

CHAPTER ONE

INTRODUCTION

Despite gains made in the educational attainment of ethnic minorities, members of these groups remain underrepresented in higher education. While ethnic minority group members (African American, Hispanic, American Indian) comprise nearly 35% of the college age population in the U.S. they represent only 20% of the total college enrollment (National Center for Education Statistics, 1999; U.S. Census Bureau, 2001). In 1999, African Americans represented approximately 11% of those enrolled in college, and Hispanics and American Indians represented less than 9% and 1%, respectively (Chronicle of Higher Education, 2001).

Low enrollment patterns among ethnic minority students impact the number of students from these groups that earn undergraduate and advanced degrees. Recent figures reveal that while 18.8% of Whites hold bachelor's degrees only 11.5% of African Americans and 7.3% of Hispanics have earned a four-year degree (Chronicle of Higher Education, 2001). Statistics at the graduate level are further disconcerting as 4.6% of African Americans and 3% of Hispanics hold advanced degrees compared to 8.5% of Whites (U.S. Census Bureau, 2001).

The underrepresentation of ethnic minorities in higher education has been attributed to many factors. Socioeconomic disadvantages, inadequate educational opportunities, a hostile campus environment, negative interactions with faculty, and limited financial resources have all been cited as reasons for the lack of minority participation in higher education (Allen, 1984; Blackwell, 1988; Fleming, 1984; King, 1998; Nettles, 1990). Whatever the reason, the disparity in educational attainment among racial groups has implications for American society and the future of higher education.

By 2050 it is estimated that 47.2% of the total U.S. population will be members of minority groups (Murdock & Hoque, 1999). Projections also indicate that by 2010 ethnic minority groups will constitute more than one-third of the college age population (U. S. Census Bureau, 2001). However, unless changes are made to increase minorities' access to and advancement within higher education, they will continue to be disproportionately represented in terms of college enrollment and degree attainment. These groups will also continue to earn less and experience limited economic and workforce participation.

As the United States becomes more ethnically diverse, failure to increase minority participation in higher education will have an impact on the economy, labor force, and institutions of higher education (Bowen & Bok, 1998; Callan, 1995; Kerlin, 1995; Murdock & Hoque, 1999; Stamps & Tribble, 1995; Vaughn, 1985). If we are to remain economically competitive in the face of anticipated demographic changes we will need to ensure that our minority workforce is better educated and more highly skilled (Murdock & Hoque, 1999; Stamps & Tribble, 1995). As Callan (1987) asserts:

America faces not only a moral mandate but an economic necessity when it seeks to include all citizens in a quality post-secondary education. If this issue is not addressed aggressively with bold policies and persistent commitment, we will not only create a permanent under-class of American citizens but also risk social and economic dissolution that will affect us all. (as cited in Shrom & Spooner, 1990, p. 223).

Economists predict that the number of jobs requiring post-secondary education will increase while the number and types of jobs available for those with only minimal education will decrease (King, 1998). Technological advances and global competition necessitate a better-educated workforce with more sophisticated skills. The workplace is transforming rapidly as a result of technology and more and more jobs now demand enhanced technical skills (King, 1998). Consequently, increased participation in higher education is necessary to equip minorities with the education and skills that will make them competitive for these jobs.

Improving college enrollment and completion rates for ethnic minorities at the undergraduate level is imperative if we are to meet changing demographic and labor force needs. In addition, the relatively low number of ethnic minority students who enter and complete a bachelor's program has a direct impact on the pool of students eligible to pursue graduate study. If minority participation is to increase at the graduate level it will be necessary to increase enrollment and retention at the undergraduate level (Olson, 1988).

The limited number as well as the experiences of ethnic minority students at the undergraduate level has a cumulative effect and poses challenges for graduate schools (Blackwell, 1988). Barriers interfering with ethnic minority enrollment and retention at

the graduate level are similar to those at the undergraduate level. The limited research on the experiences of ethnic minority graduate students reveals that feelings of isolation and discrimination, poor relationships with faculty and lack of social interaction inhibit success (DeFour & Hirsch, 1990). In addition to these factors, inadequate financial resources, unfamiliarity with the nature of graduate education, and general dissatisfaction with the program are other barriers that may interfere with minority students' success in graduate school. These factors often lead to withdrawal from postgraduate study (Allen, 1984; Clewell, 1987; Esler, 1998; Golde, 1998; Nettles, 1990; Stamps & Tribble, Jr. 1995; Vaughn, 1985).

Though ethnic minority participation at the graduate level has shown some progress over the years, the number of students entering and completing advanced degrees remains small. In 1986, ethnic minorities accounted for 11.6% of graduate school enrollments (Esler, 1998). Today, they comprise approximately 18% of the graduate population (Chronicle of Higher Education, 2001). Trend data on doctoral recipients shows some fluctuation as ethnic minorities earned an estimated 6.3% of doctorates awarded in 1975, 9.1% in 1985 (Olson, 1988) but fewer than 8% of those awarded in 1999 (Farrell, 2001).

If ethnic minorities are to enjoy economic stability it is necessary to ensure that advanced levels of education are achieved, as higher levels of educational attainment have been found to correlate with higher earnings and lower levels of unemployment (U.S. Department of Education, 1997). Statistical data for 1999 report that individuals with a master's degree earned approximately 23% more than those holding a bachelors degree and those with a doctorate earned an estimated 40% more than master's degree holders (U.S. Census Bureau, 2001). Further, those with advanced degrees were found to have a 2% unemployment rate (U.S. Department of Education, 1997). To increase opportunities for economic and social mobility among underrepresented populations and enhance their chances for full participation in American society, higher levels of graduate education must be achieved (King, 1998; Shrom & Spooner, 1990).

Minority underrepresentation in graduate education also has a significant impact on the diversification of faculty in U.S. colleges and universities (Bowen & Bok, 1998; Stamps & Tribble, 1995). As predicted, the turn of the 21st century has ushered in the

need to replace at least one-third of the nation's university faculty (Blackwell, 1988; Olson, 1988). Low numbers of minority students at the undergraduate level are perpetuated at the graduate level and thus, directly affect the number of minorities in the faculty pipeline. Currently, it is estimated that African Americans comprise 4.2% of college and university faculty and most of these are on historically Black college campuses (Chronicle of Higher Education, 2001). To meet the demand for new and more diverse collegiate faculty it will be necessary to increase the critical mass of minority students in the pipeline (Bowen & Bok, 1998; Olson, 1988; Stamps & Tribble, 1995; Vaughn, 1985).

Improving access and success at the graduate level for minority students requires both formal and informal structures that encourage and support full participation and success (King, 1988; Murdock & Hoque, 1999; Stamps & Tribble, Jr. 1995; Vaughn, 1985). In addition to ensuring that minority students are completing bachelor's programs, institutions have begun to recognize the importance of opportunities that prepare students for graduate school. Structured programs can aid in the professional socialization and development of minority students and improve retention and graduation rates among these groups (Crawford, Figert, Suarez-Balcazar, Nyden, & Reich, 1996). They can also serve to interest minority students in pursuing graduate study (Olson, 1988).

Increasing ethnic minority enrollment and retention at the graduate level will require colleges and universities to become more creative, consistent, and aggressive in their efforts (Murdock & Hoque, 1999; Stamps & Tribble, 1995). Institutions should take the initiative to establish comprehensive programs that promote the development of the next generation of minority scholars, researchers, teachers, and other professionals (Olson, 1988). Research shows that minority undergraduates who have certain kinds of experiences are more likely to pursue graduate degrees (Allen, 1984; Crawford et al., 1996; Grimmett, Bliss, & Davis, 1998; Stamps & Tribble, 1995).

The early 1990s witnessed a proliferation of programs designed to address retention and completion issues among minority undergraduates and increase the number of these students who pursue graduate education. Structured programs that provide mentoring, research activity, financial support, and information about graduate education have been shown to increase the likelihood that students from underrepresented groups

will apply and gain admission to graduate school (Crawford et al., 1996; Foertsch, Alexander, & Penberthy, 2000; Frierson, Jr., Hargrove, & Lewis, 1994; Olson, 1988; Stamps & Tribble, 1995).

Graduate school preparation programs (GSPPs), as they will be referred to in this study, were created to improve retention and graduation rates among underrepresented students and encourage them to pursue graduate study. GSPPs provide structured activities designed to expose students to the various components of graduate education that are crucial to success. This includes establishing mentoring relationships and opportunities to conduct scholarly research, as well as providing access to information about graduate education, the application process, and funding for post-baccalaureate study. It is presumed that minority students who are armed with this type of information are more likely to successfully transition, academically and socially, into the graduate environment (Crawford et al., 1996; Foertsch et al., 2000; Nnadozie et al., 2000).

The limited literature available on the impact of GSPPs in preparing underrepresented students for entry into and success within graduate school focuses on the effectiveness of individual program components such as mentoring and undergraduate research experience (Crawford et al., 1996; Grimm et al., 1998;). Research has also been conducted to assess student satisfaction with GSPP components and their perceptions of the relative importance of these components. These investigations have reported that the most effective GSPPs provide mentoring, opportunities to conduct research and financial support for participants (Crawford et al., 1996; Foertsch et al., 2000; Frierson, Jr. et al., 1994; Grimm et al., 1998; Nnadozie, Ishiyama, & Chon, 2000).

These studies focus on components of GSPPs at the undergraduate level. However, there is little empirical evidence about whether GSPPs benefit minority students upon enrollment in graduate school. That is, do GSPPs ease the academic and social transition to graduate school for minority students? Moreover, do minority graduate students who participated in GSPPs as undergraduates transition more readily to graduate school than minority graduate students who did not participate in such programs? This study was designed to explore these issues.

Purpose of the Study

This study explored the academic and social transition experiences of underrepresented ethnic minority students to graduate school and analyzed the differences in transition by race (Black/African American, Hispanic/Latino, American Indian/Alaskan Native), type of GSPP experience (no program, research-only program, graduate/professional school seminars only, holistic program) and duration of program (6 weeks or less during summer, 7-12 weeks during summer, summer and academic year).

The study employed a national sample. Participants included underrepresented ethnic minority graduate students enrolled full-time on the main campus of 35 doctoral/research extensive universities. Data were collected using a survey specifically designed for the study. The study was guided by the following research questions:

1. What are the academic transition experiences of ethnic minority graduate students?
2. What are the social transition experiences of ethnic minority graduate students?
3. Are there differences in academic transition experiences based on race?
4. Are there differences in social transition experiences based on race?
5. Are there differences in academic transition experiences based on type of program?
6. Are there differences in social transition experiences based on type of program?
7. Are there differences in academic transition experiences based on duration of program?
8. Are there differences in social transition experiences based on duration of program?
9. Are there differences in academic transition experiences between those who participated in a program and those who did not?
10. Are there differences in social transition experiences between those who participated in a program and those who did not?

Significance of the Study

The findings of this study were significant for future professional practice, research, and policy. This study explored the transition experiences of minority graduate students who participated in a GSPP and those who did not. Results revealed information that can be used to inform the professional practice of higher education administrators, faculty and those who manage GSPPs. Information about the success of graduate school preparation programs may be useful in efforts to expand the pool of ethnic minorities who pursue graduate education and ultimately, enter the faculty ranks.

As institutions of higher education attempt to become more diverse, it will be necessary for administrators to identify ways to enhance the enrollment and success of ethnic minority students. This study provided data about the role that GSPPs play in preparing underrepresented students for success in graduate school. Findings revealed information about the types of programs that promote the transition to graduate school for minority students. This information may assist higher education administrators in reaching out to those ethnic minority students who show promise for graduate study. Specifically, administrators might develop strategies for increasing minority student participation at the graduate level, assisting in their successful matriculation and completion, and ultimately increasing the pool of eligible candidates for faculty positions.

Faculty members interested in diversifying their graduate programs are another constituency that may find significance in this study. Results reveal information about the academic and social transition experiences of ethnic minority graduate students. Faculty might use these findings to develop support and enrichment programs that will facilitate a successful transition for minority students, as well as to strengthen elements of existing programs.

Those who manage GSPPs might also benefit from the findings of this study. This study examined the academic and social transition experiences of minority graduate students by type and duration of GSPP experience. Understanding the academic and social transition challenges that confront minority graduate students provides a framework for designing programs that attempt to minimize these challenges and better prepare students for success in graduate school. Results offer information for program development and enhancement so that programs can most effectively prepare ethnic

minority students for graduate school and assist them in coping with the academic and social adjustment issues that may hinder degree completion.

In addition to future practice, the present study also has significance for additional research to be conducted in this area. This study examined the academic and social transition experiences of ethnic minority graduate students by race, type of GSPP experience, and duration of experience. Another study might compare graduate student transition based on location of GSPP. For example, the academic and social transition of graduate students who participated in a GSPP at a historically Black college or university (HBCU) versus those who participated in a GSPP at a traditionally White institution (TWI) may be examined. Such a study would provide information about the similarities and differences in experiences across institutional type and might reveal best practices from each that contribute to the successful transition of minority students into graduate school.

Additional research might also be conducted to provide a more in-depth examination of the quantity and quality of the students' GSPP experience. In this study, students were asked to indicate only whether they had or had not participated in a GSPP as an undergraduate. The study did not elicit data about the frequency or level of involvement. Future studies might look at those students who participated in more than one experience or program cycle versus those that had only one experience. Studies from this perspective may also explore the student's level of involvement in GSPP components, to include degree and frequency of involvement in the mentoring relationship, participation in workshops/seminars, and number of oral presentations and publications produced. Results from this type of study may reveal the impact that length and degree of participation have on the students' ability to successfully transition into graduate school.

