focus group(s) to determine if there was agreement in responses between the focus groups.
Member checking between focus group two and focus group one. In member checking the unfolding matrix of focus group one with focus group two, the second focus group spent time on commentary related to the TA barrier and not the other two barriers, financial or faculty mentoring. The second focus group asked for clarification of what the TA barrier meant, and then individually provided personal perspectives on the barrier. Ramona commented on the number of TAs who are international graduate students at the institution, and the perception students have that TAs are “horrible” due to struggles with English speaking abilities rather than content knowledge. Ramona believes that TAs have not been a barrier to her success, but thought frequency of interaction with TAs may alter perceptions of this barrier for students. Peter did not understand how a TA is a barrier, and believed the challenges were related to dialect and verbal communication. Peter mimicked Ramona’s comments, but he did not comment on the positive or negative impact to his academic success. Brian has encountered numerous TAs at the institution due to the many lab courses he is required to take for his major. He believes that TAs have not impeded his success in class. He stated that it is important to “evaluate, even for oneself, whether it’s the TA that is the barrier, or maybe your understanding of the material.” He believes it is unfair to blame the TA if a student does not grasp the course content.

Focus group two participants did not select lack of faculty mentoring on the demographic survey, and did not provide comments on lack of faculty mentoring as a barrier during member checking of the unfolding matrix completed by focus group one. Within the 60-minute discussion timeframe of focus group two, Ramona referenced financial barriers on several occasions. While the second focus group did not provide
Member checking comments on the financial barrier from focus group one, Ramona’s comments support her belief in financial as a barrier. Additionally, as noted in Table 4, Peter selected financial barriers on the demographic survey.

**Member checking between focus group three and focus group one.**

Participants of focus group three were shown the matrix for focus group one, and asked about their agreement with the three barriers discussed by the first group—financial, TA, and faculty mentoring. Focus group three members responded from the framework of being a commuter student when discussing the financial barrier. Robert lives at home while attending college, and has scholarships, so he perceives his expenses to be small in comparison to his peers who reside on campus. He stated that he did not understand how students can afford to live on campus given the high cost of a college education. Robert believes that affirmative action in the awarding of scholarships is important, but that “95% of scholarships are focused on African-Americans, and there are other ethnic groups in the United States who experience the same marginalization. . . Native Americans, Middle Eastern groups.”

Rachel discussed academic scholarships and scholarships based on race and ethnicity. She stated that general scholarships do not give reference to race on the application form, only grade point average and student activity involvement. She believes that there are more scholarships available for particular races which she considers “unfair,” and in order to qualify for race-based scholarships, she must deny part of herself, her father’s side who self-identifies as white. Rachel feels scholarships “should not be based on race anymore, but on community service and grades. . . I don’t feel comfortable filling out a scholarship based on race. I feel that I am betraying half of
myself, and my whole is not being accepted.” Like Robert, she also commutes to school from home. She selected the institution due to reduced college expenses through scholarships, and lack of housing expenses. An additional component to Rachel’s choice in college was her concern for living on-campus with strangers who may discriminate against her or cause racial tension, something she has encountered in the past. Laura faces financial barriers and relies on scholarships to help fund her college education. She believed that scholarships should be based more on grade point average than on race or ethnicity.

In assessing the congruence with focus group one of TAs as a barrier, focus group three agreed with focus group two’s assessment that TAs are not a barrier specific to biracial/multiracial students. Participants believed that like professors, sometimes you have TAs who are really good, and sometimes you have TAs who are not good.

The third barrier of focus group one, faculty mentoring, received mixed responses. Rachel stated that she does not care about faculty mentoring, and believes that faculty cannot “show any discrimination towards me, because they could lose their job over it so I do not worry about it.” Laura agreed with Robert’s perception that many faculty members are very helpful, while others do not care about students, regardless of a student’s race or ethnicity. Robert spoke at great length about the importance of relationships with faculty (mentoring) beyond the classroom setting, and how valuable the faculty adviser-advisee relationship is as it pertains to career advice and letters of recommendation. Although Rachel stated that she does not care about faculty mentoring, she did agree that “it would be very valuable to have most of the things Robert has said. . .because of needing letters of recommendation.”
Member checking between focus group three and focus group two.

Participants of focus group three were also shown the matrix for focus group two, and asked about their agreement with the barriers discussed by the second group—personal, defined specifically as racial discrimination and justification of self-identification/stereotyping, and peer mentoring in the major. Few comments were raised from focus group three regarding peer mentoring as a barrier. All three participants stated that they have not participated in peer mentoring, and would not care who they are paired with as long as the mentor was in their academic major and “knows what they are doing.”

Robert is in a small academic major and “wished there was a peer mentoring program for his major.”

The conversation regarding personal barriers, specifically racial discrimination, evoked much conversation from the participants, particularly Rachel. Rachel believes that she has experienced racism from individuals who self-identify as white or African-Americans, but more so from African-Americans. She attended a predominantly black high school and chose to graduate a semester early due to issues with hazing as a result of having a white boyfriend. In college, she feels she has experienced immense discrimination from her peers—from students pulling her hair and asking “is it real?” to “what are you?” She views the institution as predominantly African-American more than predominantly white, but is unsure if that is a result of the composition of peers in her degree program, social work. She expressed her confusion at how much discrimination she has encountered in college given the diversity of the institution and “being with people of color who should have more of an understanding, more of a respective curiosity than hazing attitudes I experienced in high school.” Rachel stated that her experiences
have pushed her to be more successful, and she feels “bad for people who are so stupid.” She hoped that as she entered a more diverse environment at the collegiate level (as compared to the community she was raised in as a child in North Carolina), in a diverse, geographic area of the country, that people would be more understanding of multiracial individuals. She feels that the institution could be more understanding, not academically, but socially.

Laura stated that the institution is “great” as compared to her high school, and has experienced few issues while in college. She stated that her high school experiences were discouraging, and she encountered many “stupid people” who made her want to leave high school. The comments she has experienced in college have been from African-American peers making fun of her for “being white, but I’m only part White.” She stated that she doesn’t care about the comments and they make her a stronger and better person, and “they are ignorant, I’m not.”

Robert stated that he has never felt personally offended by anything that has been said to him because “I have pushed myself to be used to it and not feel awkward.” He shared some high school experiences in which his peers thought he was Native American due to his appearance, and the jokes that were made in front of him about Native Americans. Because he does not self-identify as Native American, he did not take offense to their comments. While in college, he stated that he has witnessed racially charged comments made about other peers, but he has never felt personally offended.

**Summary of Study Findings**

**Demographic Comparison.** In looking at the demographic information of the focus group participants as compared to the total study participant population (see Table 10),
Table 10

Demographic Comparison of Total Study Participants and Focus Group Participants by Percentage

<table>
<thead>
<tr>
<th></th>
<th>Survey (%)</th>
<th>Focus Group (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>61</td>
<td>45</td>
</tr>
<tr>
<td>2.00 or above GPA</td>
<td>96</td>
<td>91</td>
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<td>Ages 18-22</td>
<td>91</td>
<td>82</td>
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<tr>
<td>Sophomore Class Standing</td>
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<td>On-Campus Employment</td>
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<td>Commuters</td>
<td>43</td>
<td>64</td>
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the focus group participants were fairly representative of the total pool of study participants in all but three demographic categories. Focus groups were comprised of a larger percentage of commuter student participants (64%), than the percentage of commuter participants (43%) in the total study population. Focus groups were also comprised of a smaller percentage of female participants (45%) and traditional age college students (82%), than the percentage of female participants (61%) and traditional age college students (91%) in the total pool of study participants. Differences in the focus group participants as compared to the total pool of study participants, may have impacted study findings. If the number of commuter focus group participants were comparable to the total study population, commuting may have not been discussed as a barrier to academic success for biracial/multiracial students. Similarly, issues raised by
female focus group participants regarding racial discrimination (i.e., pulling of hair as noted by Rachel; lewd comments as noted by Ramona) may have been discussed as a more frequent barrier to academic success if representative of the total pool of female study participants.

**Perceptions regarding student academic support services.** Demographic survey participants cited the use of various student academic support services at the institution (see Figure 12) ranging from tutoring to academic advising to mentoring. Despite citing the use of various student academic support services at the institution on the demographic survey, focus group participants stated they were unaware of the location and function of some support services, such as peer mentoring. Not all student academic support services cited by demographic survey participants such as academic advising, service learning, and study abroad were discussed during the focus group meetings. There are several reasons why not all student academic support services were discussed in the focus group meetings which could include: (a) individuals participating in the focus groups were not the individuals citing use of the services on the demographic survey; (b) focus group participants did not wish to discuss the aforementioned services in the focus group meetings; or (c) as a result of time limitations of the focus group meetings. Additionally, focus group participants believe that existing academic support services such as supplemental instruction and faculty mentoring are in need of institutional evaluation and modification, and the creation of new academic support services such as peer mentoring programs in academic majors, are needed for biracial/multiracial student success at the institution.
Study participants (including demographic and focus group participants) perceived there to be a total of over 15 barriers to biracial/multiracial student success at the institution, with the majority citing personal and financial barriers. The biracial/multiracial focus group participants in this study identified ten key barriers to student success at the institution. In order to overcome barriers to student success, focus group participants stated that students must have knowledge in five key categories; must employ actions and behaviors in two key categories; and recommended institutional actions in five key categories to ensure the student success of biracial/multiracial college students (see Figure 13).

**Perceived barriers to student success.** The biracial/multiracial focus group participants in this study identified ten key barriers to student success at the institution. Personal barriers and financial barriers were cited by the majority of participants on the demographic survey, and were supported by focus group participants. Member checking confirmed congruence with the list of additional barriers developed (see Figure 13) by focus group participants which included: (a) lack of faculty mentoring; (b) TAs; (c) commuting to school; (d) racial discrimination; (e) lack of peer mentoring in the major; (f) lack of information about student activities and campus events; (g) institutional infrastructure barriers; and (h) tenured faculty.

There are several reasons why not all barriers to student success were discussed in the focus group meetings which could include: (a) individuals participating in the focus groups were not the individuals citing the barriers to student success on the demographic survey; (b) focus group participants did not wish to discuss the aforementioned barriers to
student success in the focus group meetings; or (c) as a result of time limitations of the focus group meetings.

**Heuristic knowledge needed to overcome barriers to student success.** The focus group participants identified five major categories of (heuristic) knowledge that biracial/multiracial students must have in order to overcome the ten identified barriers to student success. The five major categories of (heuristic) knowledge include (a) campus resources; (b) alternatives; (c) self; (d) faculty; and (e) diversity.

**Campus resources.** The first major category of (heuristic) knowledge is focused on knowing campus resources, and where the resources and information can be found including:
1. Tutoring center;
2. Commuter center;
3. Financial aid office;
4. Faculty office locations;
5. Study spaces;
6. Computer labs locations;
7. On-campus employers/opportunities;
8. Educational opportunities, hands-on learning experiences, and internships; and
9. When and where departmental and campus events are held.

**Alternatives.** The second major category of (heuristic) knowledge focused on finding alternatives including:

1. Seeking out alternative study spaces;
2. Finding alternative faculty knowledgeable in a subject area;
3. Seeking out a support group or talking to parent, friends, and family; and
4. Alternative options if a mentor is not available such as a friend or upper-class student who has taken the course.

**Self.** The third major category is (heuristic) knowledge of self including:

1. How you self-identify;
2. Who you are as a person;
3. What you believe in;
4. How to not internalize discriminatory comments or take them personally;
5. Your study habits;
6. How to be proactive;
7. How to network and connect with faculty, peers, and people on and off-campus such as financial aid counselors and potential employers; and
8. How race/ethnicity can be used for personal gain in securing employment and educational opportunities.