Another area for alternative study might explore the academic and transitional experiences of ethnic minority graduate students who enrolled in graduate programs at the GSPP host institution. This study explored transitional issues of minority graduate students who participated in GSPPs in general. It did not, however, give any consideration to whether or not the GSPP experience occurred at the same institution where the student subsequently enrolled in graduate school. Such a study might provide

information on how the students' knowledge of or familiarity with the institution and/or graduate program in which they enrolled influenced their academic and social transition at the graduate level. This type of study may also offer insight into how pre-established relationships with department faculty and the campus environment can enhance or inhibit success in graduate school.

The present study also had implications for future policy at the institutional, state, and federal levels. Overall, the data revealed through this study provided policymakers at all levels with information they might use to make informed decisions about support for GSPPs. At the institutional level, results may be used to re-evaluate recruitment and financial aid policies leading to the design and implementation of programs and policies that will enhance minority student enrollment, retention, and success in graduate school.

State policymakers could utilize the findings of this study to assess the effectiveness of GSPPs and to improve policies related to increasing minority participation at the graduate level. As institutions attempt to become more diversified, findings from this study may influence those with fiscal authority to assess the amount of resources allocated to programs that promote minority student success at the graduate level.

At the federal level, policymakers might use the results to examine the impact GSPPs have on improving access to and success in graduate school among minorities. Subsequently, they might evaluate the level of federal support for programs that demonstrate success in increasing educational opportunity at the graduate level for minority group members. Overall, the results of the study may assist policy makers in making decisions regarding appropriations for educational programs and services.

Delimitations

As with other studies, this study had its delimitations. First, delimitations related to the sample used for the study should be noted. The sample only included students from Black/African American, Hispanic/Latino, and American Indian/Alaskan Native ethnic backgrounds. While some might argue that Asian-American students are also underrepresented in higher education, the purpose of this study was to explore the experiences of ethnic minority students based on their involvement in a graduate school preparation program. Because most GSPPs do not identify Asian-American students as a

targeted ethnic group, they were not included as an underrepresented minority group in this study. Similarly, since this study focused on the experiences of underrepresented ethnic minority graduate students, Caucasian students were not included as a part of the sample and any comparisons made will be across the identified racial groups.

Delimitations related to the data collection method should also be described. First, since the data were collected through a survey developed specifically for this study, it is possible that the survey did not address all issues related to academic and social transition to graduate school. As a result, important information related to the transition experiences of minority students may have been misreported or certain items may have been inadvertently eliminated altogether.

Second, it is possible that the response options provided on the survey were not appropriate for all participants. Therefore, some respondents may have been forced to choose the option most closely related to how they felt instead of one that provided an accurate description of their experience. This may have led to an erroneous assessment of the academic and social transition experiences of minority graduate students.

A third delimitation related to data collection dealt with the clarity of the survey items. Some survey items may have been ambiguous or may have been interpreted differently by respondents. This in turn might have affected how participants answered questions and, therefore, the results may not provide a true account of students' experiences.

Other delimitations dealt with the use of student self-report as a data collection method. Responses were based on the students' assessment of the GSPP. It was assumed that responses would be objective and based on the GSPP as a whole. However, it is possible that certain events, positive or negative, might have influenced the students' evaluation of the overall GSPP experience, making it overwhelmingly good or bad. If this occurred, the results of the study might have been distorted.

Finally, there may have been a historical effect on the feedback provided. Because students were asked to recall their experiences, they had to rely on their memory of certain events related to the GSPP experience. It is possible that these recollections were not completely reliable and that too much time had elapsed between the GSPP experience

and the data collection period for students to accurately recall details of their participation.

Despite these delimitations, the study was important. In addition to contributing to the body of research on the experiences of minority graduate students, this study also offered an initial assessment of the degree to which GSPPs facilitate the transition to graduate school for minority students, topics about which there is very little data.

Organization of the Study

This study is organized around five chapters. Chapter One offered an introduction to and overview of the study. This included a discussion about ethnic minority students' presence in graduate education and a general description of GSPPs, as well as a summary of the purpose, research questions, significance, and delimitations of the study. Chapter Two consists of a review of the literature on minority graduate student experiences and graduate school preparation programs. In Chapter Three, the methodology utilized to select the sample and collect and analyze the data is described. Chapter Four presents the findings of the study, while Chapter Five discusses those findings and their implications for future practice, research, and policy.

Chapter 2

LITERATURE REVIEW

Introduction

To fully explore the academic and social transition of minority students to graduate school and make comparisons based on race, type of GSPP experience, and duration of GSPP, it was necessary to examine two bodies of literature. The first body of literature included research on minority graduate student experiences and identified the factors that may enhance or inhibit the academic and social integration of ethnic minority graduate students. The second body of literature focused on programs designed to encourage and prepare ethnic minority undergraduate students to pursue graduate study. The review that follows is organized around these major categories.

Research on Minority Graduate Student Experiences

The transition to graduate school can be difficult. This transition can be even more challenging for ethnic minority graduate students. Research reveals that students from these groups are often confronted with environmental factors that can interfere with their success and retention (Allen, 1984, 1987; Bohr, Pascarella, Nora, & Terenzini, 1995; Fleming, 1984; McCurdy, 1985).

One such environmental factor relates to the quality of a student's interactions with the academic and social systems of the university. These interactions influence their decision to remain in that environment. Tinto (1987) further underscored the need for students to integrate successfully into the collegiate environment. Students who are able to find the right "fit" are more satisfied with their experiences and thus, are more likely to persist.

Minority students are not always well integrated into their graduate communities (Duncan, 1976). The difficulties experienced by students of color can have a profound effect on their experiences and success in graduate school. The lack of opportunities for integration into the collegiate environment among minority students has been found to interfere with the students' participation in the learning process, lead to difficult interactions with faculty and peers, and limit the out of class involvement of students

from these groups (Astin, 1984; Armstrong-West & de la Teja, 1988; Pascarella & Terenzini, 1991).

Finding a positive comfort level has proven to be important to the adaptation and academic success of students of color (Turner, 1994). Bowen and Bok (1998) found the academic performance of Black students to be affected by difficulties adjusting to new environments. The degree of compatibility that exists between the student and the environment is crucial to the students' successful integration into the environment (Ponce, 1988; Tinto, 1987). The greater the compatibility the more likely it is that the student will persist. This compatibility can be explained in terms of academic integration and social integration (Ponce, 1988).

Academic integration refers to academic success (Ponce, 1988) and includes students' perceptions of their intellectual values and their relationships with peers and faculty (Pascarella & Terenzini, 1979). Nora (1993) defines the concept of academic integration as "the development of a strong affiliation with the college academic environment to include interactions of an academic nature with faculty, staff, and peers" (p. 235).

Social integration refers to the students' assessment of their personal and social success as it relates to overall campus social life (Ponce, 1988). It has also been defined as the development of a strong social affiliation with the collegiate environment and the informal social interactions that exist between the student and the faculty, staff, and peers in that environment (Nora, 1993).

Academic and social integration have been found to be significant indicators of academic persistence (Cabrera, Nora, & Castaneda, 1993; Pascarella & Chapman, 1983). Studies have also revealed that student persistence and commitment to the institution are influenced by the degree of congruence between the student and the academic and social environment (Nora & Rendon, 1990). Though little research exists on the factors that may facilitate or impede the academic and social integration of minority graduate students, certain environmental influences have been identified as important to each area.

Academic Integration

The extent to which students are able to integrate academically into the collegiate environment plays a significant role in their academic success. Studies show that academic integration may lead to better grades and increase the likelihood of persistence and graduation (Bean & Eaton, 2001; Donovan, 1990). Students who value their educational experience and find satisfaction in the opportunities available to achieve success are more likely to be academically integrated into their collegiate environment (Tinto, 1987). When academic integration is not achieved, students may feel disconnected from the institution and are more likely to consider dropping out.

DeFour and Hirsch (1990) explored the adaptation of Black graduate students and found that students who are integrated into their academic department are reportedly better adjusted and perceive themselves as making good academic progress. However, minority students are often not well integrated into their academic departments. Davis (1994) contends that academic integration is essential to understanding the educational experiences of African American men in higher education.

A review of the literature identifies several factors related to academic integration among ethnic minority graduate students. These include the students' academic performance, classroom interactions with faculty, perceptions of the faculty's concern for teaching, and the extent to which the student feels a sense of community within the graduate environment (Boyer, 1984; DeFour & Hirsch, 1990; McCurdy, 1985). To fully understand the issue of academic integration it is necessary to explore these factors.

Academic integration is related to academic performance and success (Pascarella & Terenzini, 1980; Terenzini, Lorang, & Pascarella, 1981). Research reveals that academic performance and success can be affected by the student's perception of the academic experience, the campus climate, and faculty and peer attitudes and support (Hurtado, 1994; Hurtado, Carter, & Spuler, 1996; Nettles, Thoney, & Gosman, 1986; Nora, 1987, 2001). Performance is also influenced by students' level of satisfaction with the academic setting (Allen, 1987; Cabrera et al., 1992; Cabrera, Nora, & Castaneda, 1993; Terenzini et al., 1981) and their interactions with faculty and peers (Nora, 1987;

Pascarella & Terenzini, 1980; Tinto, 1987). Any or all of these factors combined can affect the academic integration of minority students.

Students' perceptions of their ability can affect their academic performance. Students need to believe they can excel academically (Bean & Eaton, 2001). A study examining Latino student retention further supported this and revealed a common theme among successful students in that there was a "belief in and the realization that they possessed the potential to succeed in college" (Hernandez, 2000, p. 579).

Minority students are often sensitive to the fact that they are not perceived to be as capable or expected to be as successful as their White counterparts (Allen & Niss, 1989; Fleming, 1984). Research reveals that negative faculty perceptions and expectations can inhibit minority students' academic success (Armstrong-West & de la Teja, 1988). This perception may cause some minority students not to perform to their full potential (Richardson, Simmons, & de los Santos, 1987).

A second factor that influences the academic success of minority graduate students is their relationships with faculty. The development of close relationships with faculty is a necessary factor if academic integration is to occur (Wilson, 1975). Good faculty relationships are regarded as the most important aspect of the graduate experience. Faculty members are in a position to facilitate interaction and reduce feelings of alienation among ethnic minority students, as well as to facilitate the student's interest in and transition into graduate study (Olson, 1988).

Research suggests that the quality of the faculty-student relationship can have a strong influence on academic success and degree completion. The literature on intergroup relations suggests the need for students and faculty to engage in meaningful and important work (Smith & Davidson, 1992). Student-faculty interaction is a strong predictor of integration into the collegiate environment and exerts a strong influence on the student's academic success and persistence (Nora & Rendon, 1990).

Davis (1994) found student-faculty relationships to be integral to the educational experiences of African American males in higher education. The issue of relationships with faculty is even more important for minority graduate students. The frequency and quality of interactions that students have in the graduate school environment have been

found to be more important determinants of graduation for African American male students than their personal characteristics (Nettles, 1990).

Relationships with faculty advisors have also been found to be particularly important. The relationship with the major advisor is crucial to student satisfaction and development (Holland, 1998). Faculty advisors can provide opportunities for students to meet, interact, and form relationships with other professors within the student's field of study.

The caring attitude of the faculty is another important factor related to academic performance (Beal & Noel, 1980). Minority students are more likely to perform well academically and integrate into the collegiate environment when they sense that faculty have a genuine interest in their academic development and success. In exploring the factors that affect Latino student adjustment to college, Hurtado, Carter, and Spuler (1996) found that Latino perceptions of a student-centered faculty were positively linked to academic adjustment. When students perceive that faculty are supportive and care about them it results in the students' commitment to the institution and impacts their classroom participation, faculty interactions, involvement in scholarly activities, and ultimately persistence to graduation (Nora, 2001).

A strong academic curriculum and competent faculty enhance the quality of the academic program (Edmunds & McCurdy, 1988). Students must be satisfied with the quality and availability of courses in the graduate program. In addition, they must deem faculty as knowledgeable and capable of helping them to achieve their academic goals.

Developing a sense of community is also important to the successful integration of minority students into the graduate environment. Students enter graduate school in hopes of finding a community of scholars and opportunities for lively intellectual interactions with faculty and peers (Duncan, 1976). Staton and Darling (1989) reported that a sense of community assists graduate students in surviving the anxieties and uncertainties of their graduate programs and helps them establish expectations associated with their future academic and professional roles.

Graduate students value the importance of establishing a sense of community through cohort and other collaborative experiences (Golde, 1998). Students want to feel

connected to their peers, faculty, and academic department. Cohort groups encourage peer bonding and interaction, and can be a catalyst for long-term personal and professional relationships (Norris, Basom, Barnett, & Yerkes, 1996).

Social Integration

Higher levels of integration and social support are also related to better adjustment (DeFour & Hirsch, 1990). Tinto (1987) suggested that a lack of social integration into the collegiate environment increases the probability that the individual will leave college. Students' integration into the department and the social interactions they experience can influence whether or not they are socially adjusted within the department (Respass, 1997). Even when students are able to meet the formal requirements of their programs, they may not have the ability to "fully integrate themselves into the informal networks of the institutional system" (Allen, 1984, p. 9).

Several factors have been identified as having an influence on the social integration of minority graduate students. Students' psychological well being and the degree to which they feel isolated, as well as interactions outside of the classroom with faculty and peers are integral to their ability to integrate successfully (Allen, 1984; Armstrong & West, 1984; DeFour & Hirsch, 1990; Hurtado et al., 1996; Pascarella & Terenzini, 1991). To improve the social integration experiences of minority students and enhance degree completion, a closer examination into these factors is necessary.

Research reveals that the extent of Black graduate students' social integration is related to their psychological well-being and academic performance (DeFour & Hirsch, 1990). A positive self-concept and high self-esteem contribute significantly to the academic success of minority graduate students (Armstrong & West, 1984). Sedlacek (1987) identified a positive self-concept as one of eight factors associated with the success of minority students on predominantly White campuses.

Jenkins (1982) defined self-concept as "...an interconnected collection of the various ideals, images, and feelings..." (p.28) that a person holds about her/himself. Research suggests that the extent to which people's self-concept is affirmed or rejected by others is crucial to their development and to their social and academic integration (Armstrong -West & de la Teja, 1988). If the students' interactions within the educational environment are positive then self-esteem and self-concept are nurtured and it is more

likely that academic and social integration will occur. Hernandez (2000) found that students who possess a positive mental outlook are more resilient and have a desire to succeed.

Social isolation can have a negative influence on academic performance, well-being, and retention (Astin, 1993; Baird, 1974; Kraft, 1991; Pascarella & Terenzini, 1991). Black students on traditionally White campuses report high levels of social isolation and alienation (Allen & Niss, 1989; Bohr et al., 1995; Fleming, 1984). The sense of isolation often felt by minority students at majority institutions is an important factor in whether or not they are successful in the collegiate environment (Fleming, 1984).

Encouraging words and support from faculty foster a sense of belonging for students (Nora, 2001). Relationships with faculty can facilitate interaction within the academic setting and reduce feelings of isolation among minority graduate students (Olson, 1988). However, research reveals that minority students often feel isolated from peers and faculty (Allen & Niss, 1989; Bohr et al., 1995; Duncan, 1976; Fleming, 1984; Skinner & Richardson, 1988). Hurtado (1994) examined the institutional climate for academically gifted Hispanic college students and found that many students feel they do not fit in on their campuses. Further, these students report that they are frequently perceived by non-minority students and faculty as having been admitted under special circumstances.

Informal relationships that facilitate “ongoing academic discourse, exposure to role models, and involvement in profession-related activities” are vital to the process of helping students become integrated into the college environment (Allen, 1984, p. 19). The quality and quantity of out-of-class interactions with faculty has been found to play a key role in a student’s academic growth and persistence (Baird, 1974). Pascarella and Terenzini (1991) reported that academic performance is influenced by the frequency of students’ informal contact with faculty.

Students who develop good relationships with faculty are likely to have more opportunities to be successfully socialized into the graduate environment than those who do not. Studies examining the experiences of Hispanic students have found interactions outside of the classroom to be significant to student performance and integration (Nora,

1987; Nora & Rendon, 1990). The quality of the interaction can indicate to students that they are a valued part of the department and that they are developing into a competent professional (DeFour & Hirsch, 1990).

Tinto (1987) identified informal peer group interactions as being important to students' social integration into the academic setting. The quality and frequency of peer interactions outside of the classroom are important factors in the social integration of minority students (Baird, 1974; Duncan, 1976). Good peer relations offer informal learning opportunities and provide social support in dealing with the academic and personal difficulties encountered in the academic environment.

The connection a student develops with peers is a significant indicator of student adjustment and transition into the collegiate environment (Hurtado et al., 1996). Students are more likely to feel integrated into their academic environment when there is an established social network with their peers. Such relationships may be formed through informal interactions and conversations that occur outside of the classroom setting.

The present study examined the issue of academic and social adjustment to graduate school and explored the relationship between adjustment and participation in graduate school preparation programs. It was important, therefore, to review the literature on these preparation programs.

Research on Graduate School Preparation Programs

Tinto (1987) suggests that experiences that promote academic and social integration into the collegiate environment are important to student retention and persistence. Programs designed to enhance preparedness and educational motivation, foster academic and social development, and facilitate faculty and student interactions may offer the greatest hope for increasing access to and success in graduate school among ethnic minority students. Systematic efforts designed to assist students in making an efficient transition from college to graduate and professional school are crucial to their educational advancement (Grimmet et al., 1998).

Although pre-collegiate programs have existed for many years, only recently have institutions begun to realize their impact on improving academic preparation and educational motivation among minority students at the undergraduate level (Shrom & Spooner, 1990). In the 1990s, higher education leaders appeared to become increasingly

aware of the need to develop interventions that would expand access and educational opportunities for minority populations.

Graduate school preparation programs (GSPPs) offer a means of preparing ethnic minority students for the rigors of graduate school and increasing their representation in graduate education. They are designed to motivate, encourage and prepare students from underrepresented groups to enter and achieve success in graduate school. Students participating in GSPPs are able to gain information that introduces them to and prepares them for the experiences they will encounter in graduate school and are afforded opportunities to establish relationships with faculty members (Crawford et al., 1996; Frierson, Jr. et al., 1994; Grimmet et al., 1998; Nnadozie et al., 2000).

Though ethnic minority participation at the graduate level has shown some progress over the years, the number of students entering and completing advanced degrees remains small (Chronicle of Higher Education, 2001). To address this issue, many institutions have developed programs targeted at groups underrepresented in higher education and designed to introduce them to and make them more competitive for graduate school. Eligible groups usually include low-income, first-generation students and students from groups underrepresented in higher education to include African American, Hispanic, American Indian, and/or Pacific Islander students. Early preparation is important because the sooner students are acquainted with the research and graduate school application process, the more likely it is that they will become familiar with the requirements of graduate school (Nnadozie et al., 2000).

Several types of GSPPs have been identified throughout the country. A brief description of a few of these programs may provide insight into the purpose and design of GSPPs. The Ronald E. McNair Post-Baccalaureate Achievement Program is one of seven federal TRIO programs funded by the U. S. Department of Education. Also known as the McNair Scholars Program, its purpose is to encourage and prepare students from groups underrepresented in higher education to pursue doctoral study (www.ed.gov/programs/triomcnair/index.html). The goal of the program is to significantly increase the rates at which high-achieving juniors and seniors from low-income, first-generation and minority group backgrounds (African American, Hispanic, American Indian) enter and complete Ph.D. programs (Grimmett et al., 1998).

The McNair Scholars Program is a national program existing on approximately 156 campuses. Activities are designed to expose students to graduate education and help them develop skills that will lead to their entry and success in graduate school. This includes engaging students in scholarly research with university faculty to enhance research and presentation skills, as well as involvement in workshops and seminars that introduce students to the graduate school application process and allow them to explore the nature of graduate education (Grimmet et al., 1998).

Summer Research Opportunity Programs (SROPs) were initiated in 1986 and involve a series of summer research programs coordinated by the Committee of Institutional Cooperation (CIC). The CIC is comprised of a consortium of 15 midwestern research universities that includes the “Big Ten” (Foertsch, Alexander, & Penberthy, 2000). Students selected to participate are involved in paid research experiences with faculty mentors during the summer to help them develop essential research and writing skills. Students also attend sessions designed to prepare them for the Graduate Record Exam (GRE) and admission to graduate school. In addition, these programs provide opportunities for students to make professional presentations of their research and also allow students to see what graduate student life is like at a CIC institution (Foertsch et al., 2000).

SROPs were created to address minority underrepresentation within graduate programs at the host institutions and, ultimately, to increase faculty diversity nationwide. A longitudinal study of SROP outcomes for the period of 1986-1996 revealed that SROPs were successfully meeting their goal of recruiting students to CIC graduate programs, and to graduate school in general, and that this outcome could be tied to the experiences provided through the program (Foertsch et al., 2000).

The Howard Hughes Medical Institute Undergraduate Biological Sciences Education Initiative (BEI) provides opportunities for undergraduate students from underrepresented populations (African American, Hispanic, Latino, American Indian, and Pacific Islander) to prepare for graduate studies leading toward careers in biology, biomedically related research, and teaching biological sciences (www.sci.sdsu.edu/bei_faqs.html). The program enables students to become involved in research and gain first-hand experience in the laboratory and/or field setting. Students

also have at their disposal a variety of resources to assist in their academic and professional development including information and assistance in applying to graduate programs, opportunities to present research, and involvement with academic enrichment mentors.

The Minority Academic Opportunities Program (MAOP) is a state funded program housed on the campus of a research institution in Virginia. The mission of the program is to select, support, and encourage underrepresented students to pursue and obtain academic degrees at all levels (www.maop.vt.edu). One component of the program involves a summer research opportunity and pairs students with faculty members to work on designing and conducting a research project. Students are also required to attend seminars related to the nature of graduate academic life and receive guidance and counseling on gaining admission to graduate school and preparation for taking the GRE. At the end of the program students are expected to present an abstract and oral summary of their research findings.

GSPPs may vary in their structure, design, and funding source, but an analysis of these and other programs throughout the country reveals the following similarities: 1) a target population consisting of students from underrepresented ethnic minority groups and/or those from lower socioeconomic backgrounds; 2) student involvement in a guided research experience with a faculty member, and; 3) an emphasis on establishing mentoring relationships between students and faculty. In most cases, GSPPs will also provide seminars/workshops designed to familiarize students with graduate education and the graduate school experience.

Student involvement in a guided research experience with a faculty member is a key component of most GSPPs (e.g. Foertsch et al., 2000; Grimmett et al., 1998; U. S. Department of Education, 1997; www.maop.vt.edu; www.sci.sdsu.edu/bei_faq.html). Undergraduate research has been found to improve retention and graduation rates (Nagda et al., 1998) and may enhance the likelihood that students will enter graduate programs (Crawford et al., 1996). These experiences expose students to the scholarly research process and assist them in developing skills that will make them competitive for graduate school.

A study designed to determine the role that undergraduate research internships play in graduate school success revealed that such opportunities have a positive effect on graduate student success. Through information obtained in these experiences students are able to gain admission, obtain funding, and complete their graduate studies (Nnadozie et al., 2000).

Mentoring is another common component of GSPPs and involves the pairing of students with a faculty member to create opportunities for interaction, professional networking, and relationship building. In formally established programs, mentoring has been found to improve retention and graduation rates (Redmond, 1990) and can also lead to an “increase in marketable and often discipline based skills, behaviors, and attitudes on the part of the student, as well as to increased social and emotional interaction between faculty and students” (Crawford et al., 1996, p 257). In addition, mentoring can be useful in socializing the student into the academic and professional culture (Laden, 1999).

The establishment of mentoring relationships is of particular importance to minority graduate students, especially those on predominantly White campuses, and has been found to be a significant predictor of development (Smith & Davidson, 1992). Successful mentoring has proven to be one of the factors that may contribute to a positive institutional climate (Richardson, Simmons & de los Santos, 1988) and may also enhance professional development among minority graduate students (Smith & Davison, 1992). Other studies have shown that mentoring is an effective mechanism for increasing persistence and satisfaction among African American graduate students and helps students to negotiate difficult situations that may hinder their chances for success (Pascarella & Terenzini, 1991; Respass, 1997).

GSPPs seek to provide opportunities that not only enable students to develop essential academic and professional skills but also help them understand the nature of graduate education. To accomplish this, participants are expected to attend seminars and workshops that familiarize them with graduate school and provide information about the rewards, challenges, and expectations they may encounter at the graduate level. This early exposure may increase the likelihood that students will pursue and be prepared for graduate study (Frierson et al., 1994).

GSPPs offer experiences that may help ease the academic and social integration of underrepresented students into the graduate school environment. The availability of research, mentoring, and networking opportunities, as well as the financial support provided by these programs appear to be useful in developing students' interest in and preparedness for graduate school. Literature on GSPPs and the undergraduate research experience they provide reveals benefits related to academic integration, retention, graduation, and/or graduate school enrollment and success among participants (Crawford et al., 1996; Grimmet et al., 1998; Nnadozie et al., 2000).

In their examination of a program targeted at undergraduate minority students interested in attending graduate school in the social sciences, Crawford et al. (1996) discovered that the program helped students to develop research skills, clarify their professional goals, and foster close relationships with faculty. In addition, the experience also assisted students in the graduate school application process and helped them gain admission into a graduate program.

Grimmet et al. (1998) explored the utility of a federal program designed to encourage and prepare students from underrepresented groups in higher education to pursue doctoral study. Respondents were asked to evaluate the relative importance of various program components and indicate their level of satisfaction with each. Students identified the opportunities provided for research, internships, and mentoring, as well as the financial support they received for participation, as the most effective components of the program.

The last decade has witnessed a proliferation of GSPPs on college campuses nationwide. Coordinated preparatory programs offer widespread applicability and can be instrumental in increasing the minority representation in higher education (Shrom & Spooner, 1990). Such programs take into account many of the factors considered to influence students' academic and social integration and thus, are designed to accomplish several objectives.

GSPPs offer a means to facilitate interactions and communication between students and faculty. Establishing a close mentoring relationship between students and faculty is a primary goal of GSPPs and helps to connect students to the institution (Foertsch et al., 2000; Grimmett et al., 1998; www.maop.vt.edu;

www.sci.sdsu.edu/bei_faq.html). The structure of the research and other program activities provide deliberate networking opportunities for students to meet and interact with faculty and other members of the institution.

Developing students' readiness for graduate school is another objective of GSPPs. By involving students in research and having discussions centered on graduate education, GSPPs help to demystify the research process and graduate school (Crawford et al., 1996). GSPPs also provide information that may enhance the students' potential for academic success at the graduate level and facilitate a successful transition to graduate study.

GSPPs are also effective in introducing students to the research process. An implication of formalized programs such as these is that early exposure to research may increase the likelihood of students feeling more comfortable in the research environment (Frierson et al., 1994). In addition, students are able to develop valuable research, critical thinking, and oral and written presentation skills that will be useful to them at the graduate level.

As noted previously, GSPPs may vary in structure and design. Some programs are structured to be research-only programs. This means that the program only offers the student a research experience with a faculty member, with few, if any other activities included. In this structure, the focus is on the development of research skills and the interaction and mentoring that occurs around the research process.

Programs may also differ in terms of their design. For example, McNair Scholars Programs may be summer only programs, academic year only programs, or year round programs (academic year and summer). In addition, with respect to the research involvement of McNair Scholars, this experience may be 4 weeks, 6 weeks, or 10 weeks in duration, or the research involvement may extend throughout an academic year.

In summary, there has been growing interest in the impact of GSPPs in preparing students to enter and be successful in graduate school. As this review of the literature reveals, much of the research focuses on the effectiveness and significance of individual program components, such as the undergraduate research experience or

mentoring, in preparing students to enter graduate school (Crawford et al., 1996; Foertsch et al., 2000; Grimmet et. al. 1998; Nagda et al., 1998; Nnadozie et al., 2000). Other studies have assessed student satisfaction with and relative importance of program components (Foertsch et al., 2000; Grimmet et. al. 1998).