**Faculty.** The fourth category is (heuristic) knowledge of faculty including:

1. The strength and teaching ability of faculty;
2. How faculty members want work to be completed and submitted; and
3. Faculty office hours.

**Diversity.** The final category is (heuristic) knowledge of diversity including:

1. Understanding that diversity exists in the world;
2. The definition of biracial/multiracial;
3. Understanding different cultures;
4. Seeking out someone who understands and relates to your racial/ethnic background;
5. Expect to encounter racial discrimination; and
6. Understand that ignorance, discrimination, and stereotyping exist in the world.

**Student actions/behaviors needed to overcome barriers to student success.**

The focus group participants identified two major themes of student actions and behaviors that biracial/multiracial students must take in order to overcome the ten identified barriers to student success. The two major themes of student actions and behaviors include being proactive and resourceful, and understanding and making adjustments to self.
**Proactive and resourceful.** One major theme of student actions and behaviors is for a student to be proactive and resourceful including:

1. Read e-mails and the campus newspaper;
2. Tour campus and learn where buildings and campus resources are located;
3. Visit campus buildings to read flyers and posters;
4. Attend cultural events, department/major events, and student organization meetings;
5. Network and seek out information, advice, support, and help from peers, upper-class students, parents, family, friends, and faculty;
6. Use faculty office hours;
7. Educate others on issues of diversity and culture differences;
8. Seek out and use alternative study spaces, public libraries, online resources, faculty, course sections, and campus resources such as tutoring; and
9. If commuting to school, visit the commuter center.

**Self.** The second major theme of student actions and behaviors is an understanding and adjustment to self including:

1. Building self-confidence in one’s abilities;
2. Being open-minded to differences and change;
3. Educating and exposing oneself to other cultures;
4. Staying true to who you are as a person and what you believe in;
5. Not forcing one’s culture or beliefs on others;
6. Detaching slightly from family to engage in new college experiences;
7. Not judging others;
8. Ignoring the ignorance of others;
9. Having self-determination to academically succeed in college;
10. Prioritizing and putting forth the effort to be on campus and attend events and faculty office hours; and
11. Forming relationships with others such as faculty, advisors, and mentors.

**Institutional actions needed to overcome barriers to student success.** PWIs can take various actions (related to student academic support services) to help biracial/multiracial students overcome identified barriers to student success. Focus group participants developed a lengthy list of recommended institutional actions. The institutional actions can be divided into five major categories including (a) infrastructural change; (b) programs; (c) communication; (d) faculty and curriculum; and (e) financial.

**Infrastructural changes.** The first major category of institutional action is change and improvement to institutional infrastructure including:

1. Increase the number of printers, study spaces, and computers on campus;
2. Improve building signage, campus maps, and posting of printer locations and study spaces;
3. Modify institution applications and forms to incorporate the category of “multiracial”;
4. Invest in books, periodicals, journals, library and support staff;
5. Improve printer maintenance; and
6. Improve usage of facilities and space.

**Programs.** The second major category of institutional action is new and improved programming for biracial/multiracial students including:
1. Creation of a student organization for biracial/multiracial students;
2. Adjusting the days and times of student activities and campus events;
3. Re-evaluating and improving commuter services and programs;
4. Creation of a peer mentoring program based on academic major, cultural differences, and intentional pairings;
5. Requiring diversity training and programming for faculty;
6. Assigning campus housing to students based on major rather than race; and
7. Creating an assessment program and training center for faculty and TAs which incorporate student input, faculty observation, and formal reporting.

Communication. The third major category of institutional action is improved communication at the institution including:

1. Use of application data to tailor communications and events to biracial/multiracial students;
2. E-mailing campus and college/major events calendars to students;
3. Streamlining information and educating students about campus resources;
4. Posting of flyers and event calendars in all campus buildings;
5. Distribution of class lists (contact information);
6. Sharing funding opportunities widely and openly with students; and
7. Posting departmental faculty listings by course.

Faculty and curriculum. The fourth major category of institutional action is improvements to faculty and the curriculum including:

1. Hiring knowledgeable, diverse, and qualified faculty with real-world experience who can inject diversity into the curriculum;
2. Offering more flexible faculty office hours in convenient locations on and off-campus including required hours in the tutoring center;

3. Limiting the number of courses taught by faculty members;

4. Implementing university standards of teaching including hiring, training and evaluation of faculty, TAs, and supplemental instructors;

5. Discussion of race in a comfortable and diverse classroom environment;

6. Better integration of diversity, hands-on teaching examples, and multicultural education into curriculum;

7. Requiring practical work experience/internships in the curriculum;

8. Creating opportunities for peer and interdisciplinary interactions in the major/department/academic college;

9. Offering recitation sections and review sessions for all courses open to all students;

10. Creating Blackboard discussion groups by course subject area and facilitating discussion chats; and

11. Requiring department chairs to offer mentoring and office hours.

**Reducing the cost of college.** The fifth category of institutional action is reducing the cost of college for biracial/multiracial students including:

1. Ensuring fiscal responsibility of administrators to devote fund to students;

2. Providing more scholarships to biracial/multiracial students;

3. Basing scholarships off of community involvement, GPA, merit, and service;

4. Removing or reducing race as a criteria for scholarships;

5. Providing institutional funds to fill the financial aid gap for students;
6. Basing financial aid on student income rather than parental income; and

7. Providing more on-campus jobs.

Summary

This study focused on the perceptions of biracial/multiracial students regarding student academic support services at a PWI. The study employed methodological triangulation and used a demographic survey, three focus groups, and member checking to triangulate findings. The three focus groups served as the primary means of data collection. This chapter discussed research findings through each of the three phases of the research study including: Phase 1—the demographic survey; Phase 2—three focus group interviews; and Phase 3—member checking. The primary and secondary research questions of the study were answered in this chapter as a result of analyzing the research findings.

Chapter Five will present a local model for student success developed for the institution, address the analysis research question, and discuss the final phase of member checking in the study. The final chapter, Chapter Six, will discuss conclusions, contributions to the literature, implications for policy and practice, and recommendations for future research.
Chapter Five

Local Student Success Model

The final step in Padilla’s Framework for Modeling Student Success is the creation of a Local Student Success Model (LSSM) based on the analysis of study findings. Because the methodology for this study employed Padilla’s Framework for Modeling Student Success, this chapter will present the culmination of this research study, the LSSM designed for the institutional site. The LSSM is a blueprint for success for biracial/multiracial students at the institution. The LSSM is intended to be used as a valuable tool by faculty, staff, and administrators for implementation of possible changes and additions to programs, services, policies, and procedures to aid in the success of biracial/multiracial students at the institution.

In addition to presenting the LSSM designed for the institution, this chapter will address the analysis research question of the study, the possible problems or unintended consequences that might result if the institution implements the participants’ recommended institutional actions. The chapter concludes with a discussion of the final phase in the member checking process, the agreement (or disagreement) of the findings and the LSSM by focus group participants.

Local Student Success Model

Padilla’s Theoretical Model of Student Success consists of five qualitative parameters that “must be empirically determined for any given campus in order to create a local student success model (LSSM) and to provide suggestions for institutional change” (Wirth & Padilla, 2008, p. 689). Because of limitations in the framework, the
LSSM and its utility are limited to one specific institution, the institutional site of this study. Components of the LSSM may or may not have applicability at other institutions.

An LSSM is a visual depiction of the unfolding matrix or focus group data. It is comprised of five parameters—the four key parameters of Padilla’s framework, which are also the secondary research questions of this study including: (a) barriers to student success; (b) knowledge that successful students possess to overcome the barriers; (c) actions that successful students undertake to overcome the barriers; (d) changes that could be made on campus to diminish or eliminate the barriers; and (e) a fifth parameter, unintended consequences, which are the possible problems that might arise if the recommended institutional actions are implemented at the institution. Unintended consequences are developed by the researcher after data analysis of the findings. An institution should consider the problems or unintended consequences of any and all of the institutional action recommendations from biracial/multiracial students before making a final determination regarding the implementation of new (or changed) policies, procedures, services, or programs.

To develop an LSSM, the data collected from the focus groups using the unfolding matrix is organized into taxonomies. The objective is to create an LSSM that accurately portrays how students can be successful on a given campus; in this case, an LSSM that portrays how biracial/multiracial students can be successful at the institutional site of the study.

After analyzing the focus group data and the study findings presented in Chapter Four, the LSSM for the institution (see Figure 14) was created. Because of the amount
and complexity of the data from this study, the LSSM for the institution is quite large and extensive; the LSSM has been divided graphically into three parts for ease of readability.

A description of the components of the LSSM (Figure 14) will aid in understanding the visual depiction. The barriers for the three focus groups are listed in the rectangles emanating from the word “Barriers”. It is important to note that two of the barriers, racial discrimination and personal barriers, specifically defined by participants as racial discrimination/justification, have been consolidated into one barrier or category in the LSSM, thus Figure 14 visually depicts nine, rather than ten, barriers. The ovals represent Padilla’s parameters—the knowledge, student actions, and institutional actions needed by successful biracial/multiracial students to overcome each of the barriers. The focus group data for each of the key parameters are presented in the tables emanating from each oval. The fifth parameter, unintended consequences, is shaded in gray; unintended consequences emanate from the institutional action table for each barrier.

**Analysis Research Question: Unintended Consequences**

According to Padilla (1999), the implementation of the focus group participants’ recommended institutional actions can have problems or unintended consequences for both the institution, and the various constituents of the institution, particularly the students and the employees. Most institutional actions may require an investment of time and resources if implemented, which can include human and fiscal resources.

The unintended consequences listed in the tables (see Figure 14) were developed after analyzing the focus group data and findings. Padilla’s framework (1999) does not discuss possible positive unintended consequences to the institution or to the student, but
Figure 1.4: Local student success model – part 1

**Financial**
- More on-campus jobs
- More scholarships (for bracials/multiracial)
- Make funding apps readily accessible
- Tack financial aid on student income
- Rebrand financial aid criteria

**Knowledge**
- Support Groups: Knowing financial aid counselors
- On-campus: Talking to parents/family
- How to be proactive: How to network
- Self-confidence: Go to support systems
- Networking (peer/other): Use online resources
- Talk to friends: Proactively seek out help

**Institutional Actions**
- More off-campus faculty office hours
- Review sessions open to students from other sections of course
- More office hours per faculty member
- TAs:
  - Improve/evaluate supplemental instruction (SI)
  - Place more emphasis on student input
  - Train TAs in different ways to solve problems
  - Assessment program that incorporates student input, faculty observation, and formal reporting

**Barriers**
- Lack of Faculty Mentors:
  - Institutional Actions
  - Re-examine curriculum
  - More hands-on teaching examples
  - More office hours per faculty member
- Reduced institutional funds

**Student Actions**
- Self-confidence in ability: Seek out information
- Self-confidence: Tutoring center/major specific tutoring help
- Study Habits: Hands-on learning opportunities
- Faculty Office Hours: Contact center
- TAs:
  - Costs associated with additional sections, hiring of additional faculty, training, assessment, faculty and staff time/resources; reduction of funds for other initiatives
- Who to turn to for help in the department: Knowledgeable faculty in subject area
- Go to a different teacher/section

**Unintended Consequences**
Figure 4. Local student success model – part 3

- **Institutional Actions**
  - Lack of information about student activities
  - Local student success model – part 3

- **Student Actions**
  - Knowledge

- **Barriers**
  - Unintended consequences

- **Infrastructural Actions**
  - E-mail students event calendars/collage & major events
  - Create a student organization for biracial/multiracial students
  - Modify applications/forms to list "multiracial" rather than "other" or option to select multiple racial categories

- **Tenured Faculty**
  - Knowledge
  - Unintended consequences

- **Hire faculty with real-world experience**
  - Hire faculty who can bring diversity to the curriculum

- **Who you are as a person, what you believe in**
- Places to go to obtain information (clothing lounge, activities fair, etc.)