This chapter explored the research related to minority graduate student experiences, as well as literature on special programs designed to encourage and prepare students from underrepresented groups to pursue graduate study. The literature that exists on the experiences of ethnic minority graduate students identifies factors that can promote or hinder the academic and social integration of these students into their graduate environment. Little is known, however, about whether GSPPs ease the academic and social transition of minority students into graduate school. More research is needed to explore whether those who participated in a GSPP transition more readily into graduate school than those who did not. Additional studies are also needed to compare academic and social transition experiences based on race, type of GSPP experience, and duration of program. The present study was designed to address these gaps in the existing literature.

CHAPTER THREE

Methodology

The purpose of this study was to explore the academic and social transition of minority graduate students and to analyze the differences in transition by race (Black/African American, Hispanic/Latino, American Indian/Alaskan Native), type of GSPP experience (no program, research-only program, graduate/professional school seminars only, holistic program), and duration of program (less than 6 weeks during summer, 7-12 weeks during summer, summer and academic year). The study employed a national sample of ethnic minority graduate students enrolled at 35 doctoral/research extensive universities.

Data were collected through a survey designed specifically for this study. Survey items were developed around two groups of factors (academic and social) identified through previous research as important to the transition experiences of graduate students. The study was guided by the following research questions:

1. What are the academic transition experiences of ethnic minority graduate students?
2. What are the social transition experiences of ethnic minority graduate students?
3. Are there differences in academic transition experiences based on race?
4. Are there differences in social transition experiences based on race?
5. Are there differences in academic transition experiences based on type of program?
6. Are there differences in social transition experiences based on type of program?
7. Are there differences in academic transition experiences based on duration of program?
8. Are there differences in social transition experiences based on duration of program?
9. Are there differences in academic transition experiences between those who participated in a program and those who did not?

10. Are there differences in social transition experiences between those who participated in a program and those who did not?

Sample Selection

Two samples were needed for this study. The first sample related to the selection of institutions. Thirty-five of the 152 public and private doctoral/research universities-extensive, as classified by the Carnegie Classification of Institutions of Higher Education, were invited to participate. Doctoral/research universities-extensive are defined as institutions that typically offer a wide range of baccalaureate programs, are committed to graduate education through the doctorate, and award at least 50 doctoral degrees per year across a minimum of 15 academic disciplines (The Carnegie Classification of Institutions of Higher Education, 2000). The doctoral/research-extensive classification was selected based on the assumption that institutions awarding a greater number of graduate degrees may have a larger pool of minority graduate students from which to draw a sample. The 35 institutions selected from among this group were chosen based on their identification as a leading Doctoral-Granting Institution awarding the most doctorates to African American, Hispanic, and/or American Indian students (Brotherton & Borden, 2001). Institutions were varied in terms of size, public or private status, and total ethnic minority graduate student enrollment.

The second sample included the students who participated in the study. All currently enrolled ethnic minority graduate students at each of the cooperating institutions were invited to participate. For purposes of this study, ethnic minority students included Black/African American, Hispanic/Latino, and American Indian/Alaskan Native graduate students

To obtain a representative sample of institutions and ethnic minority graduate students two protocols were followed. The first protocol was used to solicit the support of graduate school deans/directors at research/doctoral universities-extensive. For this, the researcher sought assistance from a former Chair of the Council of Graduate Schools and current graduate school Dean of the School for Arts and Sciences at a research/doctoral university in the east. A letter of support was written by this individual and forwarded to deans/directors of the selected institutions, accompanied by a letter from the researcher

(Appendix A) outlining the purpose of the project, the type of assistance requested, proposed methods of data collection, and a copy of the MGSES survey .

In the researcher's letter, graduate school deans/directors were given a choice of three data collection methods and asked to indicate their preference. The first method asked institutional representatives to provide the postal and/or e-mail addresses for all Black/African American, Hispanic/Latino, and American Indian/Alaskan Native graduate students enrolled on their home campus. The researcher would then send research materials (cover letter, informed consent form, and the Minority Graduate Student Experiences Survey) directly to respondents. Once completed, all materials would be returned to the researcher.

Method two required the researcher to mail hard copies of research materials to institutional representatives who would then distribute them to participants in the targeted groups and also collect and return completed forms to the researcher. The final method allowed for electronic distribution of research materials. In this instance, the researcher would send an electronic cover letter to the institutional representative who would then forward it to all ethnic minority graduate students on their campus. The electronic letter provided information about the researcher, the purpose of the survey, and a link to an electronic version of the informed consent form and survey. Participants were also able to enter the drawing for a cash prize through electronic submission. All responses were returned directly to the researcher.

All but one institution opted to distribute research materials to their graduate students electronically. Only one institution selected Method 2 and mailed research materials directly to students. Completed paper surveys were returned to the researcher, who then entered responses into the on-line survey database. Data were collected between March and August 2003.

Instrumentation

The Minority Graduate Student Experiences Scale (MGSES) is an instrument developed specifically for this study. The survey method was chosen because it was deemed the most efficient and effective way of obtaining the information this study was designed to explore. The MGSES was constructed based on information obtained from

existing literature on the factors that influence the academic and social transition experiences of graduate students. The researcher had a panel of three experts (graduate school deans/directors) review a draft of the instrument for clarity and to ensure items would yield data relevant to the research questions posed in the study. The draft instrument (64 items plus demographic items) was revised to reflect the suggestions offered by these experts.

Once the necessary revisions were made to the survey instrument a pilot study was conducted with currently enrolled minority graduate students from the researcher's home institution to enhance reliability of the instrument and to examine whether the survey items and instructions were clear. Pilot studies have proven useful in evaluating the design of studies and in determining if survey items are appropriate, clearly worded, and accurately measure what they are intended to measure (Gay, 1992). Bell (1999) further supports the use of a careful pilot study as a means to ensure that questions have the same meaning for all respondents.

A pilot study was conducted during the Fall of 2002 to test the MGSES instrument. Twenty-four ethnic minority graduate students participated in the pilot study. Some of the respondents reported involvement in a GSPP and others reported no involvement. Participants represented a variety of academic disciplines.

The same procedure to be used in the actual study was used for the pilot study. Participants received an e-mail that served as a letter of introduction, explanation, and request for their assistance with the pilot study. Pilot participants were asked to complete the MGSES twice over a 1 month period of time and provide feedback that would be used to revise the instrument. Respondents were asked to comment on the amount of time it took to complete the survey, whether instructions and items on the instrument were clear and unambiguous, and how they felt about the layout and design of the instrument (i.e., was it well-organized, easy to read, attractive). Participants were also asked if there were any items they objected to responding to and, if so, to identify those items, as well as to suggest other topics related to the experiences of ethnic minority graduate students that may have been omitted from the MGSES and to provide any additional feedback they wanted to share. Comments and data from pilot participants were used to revise the instrument.

The final version of the MGSES is a 77-item self-report questionnaire grouped around three sections: 1) Academic Experiences, 2) Social Experiences, and 3) Demographic Information. Items in the Academic and Social experiences sections were related to factors identified through the literature as having an impact on the academic and social transition experiences of minority graduate students. Respondents were asked to assign a rating between 1 and 7 that expressed the degree to which the statements in the first two sections applied to their experiences as a graduate student with a rating of 1 indicating that the statement is “Not at all true of me” and 7 indicating that the statement is “Very true of me.”

The Academic Experiences (AE) section of the MGSES consisted of 30 items that elicited data related to four subscales: academic performance; faculty concern for teaching; academic relationships with faculty; and, sense of community. For example, some of the 8 items included in the academic performance subscale asked participants if they had a clear sense of how they were performing academically, whether they were in good academic standing, and whether they felt they received regular feedback from faculty about their academic performance.

The second subscale elicited data about faculty’s concern for teaching and students’ academic development. This subscale was comprised of 6 items. Selected items in this subscale asked if respondents felt faculty were supportive, committed to student learning and genuinely concerned with the quality of their teaching. Participants were also asked if they felt their courses were intellectually stimulating.

Academic relationships with faculty were addressed in the third subscale in the Academic Experiences section of the MGSES. Participants rated the extent to which they agreed with the 10 items on the subscale. Items referred to the participants’ academic interactions with faculty and asked if their classroom interactions had been positive, if their advisor was accessible, and if they were comfortable seeking out opportunities to interact with faculty.

The final subscale in the Academic Experiences section included 6 items related to respondents’ sense of community within the academic environment. For example, participants were asked if they felt there was a sense of community between faculty and

students within their graduate program, if relationships had been formed with other students, and if they felt they fit well into their graduate program.

The second section of the MGSES included 24 items related to minority graduate students' Social Experiences (SE). Items were grouped into four subscales: psychological well-being; isolation; faculty interactions outside of class; and, socialization. For example, respondents were asked 4 questions regarding psychological well-being. Items asked participants if they entered the program with a healthy self-concept, if they felt graduate school had hindered their personal growth, and if they were confident in their ability to succeed as a graduate student.

The second subscale in this section of the MGSES related to issues of isolation. A total of 6 items were included. Questions were designed to assess if participants felt socially connected within their graduate environment and asked students if they had established good relationships with faculty and other graduate students outside of the classroom and if they felt isolated within their graduate program.

The third subscale contained 6 items relating to the participants' informal interactions with faculty. Participants were asked if they frequently engaged in conversations with faculty outside of the classroom, if they felt there were sufficient opportunities to engage in out-of-class interactions with faculty, and if they were satisfied with the quality of those interactions.

Eight items were included in the final subscale of the Social Experiences section that assessed participants' level of socialization with other graduate students. Questions were similar to those regarding the interactions with faculty but focused on the students' experiences with their graduate peers. Participants were asked if they took advantage of opportunities to interact with other graduate students on campus and if they were satisfied with the frequency of those interactions.

The final section included in the MGSES gathered demographic (D) information about respondents. This section included 23 items to collect information regarding the respondents' age, gender, race/ethnicity, undergraduate institution, evidence of participation in a GSPP, type of GSPP experience, duration of GSPP program, and other data that could be used to describe the sample. A copy of the final MGSES is provided in Appendix B.

Validity and Reliability

Validity refers to the ability of an instrument to accurately measure or describe what it was designed to measure (Bell, 1999). There are various types of validity that may be established, however, for this study the researcher was most concerned with the content, construct, and external validity of the survey instrument. Content validity indicates how well the content of the instrument measured what it was intended to measure (Creswell, 1994). Construct validity relates to the extent to which the items measure the constructs or concepts they were designed to measure (Creswell, 1994). External validity refers to results that can be generalized to groups and environments outside of a study (Gay, 1992).

The validity of the instrument was enhanced by the researcher's decision to have a panel of experts review the instrument and to conduct a pilot study of the survey instrument with a representative sample of ethnic minority graduate students. Changes to the survey instrument were made as necessary based on the feedback obtained from the experts and responses of the pilot study participants.

The reliability of an instrument relates to the extent to which it is an accurate, stable, and consistent measurement (Issac & Michael, 1997). Two estimates of reliability were computed; item analysis and estimates of internal consistency reliability. Item analyses were done for each scale (AE and SE) on the original draft of the MGSES (64 items) and results were used to determine items to include or exclude from the scale. Item analyses were conducted on the 34 AE items. All items within the AE scale were correlated with a total scale score. Based on the results of the item analyses, four items were eliminated from the AE scale. Item analyses conducted on the 30 SE items resulted in the elimination of six items from the scale.

Estimates of internal reliability were also calculated for the AE and SE scales. In each case, scores were increased with the elimination of items identified through item analyses. On the AE scale, coefficient alpha increased from .45 to .94. The value of coefficient alpha on the SE scale increased from .54 to .91 with the elimination of the six items identified through item analyses. As a result, the 64 items on the AE and SE scales

of the original draft of the MGSES were reduced to 54 items on the final version of the instrument employed in this study.

Data Collection Procedures

Approval to conduct this study was obtained following the protocol outlined by the Institutional Review Board for Research Involving Human Subjects (IRB) at the researcher's home institution. After obtaining permission from the IRB to conduct the study, a supply of packets was mailed (either electronically or via U.S. mail) to the deans/department heads or students (depending on the data collection method selected) at each of the participating graduate schools. Each packet contained copies of a cover letter to the participant, the MGSES, and an informed consent form.

The cover letter provided participants with information about the researcher, the purpose of the study, and instructions for participation. The letter also outlined details about the incentive being offered to those who completed the survey and the deadline for returning the instrument. A copy of the cover letter is provided in Appendix C.

The informed consent form (Appendix D) provided additional information about the researcher, the topic and summary of the study, and a confidentiality statement. This form also explained the data collection procedures to be utilized. On the paper surveys, a request for additional information was attached to the bottom of the consent form and asked for the participants' name, telephone number, e-mail, and postal address. This information, upon receipt, was entered into an electronic database for the drawing for one of three \$100 cash prizes being offered to participants who completed and returned the MGSES.

Graduate school deans/directors were asked to provide e-mail and/or postal addresses of all ethnic minority graduate students and were informed that completed research materials would be returned directly to the researcher. It was felt that this might ensure a higher cooperation rate. As an incentive, and in exchange for their cooperation, the researcher offered to provide deans/directors with the data from their respective campus, as well as the results of the study overall.

Data Analysis Procedures

This study was designed to explore the academic and social transition experiences of ethnic minority graduate students and analyze differences by race, type of GSPP, and

duration of GSPP. Data was analyzed using the Statistical Package for Social Sciences (SPSS).

An exploratory factor analysis was done to determine whether or not the items developed for each subscale measured the constructs they were designed to measure. This allowed the researcher to calculate a mean score for each subscale and scale.