- **College newspaper**
- Campus Resources

- **Learn where resources are located**
- Adjust schedule to attend events
- Read flyers and campus newspaper
- Jump in and try new things
- Stay true to who you are as a person/what you believe in
- Attend cultural events, fairs or group meetings
- Read e-mails
- Visit buildings to read flyers/postings

- **Reallocating resources – impact other student populations; staff resources; budget – new applications; printing costs**

- **Know where alternative study spaces/resources can be found on and off-campus**

- **Seek help/advice from upper-class students**
- Go to alternative places (Kinkos, public libraries, etc.)

- **Funding for new study space, books, staff, printers, maintenance, IT support; impact on courses/students/faculty re: classroom space**

- **Know alternative faculty**

- **Seek advice of other faculty**
- Form relationships with other faculty

- **Funding to hire new faculty**
- Curricular changes
rather discusses possible negative unintended consequences or problems if institutional actions are implemented. The unintended consequences are in no way a comprehensive list of every possible problem or unintended consequence, but are rather some considerations an institution should review before implementing any or all of the institutional actions. For every investment of time and resources in addressing any given barrier, there may be a cost for not addressing another barrier. As an example, allocating more institutional funds for biracial/multiracial scholarships to address the financial barrier encountered by biracial/multiracial participants may mean shifting institutional funds away from a monoracial student population such as Hispanic students. In this example, it does not imply that an institution could not counter the potential unintended consequence through fundraising efforts or movement of institutional funds within the budget to provide scholarships to both populations, but it is a consideration to explore by the institution before implementing any recommended action.

Institutional costs can come in the form of budgetary costs related to the recommended institutional actions in this study including: (a) hiring diverse, qualified faculty; (b) investing in training, assessment, and diversity programs; (c) offering additional course sections; (d) improved or new biracial/multiracial and/or commuter student programming; (e) facility enhancements such as new campus maps and signs, study spaces, printers, computers, books, and staff; and (f) costs tied to course modifications and curriculum changes. Institutional costs can also come in the form of time commitments adding to the scope of work of faculty, staff, and administrators who may already be spread thin due to prior budgetary constraints and staff shortages. Strategic planning to evaluate and implement modification or implementation of new
programs and services, particularly curriculum changes, can be a time intensive process that can take months or years for full implementation. A new program or service may require the investment of all members of the campus community, and the approval of external accreditation bodies.

Implementing new services, programs, and procedures can also create undue burdens on human resources. Not only may the time of employees be spread thin, but it could be a stressful process that impacts the physical, emotional, and mental well-being of individuals involved. It may also impact the organizational structure of the institution, and require the hiring of new, qualified faculty and staff (human resources).

**Member Checking of the LSSM**

The last phase of member checking for this study focused on seeking agreement or disagreement of the LSSM from focus group participants. A Simplified Local Student Success Model (SLSSM), an adaptation of the LSSM, was created for ease of understanding in member checking with focus group participants. The SLSSM (see figure 15) extends the summary of study findings (see Figure 13 in Chapter Four) to include categories of unintended consequences if the institutional actions are implemented. The unintended consequences (see Figure 14) were consolidated into four categories which included: (a) budgetary/costs; (b) curricular/accreditation; (c) time commitment; and (d) burden on resources. The SLSSM was e-mailed to focus group participants, along with the summary of study findings from Chapter Four. Participants were asked to reply to the e-mail with their agreement (or disagreement) with the study findings, the SLSSM, and any additional thoughts or comments regarding the study.
Figure 15. Simplified local student success model for the institution

Note. This is the Simplified Local Student Success Model before member checking.

Member checking of the SLSSM elicited a response from six out of the 11 participants. Participants who did not respond may have responded differently than those who responded or may have offered additional points of clarification. The six participants who responded all agreed with the study conclusions; they also agreed with the SLSSM and believed the model addressed all of the categories discussed during focus group meetings. Several participants provided additional comments to support the purpose and findings of the study including Stephanie, from focus group one, who stated,

Overall, I thought the study was a great way to hear biracial students’ voices. You rarely hear of "biracial" activities, scholarships, etc. It made me feel good to know that the study pertained to my background which makes me, me. All the people in my group agreed with one another’s ideas and suggestions which was also great.
The category of “self” under the knowledge and actions that biracial/multiracial students need in order to overcome barriers was important to participants as well. Rachel, a focus group three participant, particularly liked the “self” category, indicating the role and responsibility a biracial/multiracial student plays in her/his own student success. Rachel stated,

I love what you have written. I feel that you hit all the nails on the head with what we as mixed/multiracial students need and want from a university setting. My favorite part was the section titled "self".

After reviewing focus group participant feedback, the SLSSM was modified to include the category of “Students” under the Unintended Consequences section (see Figure 16), a recommendation from focus group two participant, Brian, who stated, “I would say that the unintended consequences are something that students need to be aware of as most of the unintended consequences could have an effect on the students (directly or indirectly).” The addition of the section “Students” reflects the unintended consequences that can impact students directly or indirectly as a result of implementing institutional actions.

At the heart of evaluation, change, and implementation, must be the institution’s focus on students. Addressing the barriers of student success encountered by biracial/multiracial students should prove to aid in their academic success, but may unintentionally create new barriers, such as resentment or further cases of racial discrimination by student populations not benefiting from the changes. It may also impact a student’s time to degree completion or available course offerings. As noted earlier, change can come with a cost to someone or something, whether directly or
indirectly, and should be taken into consideration before implementation of any new policy, procedure, program, or service.

**Implementation of the LSSM**

The key to implementation of the LSSM in this study is the reshaping of student academic support service programs, policies, and procedures (institutional actions) by the institution. The services offered by the institution should be driven by the institutional mission and values, and the data which include the barriers, knowledge, and actions determined through this study. Implementation of the LSSM can be used to influence the institution and individual student behavior in an effort to increase student success at the institution (Padilla et al., 1997).
The LSSM can be implemented at the institutional level, whereby the institution implements none, some, or all of the recommended institutional actions after reviewing possible unintended consequences. The implementation of the institutional actions in the LSSM require that student services staff, academic advisers, administrators, and faculty remain knowledgeable at all times about barriers that biracial/multiracial students may face, as well as actions that successful biracial/multiracial students must take to overcome barriers. This can ultimately lead to a student successfully graduating college or to a student dropping out of college.

Padilla’s (1993) framework includes the category of frequency. Frequency can help provide context for understanding how great a barrier may be impacting the success of biracial/multiracial students at the institution. This information may aid the institution in setting priorities for implementation of institutional actions of the LSSM.

The LSSM can also be implemented at the individual faculty, staff, or administrator level. Faculty, student services staff, academic advisers, and administrators at the institution can use the LSSM as a guide at the individual level to educate biracial/multiracial students on the knowledge and actions that may be required to overcome barriers to success. They can also provide services, referrals, and make recommendations to students on an individual basis to assist them in overcoming the barriers determined. As an example, a biracial/multiracial student who states he/she is struggling with making connections to campus as a commuter student, could be provided with information on the commuter office, as well as recommendations for networking; finding on-campus employment; becoming involved on campus with events, activities, and organizations for biracial/multiracial students; and time management skills.
Summary

In addition to presenting the LSSM designed for the institution, this chapter addressed the analysis research question of the study, the possible problems or unintended consequences that might result if the institution implements the participants’ recommended institutional actions. The chapter concluded with a discussion of the final phase in the member checking process, the agreement (or disagreement) of the findings and the LSSM by focus group participants.

Chapter Six will present a summary of the study, a discussion of the major findings including contributions to the literature, limitations of the study including a critique of Padilla’s Framework for Modeling Student Success and the Unfolding Matrix, offer recommendations for policy and practice, and provide suggestions for future research.
Chapter Six

Discussion, Conclusions, and Recommendations

This chapter presents a summary of the study, and a discussion of the major findings including contributions to the literature. Additionally, this chapter presents conclusions, implications for policy and practice, and limitations of the study that includes a critique of Padilla’s Framework for Modeling Student Success. The chapter concludes with recommendations for future research.

Summary of the Study

The purpose of this study was to explore the perceptions of biracial/multiracial college students regarding student academic support services at a PWI. This qualitative study employed Padilla’s Framework for Modeling Student Success in order to answer the research questions of the study which included:

Primary research question.

1. What are the perceptions of biracial/multiracial students regarding student academic support services at a PWI?

Secondary research questions.

2. What student academic support service barriers to student success do biracial/multiracial college students perceive exist at a PWI?

3. What heuristic knowledge must biracial/multiracial students possess to overcome the identified barriers to success?

4. What collective behaviors and actions must be exhibited by biracial/multiracial students to overcome the identified barriers?
5. What set of actions might the PWI take (related to student academic support services) to help biracial/multiracial students overcome identified barriers?

**Analysis question.**

6. What are the possible problems or unintended consequences that might result if the institution implements the recommended actions?

The literature review provided support for the purpose and significance of the study. Current literature has focused on biracial/multiracial adolescents rather than biracial/multiracial college students. Little research exists on student academic satisfaction and student academic success as it pertains to diverse student populations; the majority of research has focused on issues related to campus climate and social alienation at PWIs. A review of biracial/multiracial identity development theories, student academic support services, and literature on student departure showed the importance of furthering research on biracial/multiracial college student success to help fill a void in the literature.

Padilla’s Theoretical Framework for Modeling Student Success served as the theoretical framework for this study. Padilla’s (1999) Framework for Modeling Student Success, or expertise model, assumes that successful students take effective actions to overcome barriers they face at a higher education institution, and that the actions are based on specific, expert (heuristic) knowledge. Heuristic knowledge must be assessed both as an indicator of the barriers students must overcome on the campus, and as a means for identifying the knowledge and actions that students use to overcome the barriers, in order for students to be successful and attain degree completion. By assessing the heuristic knowledge at a given institution for a specific population of students, a
LSSM can be created for the institution which can serve as a blueprint for success by the specific student population.

Using Padilla’s expertise model as the theoretical framework for this study, and employing a phenomenological research design approach, the student then took on the role of expert. Specifically in this study, the importance was placed on understanding the barriers to success at a PWI as perceived by biracial/multiracial college students.

The methodological framework was comprised of three phases of research: (a) Phase 1—demographic survey; (b) Phase 2—three focus group meetings; and (c) Phase 3—member checking. The first phase of the study was the demographic survey. The demographic survey was sent to participants via e-mail using Survey Monkey. Participants were college students who responded to the demographic survey seeking students who self-identified as biracial/multiracial. The survey ensured that individuals selected for participation in the focus groups met the criteria for participation, and self-identified as biracial/multiracial. Additionally, information obtained from the survey was used to guide the focus group conversations. The second phase of the study included three focus groups, the primary means of data collection. A total of 11 biracial/multiracial students participated in the three focus group meetings. The third phase of the study was member checking. Member checking occurred within and between focus groups during focus group meetings, and during data analysis. During data analysis, findings were shared with focus group participants for clarification and verification of interpretation.

Findings of the study revealed that despite citing the use of various student academic support services at the institution on the demographic survey, focus group
participants stated they were unaware of the location and function of some support services, such as peer mentoring. Additionally, focus group participants believed that existing academic support services such as supplemental instruction and faculty mentoring are in need of institutional evaluation and modification, and the creation of new academic support services such as peer mentoring programs in academic majors, is needed for biracial/multiracial students to succeed at the institution.

Study participants (including demographic and focus group participants) perceived that over 15 barriers exist to biracial/multiracial student success at the institution, with the majority citing personal and financial barriers. The biracial/multiracial focus group participants in this study identified ten key barriers to student success at the institution. In order to overcome barriers to student success, focus group participants stated that students must have knowledge in five key categories, must employ actions and behaviors in two key categories, and recommended institutional actions in five key categories to ensure the success of biracial/multiracial college students at the institution.

The findings of the study were then analyzed to create a LSSM for the institution, which can be implemented by the institution in order to help biracial/multiracial students succeed at the PWI. The institution should carefully review the possible unintended consequences related to human and fiscal resources, and curriculum changes, to reduce the possible negative impact on the constituents of the institution, particularly the students, before making decisions regarding implementation of a recommended institutional action(s).
Discussion

The majority of barriers to student success discussed by focus group participants were specific to biracial/multiracial students, including personal and racial discrimination. While the barrier of financial can impact any student population regardless of race or ethnicity, it was noted as a barrier to success (see Figure 11 in Chapter Four) by the majority of demographic and focus group participants. Focus group participants discussed it in the context of self-identifying as a biracial/multiracial individual related to reducing the cost of college. Mark illustrated this relationship, when he stated, “I think an institution could provide more scholarship opportunities for biracial students, because I don’t know many specifically just for biracial students.”

The barriers of lack of information on student activities and institutional infrastructure, can also impact any student population regardless of race or ethnicity. These barriers were discussed by focus group participants, however, in the context of self-identifying as a biracial/multiracial individual related to new programs and services for biracial/multiracial students. Rachel, who gets offended when she has to check “other” on an application, explained that “I’m not an ‘other’. I’m becoming a race that is coming into America, it is becoming larger. I’m not expecting them to cater to biracial/multiracial students, but I think we need to be heard more than what has been going on.” As a result she believes “there needs to be a group for biracial and multiracial students. I don’t know if there is or not, but if there isn’t, I would have thought by now there would be one started.”

The barrier of “tenured” faculty was discussed by focus group participants in the context of self-identifying as biracial/multiracial as it related to the perception of lack of
diversity taught in the curriculum. Robert, a focus group participant majoring in philosophy, feels that diversity within the curriculum of his major could be explored and taught by “tenured” faculty members. He stated,

There are 10 other professors who all know European, American philosophy, all of which were produced by white men. The “tenured” professors, the old school professors if you will, are afraid to go in the direction of diversity. In terms of an institutional thing, I definitely see that, and I think that in my major, we’re not even stepping out of the box there.

The barriers of lack of faculty mentoring and lack of peer mentoring in the major could pertain to any student population, but were discussed in the context of self-identifying as biracial/multiracial related to faculty, academic programs, and curriculum. Specifically, a mentor was discussed by focus group participants as someone who understands diversity or who can relate to the student’s biracial/multiracial identity, as noted by Sharon, who stated, “I think teachers should have to take a course that teaches about diversity and people’s differences . . . a lot of people don’t know how to accept people that are not from their culture.”

The findings of Chism and Satcher’ study (1998) regarding African American student preferences of African American faculty mentors over white faculty mentors, may explain the perceptions of biracial/multiracial students in this study and the desire to have mentors who are similar to them. Prior studies that have focused on monoracial students of color (Chavous, 2000; Ethier & Deaux, 1994), found that students who felt mentored were less likely to drop out of college than those who received mentoring. Based on the findings of prior studies on students of color and the findings of this study, it is important for the institution to address the barriers of the lack of faculty mentoring
and peer mentoring in the major, to ensure students succeed and do not drop out of college.

The barrier of TA was noted by focus group participants as a major barrier to the success of biracial/multiracial students at the institution, but was not specifically related to the context of self-identifying as biracial/multiracial. Therefore, this barrier may or may not be identified as a barrier to success by monoracial students or other biracial/multiracial students. A study conducted by Brown (1998) found that when students of color envisioned an evaluative interaction with a white TA, their expectations regarding how they would feel in class were less positive than when they imagined interacting with an ethnically matched TA. Focus group participants in this study made no reference to the racial or ethnic identity of TAs they have encountered. Because the Brown study was conducted on students of color, it may or may not have applicability to explaining the findings of this study regarding the perception of TAs as a barrier to student success by biracial/multiracial students, particularly if the TAs encountered by participants self-identified as white.

The barrier of commuting, and the knowledge and actions discussed by focus group participants to overcome the barrier, are applicable to any commuter student regardless of racial or ethnic identity. Commuting may have been raised as a barrier because the majority of focus group participants were commuter students at some point during their time at the institution, and have commuting experiences; it might not have been raised as a barrier if the majority of focus group participants resided on campus.

Personal barriers which can encompass any number of items, were cited by demographic study participants more than any other barrier, but were narrowly defined
by focus group participants as racial discrimination/justification of self-identification.

Perceptions and conclusions regarding the barrier of personal may be different for biracial/multiracial students at the institution than what was explored by the focus group participants. In addition, the barriers of lack of academic advising support, limited library hours, lack of peer/friend support, and learning barriers, were not discussed by focus group participants, thus perceptions and conclusions about these academic support services cannot be expanded upon in this discussion.

In analyzing the data and findings of the study, it should not be overlooked that the greatest academic support service used by biracial/multiracial students at the institution according to the demographic study was academic advising. This service, along with undergraduate research, service learning, and study abroad, were not discussed by focus group participants, thus perceptions and conclusions regarding these academic support services cannot be discussed in the context of this study.

**Contributions to the Literature**

The statement of the problem for this study focused on the lack of literature regarding biracial/multiracial college students, as well as the lack of research on student academic satisfaction and student academic success as it pertains to diverse student populations. Prior research has focused primarily on social aspects of the collegiate experience, such as social alienation, and has also focused primarily on biracial/multiracial adolescents, not on biracial/multiracial college students. While this study focused on the perceptions of biracial/multiracial students at one specific institution, it has begun to fill a large gap in the literature. This study supports the work on biracial/multiracial identity development. This study also contributes to the literature
on the academic experiences of biracial/multiracial college students, interactions with peers, and research pertaining to student academic success.

**Biracial/multiracial identity development.** The findings of this study support the work of racial identity theorists such as Poston (1990), Renn (2000), and Root (2003a). Much of the early research of racial identity theorists focused on biracial adolescents. Renn’s work (2008) expanded on the work of Poston (1990) and Root (2003a) by focusing on biracial and multiracial college students. In the context of exploring perceptions of student academic support services and barriers to academic success at one PWI, focus group participants in this study shared their collegiate experiences as well as experiences from adolescent years.

Renn’s model (2003) was built on the premise that the collegiate setting provides biracial/multiracial students with opportunities to explore their identity in academic, social, and peer involvement settings. Renn (2008) focused on stereotypes and assumptions based on physical appearance (phenotypes) that could create situations of hostility in campus settings including a lack of understanding about diversity. A finding of this study is that biracial/multiracial students have encountered a lack of understanding about biracial/multiracial identity at the PWI often based on phenotypes, and they feel that racial discrimination is a barrier to their academic success. Rachel, a participant in focus group three, described many situations where she has encountered harassment and discrimination based on her physical appearance during her adolescent and collegiate years. Focus group participants shared the knowledge and actions they have employed as biracial/multiracial students to try to overcome racial discrimination at the PWI.
Renn’s work (2008) has also shown that the availability of a biracial/multiracial community can support the development of biracial/multiracial identity. The findings of this study, which include institutional action recommendations from biracial/multiracial students to create a campus community inclusive of diversity, support the work of Renn (2008). Findings also show the importance of modifying and creating student academic support services, programs, policies, and procedures, to aid in the success and development of students who self-identify as biracial/multiracial at a PWI.

**Biracial/multiracial students.** The work of Bonnie Davis (2009) focuses on the sharing of experiences of biracial/multiracial individuals, and that through the sharing of experiences, individuals can create relationships and understanding. Davis states that no singular multicultural experience exists, and educators should listen to the individual voices of biracial/multiracial individuals to learn about their challenges and coping mechanisms in order to provide an inclusive racial climate in which all students thrive. The findings of this study support Davis’s belief that there is no singular multicultural experience. The experiences of the focus group participants were all very different as noted by their perceptions of student academic support services, and the frequency with which the barriers impacted each individual student’s academic success. Each focus group participant, or individual voice, contributed knowledge and action strategies that may allow students to overcome the barriers. The findings of the study contribute to the literature by sharing more individual narratives that provide a lens with which to better understand racial classifications, identity development theories, biracial/multiracial college students, and a journey to discover, “what I did not know I did not know” (Davis, p. 8).
Student academic success. The findings of this study also contribute to literature on student success, persistence, and degree completion, particularly as it relates to biracial/multiracial students. Tinto (2006) expressed that a model of institutional action is needed to provide guidelines for the development of effective policies and programs that enhance the persistence of all students. Researchers (e.g., Rendon, Jalomo, & Nora, 2000; Tierney, 1992) have suggested the limited application of Tinto’s work to students of color. Through the use of Padilla’s Framework for Modeling Student Success, this study expanded on the suggested limited applicability of Tinto’s work to students of color, by creating a LSSM of institutional action that provided guidelines for the development of effective policies and programs to enhance the success (and persistence) of biracial/multiracial students at PWIs.

This study also furthers the work of Swail et al. (2003) by placing biracial/multiracial students at the center of the model. In particular, the findings of this study support the three forces of Swail’s model—cognitive, social, and institutional factors. An important aspect of the cognitive factors relating to persistence is the decision-making and problem-solving ability of the student. The findings of this study support this notion as evidenced by the categories of “being resourceful” and “self” in the LSSM, which entail the actions successful students must take to overcome barriers. The social factors, such as parental and peer support (or the lack of), can positively or negatively impact the success of biracial/multiracial students at the PWI. A number of institutional factors, such as the lack of institutional infrastructure, were found in the study to serve as a barrier to student success.
This study also expands upon the work of Padilla. A criticism of Padilla (1999) is that his model does not explain the success of students of color. This study employed Padilla’s framework to attempt to explain the success of biracial/multiracial students at PWIs. A further critique of Padilla’s framework can be found later in the chapter.

**Student academic support services.** The findings of this study expand and support research on student academic support services such as mentoring and supplemental instruction (SI). Prior studies on monoracial students of color (Budge, 2006) have focused on the lack of awareness regarding mentoring resources available. Biracial/multiracial participants in this study had differing levels of understanding and opinions regarding what peer mentoring programs were or should be at the institution.

There are two opposing viewpoints in current research regarding cross-cultural mentoring (Budge, 2006). One viewpoint is that individuals who are ethnically and racially different often feel uncomfortable mentoring one another; the other viewpoint supports same-culture mentoring. The findings of this study support both viewpoints of cross-cultural mentoring in research. Brian, from focus group two, expressed a desire for mentoring by someone who identified differently than he does, while Ramona, from focus group two, desired a mentor who was racially and ethnically similar to herself.