To analyze the first two research questions, which related to respondents' academic and social transition experiences in general, simple descriptive statistics were obtained. The means and ranges of scores were calculated for all scales and subscales.

The remaining research questions posed in the study examined the differences in the academic and social transition experiences of ethnic minority graduate students based on race, type of GSPP, and duration of GSPP. In each of the cases, responses were sorted into appropriate groups and mean scores for each subscale and scale calculated. Analysis of variance was used to determine if there were significant differences in the mean responses ($p < .05$). If significant differences emerged, the researcher then conducted Bonferroni tests to pinpoint exactly where differences existed and to control for the increased risk of Type I error. The Bonferroni tests significance at a more conservative level, making significance more difficult to achieve and making Type I error less likely. In conclusion, this study was designed to explore the academic and social transition experiences of ethnic minority graduate students and analyze the differences in transition by race, type of GSPP experience, and duration of GSPP. The methodology described in this chapter was deemed sufficient to address the research questions posed in the study.

CHAPTER FOUR

RESULTS

This chapter reports the findings of the study. The first section explains the changes made in the data collection procedure. The second section provides a description of the sample. The chapter concludes with the data analysis, which is arranged around the research questions that guided the study.

Changes in Data Collection Procedures

One minor change in the data collection procedure outlined in Chapter 3 should be noted. Two samples were needed for this study. The first sample related to the selection of institutions. Thirty-five doctoral/research universities-extensive were invited to participate in this study. Fifteen of these institutions agreed to participate, however, nine institutions actually provided the assistance requested in distributing research materials to ethnic minority graduate students on their campus.

Though important to note, this change did not alter the study in any substantive way.

Description of the Sample

Four thousand six hundred and sixty-one (4,661) Black/African American (B/AA), Hispanic/Latino (H/L), and American Indian/Alaskan Native (AI/AN) graduate students from nine doctoral/research extensive universities were invited to participate. The sample consisted of 621 ethnic minority graduate students, yielding a 13.3% response rate. Table 1 reveals demographic information for the sample. Approximately 49% of

Table 1

Demographic Characteristics of the Sample (N=621)

Characteristic	n	%N
Sex		
Male	181	29%
Female	440	71%
Age		
20-24 years	146	24%
25-29 years	209	34%
30-34 years	125	20%
35 or above	137	22%
No Response	4	
Race/Ethnicity		
Black/African American	306	49%
Hispanic/Latino	235	38%
American Indian/Alaskan Native	43	7%
Other	33	5%
No Response	4	1%
Program Participation		
Research		
Yes	292	47%
No	321	52%
No Response	8	1%
Exploration of graduate/Professional school		
Yes	187	30%
No	427	69%
No Response	7	1%

Table 1 (Continued)

Demographic Characteristics of the Sample (N=621)

Characteristic	n	%n
Type of Program		
No Program	318	51%
Research-only	82	13%
Exploration of graduate/professional school	35	6%
Holistic Program	123	20%
Other	44	7%
No Response	19	3%
Duration of Program		
No Program	332	53%
Summer Only (6-12 weeks)	69	11%
Summer and Academic Year	145	23%
Other	55	9%
No Response	20	3%
Graduate Program		
Arts & Architecture	29	5%
Biology	53	9%
Education	124	20%
Engineering/Computer Science	58	9%
Health Professions	79	12%
Humanities	54	9%
Physical Sciences	29	5%
Professional (Law, Business)	7	1%
Psychology	32	5%
Social Sciences	144	23%
No Response	12	2%
Graduate Degree (Pursuing)		
Master's	256	41%
Doctorate	333	54%

Table 1 (Continued)

Demographic Characteristics of the Sample (N=621)

Characteristic	n	%n
Professional	9	1%
Other	18	3%
No Response	5	1%
Graduate Enrollment Status		
Full-time	531	86%
Part-time	82	13%
No Response	8	1%
Mother's Educational Level		
None	81	13%
High School Diploma	227	37%
Associate's Degree	44	7%
Bachelor's Degree	104	17%
Master's Degree	104	17%
Doctorate	14	2%
Professional	16	3%
Other	26	4%
No Response	5	1%
Father's Educational Level		
None	93	15%
High School Diploma	190	31%
Associate's Degree	45	7%
Bachelor's Degree	98	16%
Master's Degree	90	14%
Doctorate	45	7%
Professional	35	6%
Other	21	3%
No Response	4	1%

respondents were B/AA, 38% were H/L, and 7% were AI/AN. Women accounted for 71% of the sample (n = 440). The majority of respondents (58%) were between the ages of 20 and 29. Most participants (51%) indicated that they had not been involved in a structured program of any type. Of those who had participated in a program 13% reported involvement in a research-only program, 6% had been involved in a program that offered seminars/workshops related to graduate/professional school, and 20% participated in a holistic program, which offered both research experience and graduate/professional school seminars. Twenty-three percent of those who had participated in a program indicated that the program included activities during the summer and academic year.

Respondents represented a variety of graduate programs at the nine institutions and were enrolled on both full-time and part-time bases. Eleven graduate programs were identified, with the greatest number of students enrolled in the Social Sciences (144), followed by Education (124). Law and business respondents were combined into a Professional program category and had the fewest number of students (7). The majority of participants were enrolled full-time (86%) and pursuing doctoral degrees (54%).

Parents' educational level was also reported. Seventeen percent of mothers and 16% of fathers had earned a bachelors degree. Fifty-seven percent of mothers and 53% of fathers possessed an associates degree or less.

Results of Data Analysis

The Minority Graduate Student Experiences Survey (MGSES) is a 77-item self-report questionnaire designed to assess the graduate school experiences of ethnic minority students. It is grouped around three scales: 1) Academic Experiences (AE), 2) Social Experiences (SE), and 3) Demographic (D) information. The AE scale consists of 4 subscales and includes 30 items. The SE scale is comprised of 24 items across 4 subscales. The final scale compiles demographic information for each respondent and consists of 23 items.

Estimates of internal consistency reliability were computed for each scale and subscale on the MGSES (Table 2). Coefficient alphas for the AE and SE scales were .94 and .91, respectively. Each scale included four subscales. Reliability scores on the AE subscales ranged from a high of .88 to a low of .76. The greatest internal reliability was

found in the 10-item Academic Relationships with Faculty (AR) subscale. The Faculty Concern for Teaching (FC) subscale was second at .86. The value of coefficient alpha for the 8 items on the Academic Performance (AP) subscale was .83. The Sense of Community (SC) subscale had the lowest reliability score (.76) of all subscales on the AE scale.

The range for the four subscales on the SE scale ran from a high of .87 to a low of .66. The Isolation (I) subscale included 6 items and had the highest calculated alpha value at .87. Faculty Interactions Outside of the Classroom (FI) and Socialization with Other Graduate Students (S) yielded alpha scores of .76 and .83, respectively. Finally, the coefficient alpha computed for the 4-item Psychological Well-being (P) subscale was .66.

This study was guided by 10 research questions. The first two research questions were related to the overall academic and social transition experiences of participants. Fifty-four items on the MGSES were related to the academic and social

Table 2

Results of Internal Consistency for each MGSES Scale and Subscale

Scale/Subscale	α
Academic Experiences	.94
Academic Relationships w/Faculty	.88
Faculty Concern for Teaching	.86
Academic Performance	.83
Sense of Community	.76
Social Experiences	.91
Isolation	.87
Socialization	.83
Faculty Interactions Outside of the Classroom	.76
Psychological Well-Being	.66

experiences of graduate students. Respondents were asked to assign a rating of 1 to 7 that expressed the degree to which items on the instrument applied to their experiences as a graduate student. A rating of 1 indicated that the statement was “Not at all true of me” and a rating of 7 indicated that the statement was “Very true of me.” Scoring on reverse-worded items was adjusted so that higher scores were more positive scores on those items. Simple descriptive statistics were obtained by calculating the mean, range, and standard deviation for all items within each subscale. Responses are ranked in descending order, with higher scores reflecting more positive assessments of students’ graduate school experiences and lower scores reflecting more negative ratings. Table 3 summarizes the scores obtained for each of the AE subscales.

Question one examined the academic experiences of ethnic minority graduate students. Mean scores on the AP subscale ranged from a low of 4.84 to a high of 6.39. Responses to seven of the eight items on the subscale were generally positive, with scores ranging from 5.06 to 6.39. The items reporting the highest mean scores included statements such as “I am in good academic standing in my graduate program” and “I know I have the potential to succeed in my graduate/professional program”. The lowest mean was reported for the “I receive regular feedback about my academic performance” item on the AP subscale (4.84).

The FC subscale reported mean scores from 4.79 to 5.33. The highest mean score was for the item related to how intellectually stimulating academic courses were. The item stating, “I feel faculty in my program are genuinely concerned about the quality of their teaching” yielded the lowest mean score among all items on the FC subscale (4.79).

The third subscale on the AE scale dealt with participants’ academic relationships

Table 3

Sample Mean, Range and Standard Deviation for MGSES, Academic Experiences (n=621)

Subscale/Item	N	M	Range	SD
Academic Performance (AP)	619	5.71	5.13	.978
In good academic standing	618	6.39	6.00	1.092
Know I have the potential to succeed	618	6.36	6.00	1.055
Clear sense of academic performance	619	5.96	6.00	1.120
Confident in academic ability	619	5.88	6.00	1.207
Do not feel successful academic transition has been made*	618	5.62	6.00	1.754
Dissatisfied w/academic performance*	616	5.56	6.00	1.835
Satisfied w/academic experiences in graduate program	616	5.06	6.00	1.620
Receive regular feedback about academic performance	619	4.84	6.00	1.603
Faculty Concern (FC)	619	5.03	6.00	1.240
Most courses are intellectually stimulating	615	5.33	6.00	1.401
Most faculty are committed to student learning	616	5.14	6.00	1.538
Faculty are supportive	617	5.08	6.00	1.691
Faculty members seek to engage all students in class discussion	615	4.98	6.00	1.591
Dissatisfied w/quality of teaching by program faculty*	619	4.85	6.00	1.821
Faculty genuinely concerned about quality of teaching	614	4.79	6.00	1.675
Academic Relationships (AR)	619	5.34	5.40	1.121
Established good relationship w/at least one faculty member	619	5.92	6.00	1.533
Classroom interactions w/faculty generally positive	616	5.59	6.00	1.253
Advisor is accessible	612	5.58	6.00	1.701
Good relationship w/advisor	615	5.51	6.00	1.775
Faculty respond favorably to classroom contributions	615	5.44	6.00	1.340

Table 3 (Continued)

<i>Sample Mean, Range and Standard Deviation for MGSES, Academic Experiences (n=621)</i>	N	M	Range	SD
Subscale/Item				
Academic Relationships (cont'd)				
Uncomfortable in class interactions w/most faculty in program*	614	5.30	6.00	1.739
Dissatisfied w/quality of academic relationships w/faculty*	614	5.08	6.00	1.906
Satisfied w/ classroom interactions	615	5.02	6.00	1.470
Comfortable seeking out interaction opportunities w/faculty	618	5.02	6.00	1.714
Do not feel program faculty are accessible*	619	4.96	6.00	1.778
Sense of Community (SC)				
Formed several close relationships w/other graduate students	618	4.63	5.83	1.209
Comfortable participating in out-of-class activities	617	5.31	6.00	1.781
Fit well in graduate program	616	5.07	6.00	1.703
Sense of community between faculty and students	618	4.81	6.00	1.775
Lack of cohesiveness among students in program*	617	4.39	6.00	1.775
Sufficient opportunities for out-of-class activities w/faculty	617	4.14	6.00	1.898
	617	4.08	6.00	1.769

* = items have been reverse scored

with faculty. Results indicated scores of 5.02 or higher for all but one item on the AR subscale. The highest reported mean score was 5.92 and indicated that most participants have established a good relationship with at least one faculty member within their graduate program. The item that dealt with the extent to which respondents felt faculty in the program were accessible yielded the lowest mean value at 4.96.

The SC subscale related to respondents' sense of community and contained 6 items. Mean scores ranged from a low of 4.08 to a high of 5.31. The two items with the highest mean values addressed the extent to which close relationships had been formed with other graduate/professional students (5.31) and the respondents' comfort in participating in out-of-class activities with faculty (5.07). The item with the lowest reported mean revealed that participants are least satisfied with the number of opportunities to engage in academic activities with faculty outside of class (4.08).

The second research question examined the social experiences of ethnic minority graduate students. Table 4 summarizes the scores obtained for each item on each subscale of the SE scale. The P subscale included 4 items related to respondents' psychological well-being. Responses were generally positive for all items, with mean scores at 5.26 or higher. The highest mean score was for the item that asked about participants' confidence in their ability to succeed as a graduate student (6.11).

Mean scores for the six items on the I subscale ranged from a high of 5.29 to a low of 4.50. The item with the highest mean score indicated that respondents feel comfortable in their graduate program. Responses were more varied with respect to the reported degree of isolation participants feel within their graduate/professional program (4.50).