The body of literature regarding SI is sparse, and has not focused on the student success of diverse student populations (Bowles, McCoy, & Bates, 2008). Findings of this study showed that biracial/multiracial students use SI at the PWI (as noted in Figure 12), but believe that SI is in need of institutional evaluation and modification in order for biracial/multiracial students to be successful at the PWI.
Finally, McNairy (1996) discussed the institutional support of culturally deficient models of academic support services. This study shows the role that institutions play on student success, and supports McNairy’s (1996) claim that responsibility cannot be solely placed on the shoulders of the students. Findings and recommendations of this study were similar to findings of other studies on students of color such as Brown’s (2005) work on Native American students, which recommended improvements to student organizations, financial aid, social/cultural events, and student academic support services such as tutoring and faculty mentoring.

Conclusions

This study focused on biracial/multiracial student perceptions of student academic support services at a PWI. An analysis of the findings of the study resulted in four conclusions.

1. This study found that biracial/multiracial students perceive there to be barriers to student success ranging from individual barriers such as commuting to school, financial obstacles, and personal obstacles, to barriers of the institution and campus culture including “tenured” faculty, lack of faculty mentors, TAs, lack of peer mentors in the major, lack of information on student activities, and infrastructural obstacles. Financial and personal barriers were perceived to be the greatest barriers to biracial/multiracial student success.

Focus group participants were unaware of the location and function of some student academic support services at the institution. Participants believe that new student academic support services are needed, such as peer mentoring in the major, in addition to
the evaluation and modification of existing student academic support services, such as faculty mentoring, in order for biracial/multiracial students to be successful.

Perceptions regarding student academic support services, barriers to student success, and the frequency with which participants encountered barriers, differed between and among individual biracial/multiracial focus group participants as noted during the member checking process. As an example, focus group one participants perceived TAs to be a barrier to student success; focus group two participants did not fully agree with focus group one perceptions regarding TAs as a barrier to success. Study findings support the notion that biracial/multiracial students are unique individuals and experience PWIs differently based upon a number of individual factors such as individual biracial/multiracial demographics; adolescent and college experiences; familial and peer support; financial situation; differences in self (confidence, abilities, study habits, etc.); and heuristic knowledge attained at the PWI.

2. In order for biracial/multiracial students to be successful and overcome barriers to student success encountered at the PWI, biracial/multiracial students must possess various types of heuristic knowledge acquired early in the educational journey, particularly during the first year of college (Padilla, 1991). Biracial/multiracial students perceive that heuristic knowledge is needed to succeed at the PWI in five major categories: (a) knowledge of institutional resources; (b) knowledge of alternatives; (c) knowledge of self, which includes an understanding of racial self-identity; (d) knowledge of faculty; and (e) knowledge of diversity.

Biracial/multiracial students perceive that knowledge of the student academic support services available at the institution, including where the services are located, is
needed to overcome barriers to success at a PWI. Biracial/multiracial students also perceive that a knowledge of faculty and of alternatives are needed when services to help students succeed do not exist at the PWI, such as knowing and seeking out alternative individuals to serve in the role of mentor. An understanding of self, including who you are as a person and what you believe in, which includes the ability to be proactive and network on campus, is perceived to be needed for biracial/multiracial students to overcome barriers to success. Finally, having the knowledge and understanding that discrimination, ignorance, and diversity exist is perceived to be critical for students to succeed not only at the PWI, but in the global world.

3. While an institution can take action to make changes or additions to student academic support services, it is also important for biracial/multiracial students to employ individual actions to overcome barriers to success at PWIs. The responsibility for student success cannot rest solely on the institution; students must take responsibility and ownership for their own success as well. Student actions perceived to be needed by biracial/multiracial students to overcome barriers to success require an understanding and adjustment to self, including the motivation and self-confidence to succeed, as well as the ability to be proactive and resourceful such as making adjustments to priorities, attending campus events, and locating alternative study spaces on campus.

4. Because of challenges to identify biracial/multiracial students in higher education, institutions often develop academic support services based on the voices of monoracial student populations (Stage & Manning, 1992). The voices of biracial/multiracial students are needed, and should be valued by an institution, to support students on their educational journeys to success. Biracial/multiracial participants of this
study perceive that institutional actions should focus on the following: (a) modification and improvement to the institutional infrastructure including study spaces and technology; (b) programs and services created to support biracial/multiracial students such as biracial/multiracial student organizations; (c) improvements to the hiring and training of qualified and diverse faculty, as well as integration of diversity into the curriculum; and (d) a reduction of educational costs to students through efforts such as financial funding/models to support biracial/multiracial students. Biracial/multiracial participants also perceive that there is a need for improvement in communication at the institution to ensure that biracial/multiracial students are aware of available programs, services, policies, and procedures.

**Implications for Policy and Practice**

This study was conducted at one particular institutional site and can be considered a case study. The findings of the study can have numerous implications for policy and practice at the institutional site, as the end result was the creation of a LSSM with the intent of implementing recommendations for both the students and the institution. Because faculty and administrators spend much of their time dealing with departmental or institutional issues and concerns, and often deal with students only an as-needed basis, they may have a skewed perception of the institution or perceive the racial climate to be different than that of the students (Watson et al., 2005). One unique aspect of the theoretical framework and findings of this study is the inclusion of participant perceptions, and recommendations of actions that institutions can take to address the barriers to student success facing biracial/multiracial students.
One of the major issues of focus group interviews is generalizability of results (Vaughn et al., 1996). The intent of focus group interviews in this study was to report the perceptions of biracial/multiracial participants at a PWI, not to generalize perceptions or findings to other student populations or to other institutions. Due to the limitations of the theoretical framework of this study discussed in a later section of this chapter, and the nature of this research as a case study, the implications for policy and practice may be limited at other institutions. Qualitative research such as this study, however, provides descriptions of patterns present in the data to stimulate the thinking of other researchers and institutions to make decisions about the match of the patterns to their own context (Vaughn et al., 1996).

**Implications for Administrators.** Institutions often support a culturally deficient model of academic support services thereby ignoring the role that institutional policies, procedures, curriculum, services, and environment play on student success (McNairy, 1996). Long-term institutional commitment to multiculturalism and diversity with respect to assessment, human resources, budgets, and leadership are needed to effect institution-wide change (McNairy, 1996).

In order for administrators to have an understanding of the implications of the findings of this study on policy and practice, it is important that administrators have an understanding of their own racial identity, the lens through which they look, to implement policies and procedures. By reflecting on their own racial identity, administrators may be better prepared to assist students in their journey of identity development (Ozaki & Johnston, 2008). It is also important for administrators to understand the stages of identity development of the biracial/multiracial students at the
institution to best communicate and engage students in dialogue regarding policies and procedures in order to help students succeed.

Administrators need to have a clear picture of their student population in order to serve the students. Amending all institutional forms to incorporate the category of “multiracial,” such as admission application forms, will allow students to accurately reflect their identities, and provide a better means for the institution to track student data including access, student progress and success, and equity (Kellogg & Niskodé, 2008).

A systemic review of institutional policies and procedures should be conducted annually. Administrators should find ways to incorporate the identities of all student populations into campus traditions, ceremonies, and campus culture (Broido, 2004). Policy revision and formulation should involve diverse faculty, staff, and students to ensure that effective and inclusive policies and procedures are in place at the institution (Torres et al., 2003). Inclusive policies and practices will ensure that biracial/multiracial students feel their opinions and voices are valued by the institution, hopefully allowing them to feel more comfortable seeking out help and support.

As part of a systematic review of institutional policies and procedures, administrators should incorporate institutional action recommendations of biracial/multiracial students to ensure fiscal responsibility of administrators. A review of financial aid funding opportunities, which could incorporate increased opportunities for on-campus student employment and/or modified or new student scholarships, may reduce the cost of college not only for biracial/multiracial students, but all students at the PWI. Reducing the cost of college for students may help alleviate financial barriers for some students and aid in persistence and student success.
Student affairs professionals and other administrators should support biracial/multiracial students by providing them with institutional programming that teaches biracial/multiracial students the following: (a) how to create biracial/multiracial student organizations; (b) how to lobby administrators for resources; (c) how to fight for social injustice with regard to policies and procedures that racially discriminate; and (d) strategies on self-advocacy. Hiring a qualified, multicultural professional, who is dedicated to serving biracial/multiracial students, and who can raise campus awareness, would be advantageous to provide long-term support and consistency both to the students and to the institution. A dedicated multicultural professional could ensure that consistent biracial/multiracial student leadership is in place to serve on institutional committees regarding policies and services. The multicultural professional could also serve as a mentor, role model, and student advocate to biracial/multiracial students, in order to maintain a thriving biracial/multiracial student organization on the campus (Wong & Buckner, 2008).

There is a need for multicultural and diversity initiatives that are structured to engage monoracial students at the institution as well. PWIs may struggle to engage majority (white) students in programs or services for biracial/multiracial student populations if they are perceived as services targeted for populations that do not include them. Creating programs and services that engage all constituents of the institution can “eliminate polarized perceptions and create more grounded perceptions” (Watson et al., 2005, p. 91).

It is important for administrators to stay educated on issues related to biracial/multiracial students, and the environment that biracial/multiracial students
perceive at the institution. According to Torres et al. (2003), the ability to see things from differing perspectives is the “most useful tool an administrator can possess when dealing with students of color” (p. 85).

Administrators should implement policies and procedures that provide incentives to faculty to attend ongoing diversity training, and improve cultural proficiency through injecting issues of diversity into the curriculum and classroom. In addition to incentives for current faculty members, increasing the number of qualified and diverse faculty who have real-world experience through hiring practices can impact not only the recruitment of biracial/multiracial students, but also the success and retention of students. The hiring of biracial/multiracial faculty members who can serve as faculty mentors and role models is advantageous for biracial/multiracial students. Biracial/multiracial faculty mentors are important for students who come to PWIs from monoracial environments, and who are trying to navigate a new campus culture while developing their biracial/multiracial identity (Cuyjet, 2008).

Finally, administrators at other institutions should use the LSSM as a tool for institutional action. A critique of Padilla’s Theoretical Framework is discussed later in this chapter. Despite limitations of Padilla’s framework, the LSSM is a useful tool for administrators in the consideration and/or implementation of any new policies, procedures, programs, and services as a result of their own institutional study of student perceptions. As noted in the literature review, one of the strengths of Padilla’s work (1999) is the ability to provide specific knowledge applicable to a given institution at a given point in time to particular student populations within the institution.
Administrators should always consider the unintended consequences of the LSSM before implementation of any institutional actions.

**Implications for Faculty.** According to Torres et al. (2003), the majority of faculty in today’s classrooms learned their teaching techniques and styles based on white male models. Diversity within college classrooms is changing. With the increase in the number of biracial/multiracial students in higher education, faculty need to adjust and increase their awareness of issues that impact diverse populations including teaching methods. Faculty in PWIs have the ability to challenge the thinking of students from the majority population within their classrooms. In order to create a more welcoming and comfortable setting for biracial/multiracial students in the classroom, faculty need to have a strong understanding of biracial/multiracial identity development to “guide students through their own awareness of privilege, oppression, and racial consciousness” (Torres et al., p. 87).

A variety of teaching strategies can create a more inclusive learning environment for biracial/multiracial students at PWIs. Such teaching strategies could include establishing clear guidelines for classroom discussion to put biracial/multiracial students at ease in the classroom; injecting examples, discussions, and assignments related to knowledge created by various racial/ethnic groups or individuals; discussing biracial/multiracial identity development with students to better understand why students may or may not respond or react to various topics of discussion; and empowering students to become change agents to improve and enhance the classroom and campus culture and climate.
Outside of the classroom, biracial/multiracial study participants recommend that faculty offer more flexible faculty office hours in convenient locations both on and off-campus to better serve the needs of the students, including online discussion groups and chats through a course management system and social networking site. Enhancing communication to students through sharing of information via e-mail, flyers, and online tools regarding departmental events, class contact information, faculty listings, and scholarship or undergraduate research opportunities can provide biracial/multiracial students with knowledge of educational opportunities and resources at the PWI. Creating opportunities for biracial/multiracial students to interact and engage outside of class with peers and faculty, particularly interactions with interdisciplinary colleagues, such as through internships and practicum experiences can improve communication, enhance the understanding of diversity, and aid in biracial/multiracial student success.

Findings of this study show that it is important for biracial/multiracial students to perceive that their instructors are culturally competent and understand diversity. Faculty should take advantage of available avenues for ongoing diversity training and professional development programming to become more culturally proficient. As noted by Brown and Dobbins (2004), communicating to students that one is fair, open-minded, and knowledgeable about biracial/multiracial students will help in establishing rapport with those students.

Limitations

A number of limitations exist within this study. Caution should be made in interpreting and generalizing study findings given various study limitations. As noted in
Chapter Five, Padilla’s Theoretical Framework for Modeling Success, including the unfolding data matrix, presented numerous limitations for the study.

National educational statistics are limited and may not reflect individual campus demographics (Hune, 2002). Students at the institutional site may not have selected the racial/ethnic category on the admission form that accurately reflects how they self-identified as a new student entering the institution. It may also not be representative of how students self-identified at the time of the study, or after the study, given changes in students’ racial self-identification and racial identity development during college (Renn, 2008). To develop appropriate policies, programs, and services for biracial/multiracial students, institutions need to collect data on their campus populations on an on-going basis. Therefore, the institutional demographic data presented is specific to this institutional site, and may not be accurate due to racial self-identification.

The availability of the scribe for the focus groups placed limitations on when the focus group meetings could be held; the three focus group meetings occurred over the course of one weekend. With nearly 50% of the participants living off-campus (commuters), it may have impacted both the willingness of students to participate in the study, and the show rate of the participants. As previously noted, two of the participants who stated they would attend focus group meetings, did not arrive for their scheduled meeting.

The small focus group sizes and demographics of participants also may have impacted study findings. The composition of the focus groups included participants who all self-identified as white and one (or more) other races/ethnicities, and may reflect perceptions that differ from that of other biracial/multiracial student populations at the
institution that do not include white. Additionally, the gender and seating arrangement of participants in focus group meetings may have impacted participant interactions, the openness of participants to share perceptions, and, as a result, the study findings.

The research design employing Padilla’s Framework for Modeling Student Success presented limitations as it pertained to member checking between focus groups. Member checking did not occur between focus group one participants and focus group two participants, between focus group one participants and focus group three participants, or between focus group two participants and focus group three participants. Agreement of the findings and perceptions of biracial/multiracial focus group participants may be different than presented in this study given the absence of three “between group” focus group participant comparisons.

At the time of the focus group meetings, I did not disclose my racial/ethnic identity as white. I did not consider the possible impact of not disclosing my racial identity on participants. The decision not to disclose how I racially self-identify to focus group participants may or may not have impacted the demeanor, behavior(s), and openness of the participants, thus limiting study findings. A study by Brown and Dobbins (2004), found that students may have concerns of stereotyping by instructors or TAs who are of a different race/ethnicity than the students. If a student believes the instructor or TA is culturally aware, open-minded, non-biased, and knowledgeable about various groups, however, it may have a positive effect on the student’s views of the instructor or TA, and suggests that ethnic congruence is not necessary to establish rapport with the students. The Brown and Dobbins (2004) study may have implications for the limitation of not disclosing my race. If the focus group participants considered me to be
open-minded, knowledgeable about biracial/multiracial students, and non-biased, as was noted by the phenomenological purpose of this study, my lack of disclosure may have negated the impact on focus group member behaviors, and the openness of the focus group participants.

My white racial identity may have additionally impacted my perceptions of the observations of focus group participants. I may or may not have misunderstood what I saw as a change in demeanor and body language between students of differing skin color in the focus group meetings. For example, I believed there to be a disapproving look passed between Rachel to Laura in focus group three regarding a reference Laura made to skin color. The scribe did not notice this interaction. My racial identification may have impacted my perceptions of the interaction.

**Critique of Padilla’s Framework for Modeling Student Success.** Padilla’s Framework for Modeling Student Success and the unfolding data matrix presented numerous limitations to the study. The model and matrix require that focus group participants respond in a linear pathway, whereby each focus group expands upon thoughts and comments from prior focus group participants. An assumption is built into the theoretical framework that participants will think and respond to questions in a linear fashion. This assumption was false for focus group participants in this study based on how I implemented Padilla’s model; not all individuals processed information or thought in a linear fashion as evidenced by the flow of discussion when I asked the participants questions.

The unfolding matrix and theoretical framework also placed limitations on the data obtained from participants by requiring a specified time limit of 60-90 minutes per
focus group. As evidenced in the focus group findings of this study, comments could not be explored further on several occasions due to time limitations.

Padilla’s Framework for Modeling Student Success requires that the focus group scribe write all comments from the focus group participants on the unfolding matrix. While in theory the unfolding matrix should encapsulate all comments from participants, in practicality, the scribe cannot capture all thoughts given the pace of participant speech and non-linear thought processes. Additionally, the ability to read handwritten comments from a scribe during data analysis can be difficult. Due to the inability to capture all comments verbatim on the unfolding matrix, the data analysis for this study required the use of verbatim transcription of audiotapes in addition to the data from the unfolding matrices.

This study was specific to one institution and may not be applicable to other institutions or other biracial/multiracial students. The academic support services and institutional culture discussed in this study are institution specific. A limitation of Padilla’s Theoretical Model of Student Success is that the data, findings, and LSSM are bound to particular participant perceptions at a moment in time, and contextually bound to one specific institution (Padilla, 1999). Perceptions of academic support services from the participants of this study may not be the perceptions of other biracial and/or multiracial individuals at this institution or other institutions.

**Recommendations for Future Research**

This study used Padilla’s theoretical framework. Future research should be directed toward replicating this study using a larger pool of participants for the focus groups, including increasing the number of participants per focus group. Future research
should incorporate member checking between all focus group participants/groups to aid in the accuracy of participant findings and perceptions. The demographic composition of the focus group participants in this study included students who all self-identified as white with one (or more) additional races, who were primarily traditional age college students, and of whom the majority self-reported a class standing of sophomore. Future research could focus on replicating the methodology with other biracial/multiracial populations, as well as non-traditional age biracial/multiracial students, and students with differing class standings (juniors or seniors).

The framework was institution specific. Future research efforts should focus on replicating this study at other PWIs, including community colleges and private institutions. Various findings of the demographic survey could also be discussed during focus group meetings in the future such as perceptions of programming that may be occurring in residence halls (for residential students); perceptions of academic advising, study abroad programs, service learning, and undergraduate research; barriers such as lack of peer/friend support and learning barriers; or campus involvements such as participation in student organizations.

The work of Brown and Dobbins (2004) could be expanded upon to determine if the self-disclosure of a moderator’s racial identity during focus groups has an impact on the demeanor, behaviors, or openness of participants. The study could also be replicated with a moderator who identifies as biracial/multiracial, and discloses his or her racial identity to participants, to determine if there is an impact on focus group participants. Future studies could also take a more in-depth comparative look at perceptions of biracial/multiracial TAs and mentors versus non-biracial/multiracial TAs and mentors.
Future research could review findings of suggested services for monoracial student populations from prior research, and conduct comparative studies to look at the applicability to biracial/multiracial students. For example, research conducted by Brown (2005) on Native American students produced similar categories to this study regarding student success including sociocultural factors such as interaction with faculty members, academic factors such as academic preparation, and personal factors such as lack of confidence in self.

Future research at the institutional site could include studies on the perceptions of faculty and administrators regarding racial climate and campus culture. Follow-up research should also be conducted at the institution on the effectiveness of new or changed student academic support services and programs if components of the LSSM are implemented.

While this study focused on biracial/multiracial student perceptions of student academic support services in the aggregate, future research should focus on individual academic support services including: (a) exploring biracial/multiracial student motivation within mentoring programs, and why faculty do (and do not) serve as mentors; (b) informal versus formal biracial/multiracial mentoring programs; (c) cross-cultural mentoring programs for biracial/multiracial students; (d) effectiveness of peer and faculty mentoring programs for biracial/multiracial students; (e) TA training and evaluation programs; (f) and “tenured” faculty training and evaluation programs.

This study was qualitative in nature. Future research should focus on quantitative research methods as well. A longitudinal study that focuses on experiences of biracial/multiracial students over time and across institutions, including community
colleges and four-year private institutions, may provide a broader understanding of the breadth and depth of barriers to success encountered by this population. Additionally, comparative studies conducted at institutions predominantly comprised of students of color such as Historically Black Colleges and Universities, Tribal Colleges, Alaska Native/Native Hawaiian Institutions, Hispanic-Serving Institutions, and Asian-Serving Institutions are needed to better understand perceptions of biracial/multiracial students.

This study attempted to contribute to national research on student academic success of biracial/multiracial students, a growing diverse population in higher education. Currently little research exists on biracial/multiracial college students, particularly as it pertains to student academic success. The purpose of this study was to explore the perceptions of biracial/multiracial college students regarding student academic support services at a PWI. The study found that biracial/multiracial students were unaware of the location and function of some student academic support services. Study participants also believe that evaluation and modification of existing student academic support services, as well as new academic support services are needed for biracial/multiracial students to succeed in college. Additionally, this study found that biracial/multiracial students at one PWI perceived there to be two categories of barriers to student success—institutional barriers and individual barriers. In order to address barriers to student success, the voices of biracial/multiracial students are greatly needed by institutions to enhance and develop student academic support services, programs, policies, and procedures.
References


Appendix A

Poster/Flyers for Participation

The University of Toledo

Biracial/Multiracial Student Perceptions of Student Academic Support Services at a Predominantly White Public Institution

Volunteers Wanted for a Research Study

Who
We are recruiting undergraduate college students who self-identify as biracial/multiracial individuals, are 18 years of age or older, and have at least a class standing of sophomore to participate in a research study (dissertation).

Why
This research is being conducted as partial fulfillment of the requirements for the Doctor of Philosophy Degree in Higher Education at The University of Toledo. The purpose of this study is to explore the perceptions of biracial/multiracial college students regarding student academic support services at a predominantly white public institution.

Benefits and Risks
There is unlikely to be any direct benefit or significant risk to you as a result of participating in this study. The primary benefit is to gain new knowledge. If you take part in this study, you may help other biracial/multiracial college students.

When and What
This study entails completing a brief, anonymous demographic survey. The survey will take approximately ten minutes to complete. As an incentive for participation, students will be entered into a drawing for a $50 Amazon gift card.

How
This research is conducted under the direction of Dr. Penny Poplin Gosetti, Principal Research Investigator

If you or anyone you know might be interested in participating, or for further information, please contact Julie Fischer-Kinney for more information.

Julie Fischer-Kinney, Doctoral Candidate (Student Researcher)
419.360.1921 or Julie.fischer-kinney@rockets.utoledo.edu
Appendix B

Informed Consent (Survey)

ADULT RESEARCH SUBJECT - INFORMED CONSENT FORM (Survey)
Biracial/Multiracial Student Perceptions of Student Academic Support Services at a Predominantly White Public Institution

Principal Investigator:
Dr. Penny Poplin Gosetti (faculty), Associate Professor, 419-530-5570
Julie Fischer-Kinney, Student Researcher, 419-360-1921

Purpose: You are invited to participate in the research project entitled,
Biracial/Multiracial Student Perceptions of Student Academic Support Services at a Predominantly White Public Institution
which is being conducted at the University of Toledo under the direction of Dr. Penny Poplin Gosetti and Julie Fischer-Kinney. The purpose of this study is to explore the perceptions of biracial/multiracial college students regarding student academic support services at a predominantly white public institution.