Table 4

Sample Mean, Range and Standard Deviation for MGSES, Social Experiences (n=621)

Scale/Item	N	M	Range	SD
Psychological Well-Being (P)	619	5.68	5.25	1.099
Confident in ability to succeed as a graduate student	617	6.11	6.00	1.228
Entered program w/a healthy self-concept	616	5.97	6.00	1.299
Feel graduate environment has hindered personal growth*	616	5.37	6.00	1.947
Maintained a positive self-concept	617	5.26	6.00	1.647
Isolation (I)	619	4.98	6.00	1.459
Do not feel comfortable in graduate program*	617	5.29	6.00	1.845
Established good relationships w/graduate students in program	618	5.16	6.00	1.682
Do not feel supported by faculty in graduate program*	614	5.14	6.00	1.882
Faculty interested in my success	616	5.01	6.00	1.659
Feel disconnected from graduate school environment*	615	4.80	6.00	2.006
Feel isolated within graduate program*	616	4.50	6.00	2.149
Faculty Interaction Outside of Class (FI)	619	3.81	6.00	1.234
Do not feel faculty are concerned about professional development*	615	5.15	6.00	1.780
Satisfied w/quality of out-of-class interactions w/faculty	616	4.13	6.00	1.825
Few informal interactions w/faculty*	617	3.86	6.00	1.918
Sufficient opportunities to engage in out-of-class activities	617	3.73	6.00	1.807
Frequently engage in conversations w/faculty out –of-class	610	3.61	6.00	1.896
Involved in non-academic activities w/faculty	615	2.34	6.00	1.736

Table 4 (Continued)

<i>Scale/Item</i>	<i>N</i>	<i>M</i>	<i>Range</i>	<i>SD</i>
<i>Socialization (S)</i>	619	4.47	6.00	1.298
Satisfied w/social relationships developed w/other grad students	615	4.90	6.00	1.751
Dissatisfied w/social interaction w/peers in academic environment*	612	4.75	6.00	1.970
Satisfied w/frequency of interaction w/other graduate students	617	4.73	6.00	1.773
Established good social relationships w/other graduate students	615	4.72	6.00	1.884
Willingly make time for out-of-class activities w/graduate peers	613	4.45	6.00	1.911
Takes advantage of interaction opportunities w/graduate peers	617	4.36	6.00	1.943
Formed a social network in local community	616	4.00	6.00	2.254
Frequently engage in social activities w/graduate peers	615	3.85	6.00	2.010

* = items have been reverse scored

The FI subscale included 6 items with means ranging from 2.34 to 5.15 and yielded the lowest overall mean scores of all subscales on the Social Experiences scale. Five of six items had means at 4.13 or less. The lowest mean score of 2.34 suggests that participants had little involvement in non-academic activities with faculty members.

The final subscale on the SE scale was the S subscale. The highest mean score was 4.90 and related to respondents' satisfaction with the social relationships developed with other graduate/professional students. The lowest mean score was found in relation to the frequency with which participants engage in social activities with other graduate/professional students on campus (3.85).

The remaining research questions examined differences in participants' academic and social transition experiences by race, type of program, and duration of program. Responses were sorted into appropriate groups and analysis of variance (ANOVA) tests were conducted to compare mean scores among groups for each subscale.

The third and fourth questions examined differences in academic (Table 5) and social (Table 6) transition experiences by race. ANOVAs comparing mean scores on each subscale of the AE and SE scales for each racial group revealed no significant differences ($p = .05$). If the significance level was raised to .10, one significant difference emerged on the SE scale. Bonferroni post-hoc tests revealed that B/AA participants reported a significantly lower mean score (4.34) than H/L participants (4.63) on the S subscale ($p = .07$).

Questions five and six explored differences in academic and social transition experiences based on program type. Table 7 reports results of ANOVAs comparing

Table 5

Results of ANOVAs on Differences in Academic Experiences Subscales by Race (n=621)

Subscale/Race	M	SD	df	F	p
AP			3	.196	.90
B/AA	5.72	.967			
H/L	5.70	.986			
AI/AN	5.73	1.053			
Other	5.59	.979			
FC			3	.864	.46
B/AA	5.05	1.235			
H/L	5.01	1.212			
AI/AN	5.15	1.423			
Other	4.72	1.260			
AR			3	1.146	.33
B/AA	5.26	1.147			
H/L	5.43	1.064			
AI/AN	5.34	1.382			
Other	5.44	.887			

Table 5 (cont'd)

Results of ANOVAs on Differences in Academic Experiences Subscales by Race (n=621)

Subscale/Race	M	SD	df	F	p
SC			3	.963	.41
B/AA	4.56	1.227			
H/L	4.74	1.160			
AI/AN	4.63	1.339			
Other	4.53	1.210			

Table 6

Results of ANOVAs on Differences in Social Experiences Subscale by Race (n=621)

Subscale/Race	M	SD	df	F	p
P			3	.881	.45
B/AA	5.74	1.060			
H/L	5.62	1.123			
AI/AN	5.73	1.217			
Other	5.52	1.140			
I			3	2.053	.11
B/AA	4.85	1.465			
H/L	5.15	1.421			
AI/AN	4.88	1.645			
Other	5.10	1.379			
FI			3	1.077	.36
B/AA	3.72	1.235			
H/L	3.90	1.241			
AI/AN	3.76	1.268			
Other	3.94	1.131			

Table 6 (cont' d)

Results of ANOVAs on Differences in Social Experiences Subscales by Race (n=621)

Subscale/Race	M	SD	df	F	p
S			3	2.379	.07*
B/AA	4.34	1.310			
H/L	4.63	1.300			
AI/AN	4.48	1.314			
Other	4.63	1.024			

*p<.10

Table 7

Results of ANOVAs on Differences in Academic Experiences Subscales by Type (n=621)

Subscale/Race	M	SD	df	F	p
AP			4	3.455	.01*
No Program	5.76	.897			
Research-only	5.34	1.230			
Graduate School Exploration	5.73	1.154			
Holistic	5.80	.947			
Other	5.63	.937			
FC			4	1.146	.33
No Program	5.07	1.174			
Research-only	4.98	1.301			
Graduate School Exploration	4.94	1.604			
Holistic	5.05	1.279			
Other	4.66	1.283			
AR			4	1.151	.33
No Program	5.40	1.084			
Research-only	5.15	1.205			
Graduate School Exploration	5.38	1.307			
Holistic	5.34	1.156			

Table 7 (cont'd)

Results of ANOVAs on Differences in Academic Experiences Subscales by Type (n=621)

Subscale/Race	M	SD	df	F	p
Other	5.15	1.022			
SC			4	1.149	.33
No Program	4.68	1.198			
Research-only	4.54	1.172			
Graduate School Exploration	4.67	1.404			
Holistic	4.65	1.221			
Other	4.29	1.151			

*p<.01.

mean scores on the AE subscales and reveals significant differences on the AP subscale by program type, $F(4,601) = 3.455, p < .01$. Follow-up tests were conducted to identify specific scores that differed significantly. Results of the Bonferroni tests revealed that those who had not participated in a program reported a significantly higher score on the AP subscale (5.76) than those who had been involved in a research program (5.34). Those involved in a research program also reported a significantly lower score (5.34) than those in a holistic program (5.80).

ANOVAs comparing mean scores on each subscale of the SE scale by program type revealed differences on the P [$F(4,601) = 2.645, p < .05$] and FI [$F(4, 601) < 2.448, p < .05$] subscales (Table 8). Results of the Bonferroni test revealed that those respondents who had not participated in a program reported a significantly higher score on the P subscale (5.72) than those who had been involved in a research program (5.32). Respondents who had participated in a research program (5.32) also reported a significantly lower score than those who had participated in a holistic program (5.77). Significant differences on the FI subscale were not identifiable by post-hoc tests but the highest mean score was reported by those who had not participated in a program and the lowest mean score was reported by those who had participated in a program classified as “other”. Other types of programs described by respondents included weekly and monthly seminars, periodic workshops, and senior seminar courses.

Two research questions examined differences in AE and SE transition experiences by program duration. Results of ANOVAs computed for the AE subscales indicated differences on the AP subscale based on program duration, $F(4,600) = 4.001, p < .01$ (Table 9). Bonferroni test results revealed that those who had participated in a summer

Table 8

Results of ANOVAs on Differences in Social Experiences Subscales, by Type (n=621)

Subscale/Race	M	SD	df	F	p
P			4	2.645	.03*
No Program	5.72	1.025			
Research-only	5.32	1.179			
Graduate School Exploration	5.80	1.256			
Holistic	5.77	1.105			
Other	5.64	1.279			
I			4	1.276	.28
No Program	5.02	1.443			
Research-only	4.74	1.421			
Graduate School Exploration	5.30	1.591			
Holistic	4.98	1.504			
Other					
FI			4	2.448	.05*
No Program	3.91	1.245			
Research-only	3.62	1.223			
Graduate School Exploration	3.71	1.289			
Holistic	3.79	1.210			

Table 8 (cont'd)

Results of ANOVAs on Differences in Social Experiences Subscales by Type (n=621)

Subscale/Race	M	SD	df	F	p
Other	3.38	1.079			
S			4	1.861	.12
No Program	4.54	1.276			
Research-only	4.39	1.310			
Graduate School Exploration	4.78	1.336			
Holistic	4.37	1.319			
Other	4.11	1.262			

*p<.05.

Table 9

Results of ANOVAs on Differences in Academic Experiences Subscales by Duration (n=621)

Subscale/Race	M	SD	df	F	p
AP			4	4.001	.00*
No Program	5.80	.944			
Summer (< 6 weeks)	5.89	.933			
Summer (7-12 weeks)	5.38	.874			
Summer and Academic Year	5.58	1.081			
Other	5.95	.966			
FC			4	1.867	.12
No Program	5.08	1.211			
Summer (< 6weeks)	5.61	.909			
Summer (7-12 weeks)	4.77	1.177			
Summer and Academic Year	4.93	1.360			
Other	5.18	1.060			
AR			4	1.649	.16
No Program	5.40	1.130			
Summer (< 6weeks)	5.66	.782			
Summer (7-12 weeks)	5.05	1.160			
Summer and Academic Year	5.30	1.151			

Table 9 (cont'd)

Results of ANOVAs on Differences in Academic Experiences Subscales by Duration (n=621)

Subscale/Race	M	SD	df	F	p
Other	5.48	.934			
SC			4	1.589	.18
No Program	4.67	1.173			
Summer (< 6weeks)	4.95	1.100			
Summer (7-12 weeks)	4.39	1.250			
Summer and Academic Year	4.55	1.317			
Other	4.87	1.036			

*p<.01.

program lasting 7-12 weeks scored significantly lower (5.38) than both those who had not participated in a program at all (5.80) and those who had participated in some other type of program (5.95).

ANOVAs comparing mean scores on each subscale on the SE scale by program duration revealed differences on the P [$F(4, 600) = 2.869, p < .05$] and I [$F(4, 600) = 3.247, p < .01$] subscales. Results are reported in Table 10. Significant differences on the P subscale were not identifiable by post hoc tests but those who reported participation in “other” programs had the highest mean score (5.91). Bonferonni tests did reveal that those who had not participated in a program scored significantly higher on the I subscale (5.12) than those who had participated in a summer program lasting 7-12 weeks (4.53).

Finally, I wanted to examine whether participating in any sort of program made a difference in the academic and social transition experiences of minority graduate students. To that end, all those who had participated in any sort of program were combined into a single group and scores on each subscale were compared to scores for their counterparts who had not participated in any type of program. Overall, approximately 51% of all respondents reported they had not participated in a program (N=318) compared to an estimated 46% who reported involvement in a program of some type (N=284). ANOVAs revealed significant differences on the AR subscale of the AE scale, $F(1, 602) = 3.807, p < .05$ (Table 11) and indicated that respondents who had not participated in a program scored higher (5.42) than those who had some program involvement (5.23). If the level of significance was increased to .10, significant differences are also noted in the AP

Table 10

Results of ANOVAs on Differences in Social Experiences Subscales by Duration (n=621)

Subscale/Race	M	SD	df	F	p
P			4	2.869	.02*
No Program	5.77	1.026			
Summer Program (< 6 weeks)	5.68	.969			
Summer Program (7-12 weeks)	5.41	1.097			
Summer and Academic Year	5.53	1.260			
Other	5.91	.960			
I			4	3.247	.01**
No Program	5.12	1.430			
Summer Program (< 6 weeks)	5.47	.994			
Summer Program (7-12 weeks)	4.53	1.458			
Summer and Academic Year	4.81	1.498			
Other	5.15	1.406			
FI			4	1.708	.15
No Program	3.84	1.228			
Summer Program (< 6 weeks)	4.44	1.099			
Summer Program (7-12 weeks)	3.55	1.139			
Summer and Academic Year	3.74	1.267			

Table 10 (cont'd)

Results of ANOVAs on Differences in Social Experiences Subscales by Duration (n=621)

Subscale/Race	M	SD	df	F	p
Other	3.94	1.218			
S			4	.502	.73
No Program	4.50	1.250			
Summer Program (< 6 weeks)	4.48	1.358			
Summer Program (7-12 weeks)	4.43	1.183			
Summer and Academic Year	4.38	1.371			
Other	4.65	1.490			

**p<.01, *p<.05

Table 11

Results of ANOVAs on Differences Between No Program and Program Respondents on Academic Experiences Subscales (n=621)

Subscale/Race	M	SD	df	F	p
AP			1	3.072	.08*
No Program	5.76	.980			
Program	5.62	.971			
FC			1	2.677	.10*
No Program	5.09	1.226			
Program	4.92	1.259			
AR			1	3.807	.05**
No Program	5.42	1.119			
Program	5.23	1.123			
SC			1	2.566	.11
No Program	4.69	1.154			
Program	4.53	1.306			

**p < .05, * p<.10

$p = .08$) and FC ($p = .10$) subscales, where respondents who had not participated in a program reported higher scores on both subscales than those who participated in some type of program.

On the SE scale (Table 12), ANOVAs revealed significant differences on the I subscale, $F(1,602) = 6.273, p < .01$. Those who had not participated in a program reported significantly higher scores (5.10) than those who had participated in some type of program (4.79).

In summary, the results of this study revealed no significant differences between the academic and social transition experiences of ethnic minority graduate students by race at $p < .05$, however, differences were noted on the SE scale when the significance level was increased to .10. Significant differences were found based on program type and duration ($p < .05$) and there were also significant differences between those who had not participated in a program and those who had participated in a program of some type. These results and their implications for future practice, policy, and research are discussed in Chapter Five.