Description of Procedures:
This research study will take place at The University of Toledo, and involves completion of a brief demographic survey. The survey will take approximately 10 minutes to complete. The demographic survey will ensure that individuals selected for participation in the next phase of research (focus groups) are appropriate, and self-identify as biracial/multiracial. Additionally, the survey will be used to guide the focus group conversations and will be analyzed during the data analysis phase. Should you not provide consent for participation, you will not be able to complete the survey. Should you provide consent for survey participation, you will be directed to the survey questions.

Students who are under the age of 18, do not have a class standing of at least sophomore, or who do not self-identify as biracial/multiracial in the survey, will be directed to a thank you page. This will ensure that if you do not meet the research design criteria, you are spared from completing the survey.

As an incentive for survey completion, you will be entered into a drawing for a $50 Amazon gift card. The participant randomly selected as the winner of the drawing will be e-mailed the electronic gift card.

Potential Risks: There are minimal risks to participation in this study, including loss of confidentiality and the right to stop participation at any point. Answering the survey might cause you to feel upset or anxious. If so, you may stop participation at any point.

Potential Benefits: The only direct benefit for participation in this research may be that you will learn about perceptions of biracial/multiracial college students regarding student academic support services at your institution. Before programs and services can be
developed to aid biracial/multiracial students, institutions need to understand the barriers to academic success biracial college students experience at predominantly white institutions. Hopefully, the results of this study will inform administrators and policymakers of necessary changes to meet the needs of biracial/multiracial college students in higher education.

**Confidentiality:** The researchers will make every effort to prevent anyone who is not on the research team from knowing that you provided this information, or what that information is. The consent forms with signatures will be kept separate from responses, which will not include names and which will be presented to others only when combined with other responses. Although we will make every effort to protect your confidentiality, there is a low risk that this might be breached.

**Voluntary Participation:** Your refusal to participate in this study will involve no penalty or loss of benefits to which you are otherwise entitled and will not affect your relationship with The University of Toledo or any of your classes or student involvements. In addition, you may discontinue participation at any time without any penalty or loss of benefits.

**Contact Information:** Before you decide to accept this invitation to take part in this study, you may ask any questions that you might have. If you have any questions at any time before, during or after your participation or experience any physical or psychological distress as a result of this research you should contact a member of the research team (Dr. Penny Poplin Gosetti, 419-530-5570 and/or Julie Fischer-Kinney, 419-360-1921). If you have questions beyond those answered by the research team or your rights as a research subject or research-related injuries, the Chairperson of the SBE Institutional Review Board may be contacted through the Office of Research on the main campus at (419) 530-2844.

**SIGNATURE SECTION – Please read carefully**

By clicking 'Agree', you agree that you have read the information provided above, you have had all your questions answered, and you have decided to take part in this research. You are making a decision whether or not to participate in this research study.

- Agree
- Disagree

This Adult Research Informed Consent document has been reviewed and approved by the University of Toledo Social, Behavioral and Educational IRB for the period of time specified in the box below.

Approved Number of Subjects: 200
Appendix C

Informed Consent (Focus Groups)

ADULT RESEARCH SUBJECT - INFORMED CONSENT FORM (Focus Group)
Biracial/Multiracial Student Perceptions of Student Academic Support Services at a
Predominantly White Public Institution

Principal Investigator:
Dr. Penny Poplin Gosetti (faculty), Associate Professor, 419-530-5570
Julie Fischer-Kinney, Student Researcher, 419-360-1921

Purpose: You are invited to participate in the research project entitled,
Biracial/Multiracial Student Perceptions of Student Academic Support Services at a
Predominantly White Public Institution which is being conducted at the University of
Toledo under the direction of Dr. Penny Poplin Gosetti and Julie Fischer-Kinney. The
purpose of this study is to explore the perceptions of biracial/multiracial college students
regarding student academic support services at a predominantly white public institution.

Description of Procedures:
This research study will take place at The University of Toledo, and involves
participation in a 60-90 minute focus group.

Focus Groups:
Survey participants have been selected from the pool of completed demographic
surveys, and contacted for participation in the focus groups. As an incentive for
participating in the focus groups, you will be entered into a drawing for a $100 gift
certificate to the retailer of your choice.

The participants have been divided into three focus groups with approximately 6-
8 students per group. The groups include male and female students. The data obtained
from the focus groups will be used in the aggregate. No names, class ranks, other
identifying characteristics, or identifying quotes will be mentioned in the study; all
information will be completely confidential. The focus groups will be audio-taped with
participant consent. Should you not provide consent for audio-taping, the session will not
be recorded. Each focus group will convene for 60 – 90 minutes in duration.

The student researcher will serve as moderator of the focus groups. A doctoral
student with research experience will serve as scribe of the sessions. The scribe will write
responses from participants on a flipchart. Each focus group will reflect and build on the
data collected from the prior focus group(s). During the focus group meeting, you will be
asked if you agree with data recorded on the flipchart from the prior focus group(s) to
determine if there is agreement in responses between the focus groups.

During data analysis, emerging themes and findings will be shared via e-mail with
focus group participants for clarification and verification of interpretation. Participants
will be asked to provide an e-mail response indicating that they either (a) agree with the
interpretation(s), or (b) provide clarifying responses if they disagree with the
interpretation(s). As an incentive for responding to the e-mail, you will be entered into a
drawing to receive a $50 i-Tunes gift card. The randomly selected winner will receive the gift card electronically via their e-mail account.

Will you permit the researcher to audio record during the focus groups?

YES [ ] NO [ ]

Initial Here Initial Here

After you have completed your participation, the research team will debrief you about the data, theory and research area under study and answer any questions you may have about the research.

**Potential Risks:** There are minimal risks to participation in this study, including loss of confidentiality and their right to stop participation at any point. Answering the survey and/or participating in the focus group might cause you to feel upset or anxious. If so, you may stop participation at any point.

**Potential Benefits:** The only direct benefit for participation in this research may be that you will learn about perceptions of biracial/multiracial college students regarding student academic support services at your institution. Hopefully, the results of this study will inform administrators and policy makers of necessary changes to meet the needs of biracial/multiracial college students in higher education.

**Confidentiality:** The researchers will make every effort to prevent anyone who is not on the research team from knowing that you provided this information, or what that information is. The consent forms with signatures will be kept separate from responses, which will not include names and which will be presented to others only when combined with other responses. Although we will make every effort to protect your confidentiality, there is a low risk that this might be breached.

**Voluntary Participation:** Your refusal to participate in this study will involve no penalty or loss of benefits to which you are otherwise entitled and will not affect your relationship with The University of Toledo or any of your classes or student involvements. In addition, you may discontinue participation at any time without any penalty or loss of benefits.

**Contact Information:** Before you decide to accept this invitation to take part in this study, you may ask any questions that you might have. If you have any questions at any time before, during or after your participation or experience any physical or psychological distress as a result of this research you should contact a member of the research team (Dr. Penny Poplin Gosetti, 419-530-5570 and/or Julie Fischer-Kinney, 419-360-1921). If you have questions beyond those answered by the research team or your rights as a research subject or research-related injuries, the Chairperson of the SBE
Institutional Review Board may be contacted through the Office of Research on the main campus at (419) 530-2844.
Before you sign this form, please ask any questions on any aspect of this study that is unclear to you. You may take as much time as necessary to think it over.

**SIGNATURE SECTION – Please read carefully**

You are making a decision whether or not to participate in this research study. Your signature indicates that you have read the information provided above, you have had all your questions answered, and you have decided to take part in this research. The date you sign this document to enroll in this study, that is, today's date must fall between the dates indicated at the bottom of the page.

<table>
<thead>
<tr>
<th>Name of Participant (please print)</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Person Obtaining Consent</td>
<td>Signature</td>
<td>Date</td>
</tr>
</tbody>
</table>

This Adult Research Informed Consent document has been reviewed and approved by the University of Toledo Social, Behavioral and Educational IRB for the period of time specified in the box below.

Approved Number of Subjects: 200
Appendix D

E-Mail to Staff and Administrators

E-mail from Dean of Students to the Dean of Student’s Staff and Colleagues

Hello DOS staff and DOS friends,
Please pass Julie’s email on to any biracial/multiracial students/student organizations that you believe would be interested in participating in this study. Julie needs as many biracial/multiracial students as possible to take her survey. The work she’s doing will pave the way for helping this important student population! Pass it on!

The University of Toledo
Biracial/Multiracial Student Perceptions of Student Academic Support Services at a Predominantly White Public Institution

Volunteers Wanted for a Research Study
I am seeking undergraduate college students who self-identify as biracial/multiracial individuals, are 18 years of age or older, and have at least a class standing of sophomore to participate in a research study (dissertation). The purpose of this study is to explore the perceptions of biracial/multiracial college students regarding student academic support services at a predominantly white public institution.

This study entails completing a brief, anonymous demographic survey. The survey will take approximately 10 minutes to complete. As an incentive for participation, students will be entered into a drawing for a $50 Amazon gift card.

If you or anyone you know might be interested in participating, or for further information, please contact Julie Fischer-Kinney for more information.

Julie Fischer-Kinney, Doctoral Candidate (Student Researcher)
419.360.1921
julie.fischer-kinney@rockets.utoledo.edu
Appendix E

E-mail Invitation to Participate in Study

[Email]

"julie.fischer-kinney@rockets.utoledo.edu via surveymonkey.com"
<member@surveymonkey.com>

Subject: Biracial/Multiracial Student Survey - Help a UT Student!

Body: Greetings!

I am conducting a survey as part of my dissertation on biracial/multiracial students. If you self-identify as a biracial or multiracial student at UT, I would greatly appreciate your help in filling out a brief survey! I am giving away a gift card ($$) as an incentive for survey completion.

Here is a link to the survey:
https://www.surveymonkey.com/s.aspx

This link is uniquely tied to this survey and your email address. Please do not forward this message.

Thanks for your participation!
Julie Fischer-Kinney, Student Researcher

Please note: If you do not wish to receive further emails or do not self-identify as a biracial/multiracial student, please click the link below, and you will be automatically removed from the mailing list.
https://www.surveymonkey.com/optout.aspx
Appendix F

Survey Monkey Demographic Survey

Biracial/Multiracial Student Perceptions Dissertation Survey

1. Informed Consent

Consent for participation in survey

1. Principal Investigator Penny Poplin Gosetti, Associate Professor, 419-530-5570;
Julie Fischer-Kinney, Student, 419-360-1921

Purpose: You are invited to participate in the research project entitled, Biracial/Multiracial College Student Perceptions of Student Academic Support Services at a Predominantly White Public Institution, which is being conducted at The University of Toledo under the direction of Dr. Penny Poplin Gosetti, and Julie Fischer-Kinney. The purpose of this study is to explore the perceptions of biracial/multiracial college students regarding student academic support services at a predominantly white public institution.

Description of Procedures:
This survey will ensure that individuals selected for participation in next phase of research (focus groups) are appropriate, and self-identify as biracial/multiracial, according to the aspects of the research design. Additionally, the survey will be used to guide the focus group conversations and will be analyzed during the data analysis phase. Should you not provide consent for participation, you will not be able to complete the survey. Should you provide consent for survey participation, you will be directed to the survey questions. Students who are under the age of 18, do not have a class standing of at least sophomore, or who do not self-identify as biracial/multiracial in the survey, will be directed to a thank you page. This will ensure that if you do not meet the research design criteria, you are spared from completing the survey. As an incentive for survey completion, you will be entered into a drawing for a $50 Amazon gift card. The participant randomly selected as the winner of the drawing will be e-mailed the electronic gift card.

Potential Risks: There are minimal risks to participation in this study, including loss of confidentiality and the right to stop participation at any point. Answering the survey might cause you to feel upset or anxious. If so, you may stop participation at any point.

Potential Benefits: The only direct benefit for participation in this research may be that you will learn about perceptions of biracial/multiracial college students regarding student academic support services at your institution. Before programs and services can be developed to aid biracial/multiracial students, institutions need to understand the barriers to academic success biracial/multiracial college students experience at predominantly
Biracial/Multiracial Student Perceptions Dissertation Survey

white institutions. Hopefully, the results of this study will inform administrators and policy makers of necessary changes to meet the needs of biracial/multiracial college students in higher education.

Confidentiality: The researchers will make every effort to prevent anyone who is not on the research team from knowing that you provided this information, or what that information is. Although we will make every effort to protect your confidentiality, there is a low risk that this might be breached.

Voluntary Participation: Your refusal to participate in this study will involve no penalty or loss of benefits to which you are otherwise entitled and will not affect your relationship with The University of Toledo or any of your classes. In addition, you may discontinue participation at any time without any penalty or loss of benefits.

Contact Information: Before you decide to accept this invitation to take part in this study, you may ask any questions that you might have. If you have any questions at any time before, during or after your participation, or experience any physical or psychological distress as a result of this research, you should contact a member of the research team (Penny Poplin Gosetti, PhD, Principal Investigator, 419-530-5570 and/or Julie Fischer-Kinney, 419-530-1263).

By clicking 'Agree', you agree that you have read the information provided above, you have had all your questions answered, and you have decided to take part in this research.

☐ Agree
☐ Disagree
Skip Logic:
If Disagree is selected this message appears:

Biracial Student Perceptions Dissertation Survey
2. Thank You

You have elected not to participate in the survey. Thank you for taking the time to learn more about the purposes of this research project. Should you change your mind and wish to participate or have additional questions before making a decision, please contact Julie Fischer-Kinney at julie.fischer-kinney@rockets.utoledo.edu or 419.369.1921.
2. What is your age?

- Under 18
- 18-22
- 22-26
- 26-30
- Over 30
Skip Logic:
If “Freshman” is selected this disqualification thank you message appears:

Sorry, but based upon your responses you do not meet the qualifications for this survey. Thank you for taking the time to learn more about this study. Should you have questions, please contact Julie Fischer-Kinney at julie.fischer-kinney@utoledo.edu
Skip Logic:
If “Monoracial” is selected this disqualification thank you message appears:

Sorry, but based upon your responses you do not meet the qualifications for this survey. Thank you for taking the time to learn more about this study. Should you have questions, please contact Julie Fischer-Kinney at julie.fischer-kinney@utoledo.edu
6. Biracial/Multiracial self-identification

*5. If you self-identify as biracial or multiracial, please mark all that apply regarding how you self-identify.

[ ] White
[ ] Black/African American
[ ] Hispanic
[ ] Asian
[ ] American Indian or Alaska Native
[ ] Native American or other Pacific Islander
[ ] Other (please specify)

[ ] International
**6. Gender**
- Female
- Male
- Transgender

**7. Your current academic college**
- Adult & Lifelong Learning
- Business & Innovation
- Education, Health Science & Human Service
- Engineering
- Language, Literature and Social Sciences
- Gateway Programs (Undecided/Trans/Pre-major)
- Natural Science & Mathematics
- Nursing
- Pharmacy
- Visual & Performing Arts

**8. Anticipated graduation date (month/year)**

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>2023</td>
</tr>
</tbody>
</table>

**9. Cumulative Grade Point Average**
- 3.0 - 4.0 GPA
- 2.0 - 3.0 GPA
- 1.0 - 2.0 GPA
- Under 1.0

**10. Campus Involvements/Student Organizations (including leadership positions held); if no involvements state "N/A"**

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Position</td>
</tr>
<tr>
<td>Clubs</td>
<td>Activities</td>
</tr>
</tbody>
</table>
11. On and off-campus student employment history (include employers name and length of employment); if no employment history state "N/A"

12. Have you ever lived in a residence hall?
   - Yes
   - No

If No is selected for Question #12, Skip Logic sends the participant to Question #15 on Page 11 of the Survey
**13. If yes, what residence hall(s)?**

- [ ] Parks Tower
- [ ] Carter Hall
- [ ] Crossings
- [ ] Academic House
- [ ] International House
- [ ] Ottawa House
- [ ] MacKinnon
- [ ] Dowd, Nash, White
- [ ] McDonald Village

**14. What year in school did you live in a Residence Hall(s)?**

- [ ] Freshman Year
- [ ] Sophomore Year
- [ ] Junior Year
- [ ] Senior Year
15. What academic support services have you used (mark all that you have used in the past or are currently using at this institution)?

- Tutoring
- Supplemental instruction
- Mentoring (faculty)
- Mentoring (peer-to-peer)
- Undergraduate research
- Service Learning
- Study Abroad
- Academic advisor

Other (please specify):
<table>
<thead>
<tr>
<th>*16. What barriers to academic success have you encountered on this campus (mark all that apply)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Lack of faculty support</td>
</tr>
<tr>
<td>☐ Lack of faculty mentors</td>
</tr>
<tr>
<td>☐ Personal barriers (examples: lack of family support, health problems, balance between school and social life, family responsibilities, mental health barriers)</td>
</tr>
<tr>
<td>☐ Lack of peer familial support</td>
</tr>
<tr>
<td>☐ Lack of peer mentors</td>
</tr>
<tr>
<td>☐ Financial obstacles (Examples: Financial Aid, unemployment, ability to buy books)</td>
</tr>
<tr>
<td>☐ Learning barriers (examples: lack of study habits, note-taking skills, communication skills, time management skills, computer literacy, personal computers, study groups, difficulty concentrating, undervalued in major)</td>
</tr>
<tr>
<td>☐ Institutional barriers (Examples: lack of available tutoring, supplemental instruction, service learning opportunities, undergraduate research opportunities, study abroad opportunities, computers on campus)</td>
</tr>
<tr>
<td>☐ Insufficient study areas</td>
</tr>
<tr>
<td>☐ Lack of information on campus activities/student organizations</td>
</tr>
<tr>
<td>☐ Limited library hours</td>
</tr>
<tr>
<td>☐ Lack of academic advising support</td>
</tr>
</tbody>
</table>

Other (please specify)
Thank you for taking the time to complete this survey!

Please provide your name and e-mail address to be entered into a drawing to receive a $50 gift card to Amazon.com, and for survey tracking purposes. Should you be randomly selected to receive the gift card, it will be electronically e-mailed to your e-mail account.

Approximately 30 students will be randomly selected from the pool of completed surveys to participate in a focus group meeting (90-60 minute time commitment). Should you be randomly selected to participate in a focus group, you will be contacted via e-mail and/or phone. Participation in the focus group is voluntary. Participants will receive a free meal, and will be entered into a drawing to receive a $100 gift card to the retailer of your choice.
Best wishes for a wonderful semester!

**17. Please provide your name and e-mail address**

Name:  

Email Address:  

Appendix G

Moderator’s Guide for Focus Group Meetings

I. Introduction
   A. Welcome
   B. Statement of the purpose of the study and explanation of terms
   C. Explanation of Consent Form and obtaining signatures
   D. Ground rules to follow during the interview

II. Warm-Up
   A. Set the tone by explaining the unfolding matrix
   B. Set participants at ease by providing examples

III. Ask the focus group questions

IV. Wrap-up
   A. Identify and organize the major themes from the responses
   B. Ensure that any conversational points not completed are mentioned

V. Member Checking with-in group

VI. Member Checking between groups

VII. Closing Statements
   A. Request anonymity of information
   B. Answer any remaining questions
   C. Express thanks
Appendix H

Focus Group Questions

1. What student academic support service barriers to student success do you perceive at this institution?

2. How often do you encounter academic support service barriers at this institution?

3. What (heuristic) knowledge must successful biracial students possess to overcome the identified barriers to success?

4. What (collective) behaviors and actions must be exhibited by successful biracial students to overcome the identified barriers?

5. What set of actions might predominantly white institutions take (related to student academic support services) to help biracial students overcome identified barriers?
Appendix I

Focus Group Handout

Dissertation Study

Summary of Purpose and Significance of Study

There is a need at the national level for research on biracial/multiracial students’ attitudes and perceptions affecting academic areas, but despite this need, little research has been conducted in these areas (Loo & Rolison, 1986).

Voices of biracial/multiracial college students, a growing population in the United States and in higher education, are not reflected in the research and are greatly needed by institutions to best meet the needs of the changing student population in higher education. Before programs and services can be developed to aid biracial/multiracial students in being academically successful in higher education, higher education institutions need to understand the barriers to academic success biracial college students experience at predominantly white institutions. Higher education institutions also need to understand what services biracial college students want and need from their perspective, rather than imposing student academic support services based on assumptions that students of color are homogeneous.

Definition of Terms:

**Barrier**
Obstacles that must be overcome by the student in order to attain a college degree (Attinasi, 1986).

**Biracial**
First-generation offspring of parents of different races, and most appropriately signifies the presence of two racial backgrounds in a non-judgmental manner (Kerwin & Ponterotto, 1986).

**Ethnic Culture**
Groups of people united by ancestry, language, physiology, and history as well as beliefs and practices. (Robins, Lindsey, R. B., Lindsey, D. B., & Terrell, 2002, p. 52).

**Heuristic Knowledge**
Local or practical knowledge that is necessary for a student to function competently on campus (Padilla, 1991).
**Multiracial**
Kerwin and Ponterotto (1995) define multiracial as first-generation offspring of parents of different races and it most appropriately signifies the presence of two or more racial backgrounds in a non-judgmental manner. This definition incorporates biracial individuals.

**Successful Student**
Student success will be defined as progress toward graduation (Wirth & Padilla, 2008).

**Student Academic Support Services**
Defined in the context of this study as incorporating academic advising, tutoring, faculty mentoring, peer-to-peer mentoring, supplemental instruction, study abroad programs, undergraduate research programs, and service learning programs.

**Theoretical Knowledge**
Knowledge that is learned through coursework and formal study (Padilla, 1991).
Appendix J

Ground Rules

This is a phenomenological study meaning the intent is to focus on your feelings, your perceptions, your opinions, and your experiences, thus there are no right or wrong answers. You are free to agree or disagree with the opinions stated by other participants in this focus group, but I do ask that you be respectful of each other if you disagree. From time to time I will conduct member checking to ensure that I am summarizing your comments correctly.

You have each been provided a pseudonym name to protect your anonymity within this study. Your actual name will not be cited in this study. As you can see, I have name tents in front of each of you with your pseudonym name. I am taping this session to ensure I do not miss any of your comments. I ask that if you reference another student’s comments, you state their pseudonym name first when speaking. For example, “As John stated, I feel that……”

As students, you are the experts in this study and on this topic. I am very interested in hearing from each of you and greatly value your comments.

Let’s begin.

As I assessed your survey responses, I noted that the majority of you noted the following as barriers to your academic success _____________________________