Table 12

Results of ANOVAs on Differences Between No Program and Program Respondents on Social Experiences Subscales (n=621)

Subscale/Race	M	SD	df	F	p
P			1	1.223	.27
No Program	5.72	1.107			
Program	5.61	1.097			
I			1	6.273	.01*
No Program	5.10	1.421			
Program	4.79	1.526			
FI			1	.934	.33
No Program	3.85	1.220			
Program	3.75	1.254			
S			1	.275	.96
No Program	4.47	1.266			
Program	4.47	1.367			

*p<.05.

CHAPTER FIVE

DISCUSSION

The purpose of this study was to explore the academic and social transition experiences of ethnic minority graduate students and to analyze experiences by race (Black/African American, Hispanic/Latino, and American Indian/Alaskan Native), type of program (no program, research-only, graduate/professional school seminars only, holistic) and duration (no program, less than 6 weeks during summer, 7-12 weeks during summer, summer and academic year). This chapter summarizes the results of the study and discusses the findings as they relate to the research questions. The researcher then examines how results of the study relate to prior research followed by a discussion of the implications for future practice, policy, and research. Limitations to the study are also discussed. Finally, the chapter concludes with a discussion of the researcher's general impressions about the academic and social transition experiences of ethnic minority graduate students and recommendations for enhancing the transition experiences of these students.

Discussion

This study was guided by 10 research questions. The first two research questions examined the academic and social transition experiences of ethnic minority graduate students. To explore these questions, the researcher examined the means and standard deviations for each of the four subscales on the Academic and Social experiences scales. For each item, respondents assigned a rating between 1 ("Not at all true of me") and 7 ("Very true of me") indicating the extent to which they felt the item applied to their graduate school experiences. For the purposes of this study the researcher interpreted a value of 4 or greater as a positive assessment of graduate school experiences and a rating of 3.99 or less as a negative assessment of graduate school experiences.

The first research question examined the academic experiences (AE) of ethnic minority graduate students and explored students' perceptions of their academic performance (AP), faculty concern for teaching (FC), academic relationships with faculty members (AR), and the sense of community (SC) experienced in the academic environment. Mean scores on the AE scale were generally positive and ranged from a

high of 5.71 on the AP subscale to a low of 4.63 on the SC subscale. Table 3 reports all subscale and item scores.

Ratings on the AP subscale were highest and ranged from 6.39 (“I am in good academic standing in my graduate program”) to 4.84 (“I receive regular feedback about my academic performance”). Findings suggest that ethnic minority students are performing well academically (6.39), are confident in their ability to succeed (6.36), and satisfied with the academic experiences they have had in their graduate program (5.06). These findings indicate that many ethnic minority students believe they can excel academically and are therefore, more likely to integrate academically into the graduate school environment.

Faculty concern for teaching was the second subscale on the AE scale and refers to the competence and caring attitude of faculty, as well as the strength of the academic curriculum. Overall, results were positive (5.03) and revealed that students perceived faculty as supportive (5.08) and committed to student learning (5.14). Students also found their courses intellectually stimulating and were satisfied with the quality of teaching provided by program faculty. Minority students are more likely to perform well and integrate into the academic environment when they perceive faculty as knowledgeable and genuinely interested in their success. These findings reveal positive attitudes toward the faculty and academic curriculum and suggest that ethnic minority graduate students are adjusting well within their graduate school environment.

The AR subscale explored students’ academic relationships with faculty. Results revealed that students had good academic relationships (5.34), particularly with their advisors (5.51). Students also indicated that they were satisfied with their classroom interactions (5.02) and felt faculty responded favorably to their classroom contributions (5.44). Faculty relationships are crucial to the success of ethnic minority graduate students, as are faculty perceptions of the students’ ability. The results of this study are encouraging and suggest that students have been able to form good relationships with faculty within the classroom and that their classroom contributions are valued.

The final subscale on the AE scale related to the sense of community students felt within the graduate environment. Mean ratings were lowest for the SC subscale (4.63) and suggest that students were least enamored with this aspect of their academic

experiences in graduate school. Item scores ranged from a high of 5.31 (“I have formed several close relationships with other graduate students”) to a low of 4.08 (“I feel there are sufficient opportunities to engage in academic activities with faculty outside of the classroom”). Findings revealed students have formed cohesive relationships with other graduate students on campus (5.31). However, ratings were lower with respect to relationships with graduate program peers (4.14) and between program faculty and students (4.39). The development of close relationships within the graduate environment is integral to a successful graduate experience, particularly for ethnic minority students. Although there is evidence that students have been able to establish positive relationships, results suggest that relationships with students and faculty within their graduate program could be stronger.

Students were least likely to agree that there were sufficient opportunities to engage in academic activities with faculty outside of the classroom (4.08). Their rating of this element was only minimally positive. Limited engagement with faculty outside of class may in turn impact the degree to which students feel there is a sense of community within their graduate program. Graduate students value intellectual interactions with faculty and use these opportunities to develop relationships and successfully navigate through graduate school (Olson, 1988). Findings revealed that these opportunities may be lacking for ethnic minority students and suggest they may be at-risk when it comes to establishing a sense of community within their graduate program.

The second research question posed in this study explored the social transition experiences of ethnic minority graduate students and examined students’ psychological well-being (P), feelings of isolation (I), interactions with faculty outside of the classroom (FI), and socialization (S) experiences. As Table 4 reveals, scores on the SE subscales ranged from a high of 5.68 (P) to a low of 3.81 (FI). Overall, subscale scores on the SE scale were lower than those reported on the AE scale suggesting that students were less pleased with the social experiences they have had while in graduate school than they were with their academic experiences.

As noted, the highest reported subscale scores related to students’ Psychological Well-being, which was operationalized to mean confidence and self-concept. Findings revealed that respondents were certain of their ability to succeed as a graduate student

(6.11), had entered their graduate program with a healthy self-concept (5.97), and had maintained a positive self-image throughout their experiences (5.26). High self-concept and self-esteem are important to the academic success of ethnic minority graduate students. The findings of this study were promising and indicate that students possess a positive mental outlook, as well as the confidence and competence to succeed in graduate school.

The second SE subscale explored students' levels of social isolation and alienation. Scores were generally positive (4.98) and suggest that students do feel a connection to their graduate environment. Participants reported that they had established good relationships with graduate students in their program (5.16) and felt supported by faculty (5.14). Students also indicated that they were comfortable within their graduate program (5.29). It is important to note, however, that there did appear to be some marginal feelings of isolation (4.50) when this question was posed directly and examined as a single item, independent of all others on this subscale. Though not necessarily a cause for alarm, this finding may warrant closer monitoring of ethnic minority students' experiences so that any negative changes can be detected and addressed.

Interactions with faculty outside of class is the third subscale and assesses students' informal interactions with faculty. The FI subscale yielded the lowest scores (3.81) and revealed the only negative findings across both the AE and SE scales. Students felt faculty were concerned about their professional development (5.15) and they were satisfied with their out-of class interactions with faculty (4.13). However, ratings were less favorable when assessments were made about the frequency of involvement in interactions with faculty and the availability of opportunities for such interactions. The quality and quantity of out-of-class interactions with faculty can influence academic performance and student persistence, and contribute to the successful integration of minority students. Findings revealed students had little involvement in non-academic activities with faculty (2.34) and did not feel there were sufficient opportunities to do so (3.73).

The final subscale on the SE scale examined student's socialization experiences. Overall subscale ratings were somewhat marginal (4.47) but positive. Students indicated that they had established good social relationships with other graduate students on their

campus (4.72) and that they were satisfied with the frequency of interaction they have with other graduate students (4.73). It appears that students have better relationships with graduate students outside of their program than they do with their graduate program peers, as students assigned lower ratings to their willingness to make time for out-of-class activities with graduate peers (4.45) and their frequency of engagement in social activities with their graduate peers (3.85). Given the limited number of minority students in graduate school in general, one possible explanation for seeking social relationships outside of the graduate program might have to do with race. It is likely that the number of minority graduate students in any one program is limited. If so, then minority students might seek out other minorities to socialize with, even if that means going outside of their programs, instead of pursuing relationships with white students in their program.

The remaining research questions explored transition experiences by race, program type, and program duration. To explore these hypotheses responses were sorted into appropriate groups and ANOVAs were conducted to compare mean scores among groups for each AE and SE subscale.

Question three explored academic transition experiences by race. Scores ranged from a high of 5.73 to a low of 4.56 (Table 5). No significant differences were identified on any of the academic experiences subscales. This suggests that B/AA, H/L, and AI/AN graduate students have had similar academic transition experiences within their graduate programs and fortunately, for those in this study, they have been positive.

The fourth research question examined social experiences by race and revealed no significant differences at the .05 level (Table 6). Differences did emerge, however, at the .10 level on the S subscale. Findings at this level revealed differences in social experiences between H/L and B/AA graduate students with H/L students rating their social experiences more positively (4.63) than B/AA (4.34) students. One possible explanation for this may be related to the history of B/AAs in America and the negative perceptions and attitudes that people from these groups often encounter. Since respondents were enrolled at predominantly white institutions, it may be that B/AA graduate students face more challenges in establishing and maintaining social relationships with their graduate peers, most of whom do not look like them, and that they do not feel as comfortable in the graduate environment as their peers from other

ethnic minority groups. As a result, B/AA graduate students may find it more difficult to integrate into the social fabric of their graduate environment.

Question five examined ethnic minority graduate students' academic transition experiences by program type, which included no program, research-only programs, graduate/professional school seminars, and holistic programs. Table 7 displays the results and reveals significant differences on the AP subscale between those who had no program involvement (5.76) and those who had been involved in a research-only program (5.34). Students who were not involved in a program were more confident in their academic ability and potential to succeed in graduate school and had a clearer sense of how they were performing academically. It is possible that those ethnic minority graduate students who reported no program participation were high achieving students as undergraduates and were focused on their academic and professional aspirations even without the benefit of being involved in any type of formal program. As such, these students took the initiative to seek out and take advantage of other opportunities and resources that would assist them in achieving their academic and professional goals.

Significant differences were also found between those who had participated in a holistic program and those who had been involved in a research-only program. Students who had been involved in a holistic program as undergraduates rated their academic performance significantly higher (5.80) than those who had been involved in a program that provided a research experience only (5.34). Holistic programs offer opportunities to explore graduate education and gain research experience, and are designed to motivate, encourage, and prepare students, particularly those from underrepresented groups, to enter and succeed in graduate school. The findings of this study suggest that involvement in holistic programs may have had some impact on preparing students for the academic challenges of their graduate programs and helped them to develop the confidence and competence necessary to be successful graduate students.

The sixth research question examined social transition experiences of ethnic minority graduate students by program type. As reported in Table 8, significant differences were noted on two of the SE subscales. On the P subscale, those who had not participated in a program at all rated their psychological well-being significantly higher (5.72) than those who had been involved in a research-only program (5.32). Results of

this study indicate a healthy self-concept among students in both groups, however, it is plausible to suggest that those who were not involved in a program may have possessed the same confidence and belief in their academic ability as undergraduates as they reported in relation to their experiences as graduate students and therefore, may not have had a need for a structured program to motivate and move them forward.

Significant differences were also found between those who had participated in a holistic program and those who had been involved in a research-only program, as holistic program respondents reported higher scores (5.77) on the P subscale than research-only respondents (5.32). It appears from these findings that while research-only programs may help students gain the skills and knowledge to conduct scholarly research, they may not be as successful as holistic programs in building students' confidence and preparing them for the academic rigors of graduate school.

The FI subscale revealed the lowest reported scores across all SE subscales by type. Scores ranged from a high of 3.91 to a low of 3.62 (excluding the "other" category) suggesting that ethnic minority students have not been pleased with their experiences on this dimension. Though significant differences were revealed they could not be identified through post-hoc tests. The findings of this study still reveal a need for more purposeful and intentional efforts on the part of faculty to create opportunities for informal interactions with students. Failure to do so may put ethnic minority students at risk of not being able to fully integrate into the graduate school culture.

The seventh research question that guided this study explored the academic transition experiences of ethnic minority graduate students by program duration (no program, summer program lasting less than 6 weeks, summer program lasting 7-12 weeks, summer and academic year program). Table 9 reveals that significant differences were identified on the AP subscale between those who had no program involvement (5.80) and those who had been involved in a summer program lasting 7-12 weeks (5.38). Differences were also noted between those who had been involved in a program identified as "other" (5.95) and those who had been in a summer program lasting 7-12 weeks (5.38). Other types of programs described by respondents included weekly and monthly seminars, periodic workshops, and senior seminar courses.

These findings indicate that involvement in a 7-12 week summer program has less of an impact on the academic performance of ethnic minority students at the graduate level than either no program involvement or involvement in seminars and other types of activities. It is possible that a program occurring only 7-12 weeks during the summer is not an adequate time frame in which to offer the information, guidance, and support necessary to help students build the academic confidence they need to successfully transition into the graduate environment.

The eighth research question in this study explored the social transition experiences of ethnic minority graduate students by program duration. Significant differences were revealed on two of the SE subscales, psychological well-being and isolation (Table 10). However, these differences were only identifiable on the isolation subscale where it was found that those students who had no program involvement reported significantly higher scores (5.12) than those who had participated in a summer program lasting 7-12 weeks (4.53). Self-esteem and self-perception are very important to the transition process. Findings of this study indicate that ethnic minority graduate students with no undergraduate program involvement are entering graduate school with a healthy self-concept and a strong belief in their ability to succeed and as a result, are able to transition well into the graduate environment.

As an additional measure, comparisons were also made between the experiences of those students who had no program involvement and those who had participated in a program of any type to see if program participation made a difference in the academic and social transition experiences of ethnic minority graduate students. Table 11 reveals significant differences on three of the four academic experiences subscales: academic performance, faculty concern for teaching, and academic relationships. In all cases, those who had no program involvement reported higher scores than those who had participated in a program of some type. This suggests that even without the benefit of formal preparation many ethnic minority students enter their graduate programs with a healthy self-concept and have not allowed this to be diminished by their academic or social experiences in graduate school. Further, they have developed good relationships with faculty and peers, feel engaged in classroom discussions, find their courses intellectually stimulating, and find faculty to be supportive and genuinely concerned about the quality

of their teaching. Caution should be taken when interpreting these findings, however. While no program participants did report higher scores, ratings were positive across all program types indicating favorable experiences for GSPP participants as well.

Findings on the SE scale revealed significant differences on the isolation subscale (Table 12). Students who had not participated in a program reported higher scores (5.10) than those who had been involved in a program as an undergraduate (4.79). Scores for both groups were favorable and indicated that ethnic minority students do feel comfortable in and connected to their graduate programs and have established relationships with their graduate peers. Findings also reveal that students feel supported by the faculty members within their department and believe faculty are interested in their success. Positive faculty and peer relationships are crucial to the successful transition experiences of ethnic minority students. These findings are encouraging and suggest that ethnic minority graduate students enrolled in predominantly white institutions can and do transition well, both academically and socially, into the graduate environment.

It is also worth noting that in specific questions designed to explore the extent to which structured programs had prepared students for graduate school (included in the demographics section of the MGSES), those students who indicated they had participated in a structured program designed to help them explore graduate/professional education reported high scores in relation to the extent to which they felt the program had prepared them for selecting an appropriate graduate/professional program (4.77), applying to graduate/professional school (4.89), gaining admission to graduate/professional school (5.25), and conducting research at the graduate level (5.33). Students also indicated that while they felt their structured program had prepared them for the academic experiences they have had while in graduate school (4.83) they did not feel that their programs had prepared them for the social experiences they have had (3.73). This provides further evidence that while structured programs may do an adequate job of preparing students academically for graduate school, they are not doing as well when it comes to preparing students for social acculturation to graduate school.

Relationship of Findings to Prior Student Experiences Research

Findings of this study both support and contradict previous studies on minority student experiences and graduate school preparation programs. Several studies have

found the quality of a student's interactions with the academic and social environment to be integral to academic success and retention (Bowen & Bok, 1998; Nora, 1993; Ponce, 1988; Tinto, 1987). Turner (1994) reported that finding a positive comfort level is important to the adaptation and academic success of students of color. Results of this study support these findings and reveal that ethnic minority students are comfortable both within and outside of the classroom, perform well academically, and are satisfied with their academic performance as graduate students.

This study also supports the literature related to the factors that may influence successful transition experiences for graduate students. Research has revealed that academic performance, classroom interactions with faculty, perceptions of faculty's concern for teaching, and the extent to which the student feels a sense of community within the graduate environment are all factors that influence the successful academic integration of ethnic minority students (Boyer, 1984; DeFour & Hirsch, 1990; McCurdy, 1985). Other research has examined the factors that influence social transition experiences and found students' psychological well-being, isolation factors, informal interactions with faculty outside of the classroom, and socialization experiences with other graduate students to be important (Allen, 1984; Armstrong & West, 1984; DeFour & Hirsch, 1990; Hurtado et al., 1996; Armstrong -West & de la Teja, 1988). This study lends additional support to the use of these factors as indicators of academic and social integration. Findings revealed that these were reliable measures by which to assess students' academic and social experiences (Table 2) and that ratings were generally positive, suggesting that ethnic minority graduate participants have successfully integrated into their graduate school programs.

Studies related to students' perceptions of their intellectual value and ability purport that perceptions can influence academic performance (Pascarella & Terenzini, 1979) and that in order to excel academically, students must believe they can do so (Bean & Eaton, 2001). Findings of this study appear to support this notion that academic performance is linked to self-perception. Results revealed that in addition to being confident in their academic ability and potential to succeed in graduate school, ethnic minority students are also more likely to report that they are in good academic standing and satisfied with their academic performance as a graduate student.

The development of close academic relationships with faculty is a necessary factor if academic integration is to occur (Wilson, 1975). When ethnic minority students perceive faculty are supportive and that they genuinely care about them it results in students' commitment to the institution and impacts classroom participation, faculty interactions, involvement in scholarly activities, and ultimately persistence to graduation (Nora, 2001). Results of this study are encouraging and found that ethnic minority graduate students have been able to establish good relationships with at least one faculty member in their graduate program, have had positive classroom interactions with faculty, and are generally satisfied with the academic experiences they have had while in graduate school. Further, students are performing well academically, perceive faculty as supportive and committed to student learning, and report being comfortable participating in academic activities outside of the classroom. These findings indicate that ethnic minority graduate students are forming important academic relationships with faculty that can enhance their educational experiences and increase the likelihood of remaining, being comfortable, and succeeding within the graduate environment.

Relationship of Findings to Prior Research on GSPPs

This study also supported prior research related to Graduate School Preparation Programs. The literature suggests that systematic efforts designed to assist students in making an efficient transition from college to graduate and professional school are crucial to their educational advancement (Grimmett et al., 1998). Although it was found that students with no program experience reported more positive academic and social experiences than those who had participated in some type of formal program, the experiences reported by GSPP participants were favorable and indicated that GSPP participants are confident in their academic ability, perform well, have established good relationships with faculty and peers, and are comfortable within the graduate setting. These findings appear to support the utility of GSPPs in preparing ethnic minority students to enter graduate school and successfully transition into the graduate school culture.

Studies related to the role that undergraduate research internships play in graduate school success revealed that such opportunities have a positive effect on graduate school success and provide real benefits related to academic integration, retention, graduation,

and success among participants (Crawford et. Al., 1996; Grimmer et al., 1998; Nnadozie et al., 2000). In the present study, while research-only participants tended to rate their experiences lower than their peers who had been involved in a holistic program or those with no program involvement, their experiences overall were generally positive. This supports the continuation of research internships as a means to introduce students to the research process and prepare them for graduate education, though some modifications may be necessary to make the programs more effective at helping students to transition to graduate school.

Some of the findings of this study also contradict the findings of previous studies. Several studies have found that minority students are not always well integrated into their graduate communities and that ethnic minority students on traditionally White campuses report high levels of social isolation and alienation (Allen & Niss, 1989; Bohr et al., 1995; Duncan, 1976; Fleming, 1984; Hurtado, 1994). The findings of this study, however, suggest that ethnic minority students have been able to successfully integrate into the academic and social fabrics of their graduate programs at predominantly white institutions. Students reported that they are comfortable within and outside of their graduate programs, have established good relationships with faculty, graduate peers, and other students, and feel supported in their programs and classroom interactions. It is important to note however, that while ethnic minority participants reported that they do not feel isolated within their graduate environments, this rating was marginally positive (4.50), suggesting that ethnic minority students may be at risk in terms of feeling isolated.

Other studies that have examined the social experiences of graduate students have found that even when students are able to meet the formal requirements of their programs, they may not have the ability to “fully integrate themselves into the informal networks of the institutional system” (Allen, 1984, p. 9). Such findings were not necessarily supported by this study, as it was revealed that ethnic minority respondents are not only doing well with respect to their academic performance and experiences, but also report generally positive social experiences and good relationships with faculty and peers, suggesting that they have been able to integrate into both the formal and informal graduate setting. Students express feelings of confidence, comfort, and support in their

academic and social environments and are more likely to report that they have been able to establish good relationships with faculty and peers.

Pascarella and Terenzini (1991) reported that academic performance is influenced by the frequency of students' informal contact with faculty. Their finding was not necessarily supported by this study as students were more likely to report that they are performing well academically, in spite of having few informal interactions with faculty and indicating that they feel there are insufficient opportunities to do so.

Finally, research on structured programs suggests that they can aid in the professional socialization and development of minority students (Crawford, Figert, Suarez-Balcazar, Nyden & Reich, 1996). The findings of this study did reveal generally positive socialization experiences for all students, however, those who had not participated in a structured program reported more positive experiences than those who had been in a program of some type. Further, scores related to social experiences were lower than those reported for academic experiences, signifying a need for programs to place greater emphasis on preparing students to make the social transition to graduate school.

Implications for Future Practice, Research, and Policy

The results of this study have several implications for future professional practice, research, and policy. In relation to future practice, results can be used to inform the practices and decision making for several constituencies, including those who manage graduate school preparation programs, graduate school deans/directors and other higher education administrators, and faculty.

Program managers may use the findings related to ethnic minority graduate student experiences to design programs that will be effective in preparing students for graduate school and facilitating a successful academic and social transition. Specifically, program managers may want to provide more varied activities and services that will prepare students for the social transition to graduate school, since social transition scores were lower than those reported for academic transition experiences. This may include seminars related to the nature of graduate education and the socialization process, discussions with currently enrolled graduate students about their social experiences

within graduate school, and workshops that address the factors known to influence success at the graduate level.

This study also provided information about the types of programs that may ease the transition into the graduate setting for ethnic minority students that program managers may find helpful. Although results revealed that those who had not participated in a program of any type reported the most positive academic and social experiences, ratings were still positive for those who had been involved in research and holistic programs suggesting that these programs do help to ease transition experiences for ethnic minority graduate students. As such, those who manage graduate school preparation programs including research based programs, graduate/professional school exploration, and holistic programs, may use the findings of this study to improve existing programs. In addition to providing assistance with the graduate application process, a hands-on research experience, and opportunities to interact with faculty, program managers should also talk with students about the importance of establishing social contacts within the graduate environment and the forms of social support available. They might also consider encouraging students to enroll in graduate level courses, if possible, so they can experience first-hand what graduate coursework is like and have an opportunity to engage in formal and informal interactions with graduate students and faculty. Such experiences at the undergraduate level may maximize students' experiences at the graduate level.

Findings revealed that students who were involved in a research experience only reported lower scores than those with no program participation and/or involvement in a holistic program on factors related to academic performance, psychological well-being, and socialization. Program managers who provide a research-only program may want to include more opportunities for faculty and students to talk about graduate education and the academic requirements and expectations for success at the graduate level. A component may also be added to address issues related to self-perception, self-esteem, and informal networking, as these are areas in which research-only participants appear to lag behind those from other groups under study. Regular feedback on their performance in the research setting, encouragement to take on additional responsibilities in the lab, providing a good balance of challenge and support, and helping students to form relationships with students and faculty within the department are ways to instill and/or

build academic and social confidence among students and to assist them in integrating into the academic and social environment as undergraduates. These strategies may, in turn, prove beneficial to these students upon entrance into the graduate school setting.

Holistic program managers may want to re-examine their programs to ensure that they are providing information and guidance closely related to the academic and social factors that influence retention and success in graduate school, and ensure that their programs take a truly holistic approach to preparing students for graduate school. This may include information about developing faculty relationships both within and outside of the classroom, the importance of obtaining direct feedback from faculty regarding academic performance on a regular basis, and workshops and seminars to facilitate acculturation to graduate school.

Those who manage programs may also want to pay attention to the findings related to program duration. It was found that those who had participated in a summer program lasting 7-12 weeks reported significantly lower scores related to academic performance and isolation factors when compared to other groups. It may be that this time period is not sufficient enough to adequately prepare students to transition at the graduate level. A 7-12 week summer program along with activities throughout the academic year may be more beneficial as more information can be covered and skills and information gathered during the summer experience can be reinforced.

Another constituency for whom the results of this study may have practical application includes graduate school deans/directors and other higher level administrators interested in expanding the pool of ethnic minority graduate students. Findings from this study offered valuable information from ethnic minority graduate students about the aspects of their academic and social experiences they have found to be most positive. It is important for this constituency to be aware of these factors so that they can ensure that the academic and social climate is one that supports and encourages student success, retention, and degree completion for ethnic minority students. This entails putting appropriate academic and social support systems in place. Periodically reviewing students' academic records would offer a means of monitoring academic progress and may signal when a student is encountering difficulty and in need of some type of

intervention. It might also ensure that students are making satisfactory progress toward their graduate degree.

Graduate school administrators may also want to introduce various social opportunities for minority graduate students to facilitate their integration into the graduate environment. Strategies for promoting successful social integration may involve pairing students with a faculty or student buddy upon their arrival to campus or sponsoring regularly scheduled meetings or brown bag discussions that bring faculty and students together on an informal basis throughout the semester. In addition, graduate school deans may want to conduct routine campus and departmental climate studies to obtain information on the experiences of ethnic minority students enrolled on their campus. This would allow for any issues that exist to be identified and addressed in an appropriate and timely manner and may also create opportunities for community building and socialization within the graduate environment.

Deans and other campus administrators may also want to conduct seminars/workshops designed to help faculty understand when and how social interaction with graduate students could occur. Results indicate that students appreciate interactions with faculty both within and outside of the classroom but are dissatisfied with the frequency with which they occur (particularly informal interactions with faculty outside of classes). This may occur because faculty may have some concerns about maintaining appropriate boundaries with students and as a result, may be reluctant to engage in social interactions with them. Administrators and faculty could work together to discuss and develop activities that may be appropriate and helpful in enhancing faculty-student interaction and fostering a more engaging environment for students.

Faculty members may also be interested in the findings of this study. Students reported generally favorable ratings of their academic and social experiences and indicated that they were performing well academically, were comfortable in their graduate programs, and had established good relationships with faculty and students. However, one area to which program faculty may want to pay closer attention is faculty interactions outside of the classroom. Students indicated that there were limited out-of-class interactions with faculty and too few opportunities to do so. Faculty may want to develop and coordinate opportunities for informal interactions with students such as

brown bag discussions, invitations (and if possible financial assistance) to attend and/or co-present at professional conferences, and social gatherings for faculty and students throughout the academic year.

Faculty might also use these findings to enhance their research experiences and relationships with ethnic minority graduate students. It is important that faculty understand how essential regular and supportive feedback and faculty perceptions and relationships are to the academic and social success of ethnic minority graduate students so that structures can be put in place to promote these factors. Meeting with students on a monthly basis, showing an interest in students within and outside of the classroom, and offering support and encouragement are all effective ways to build meaningful relationships with ethnic minority graduate students and make them feel that they are a valued part of the community. In addition, implementing these strategies may lead to more rewarding and productive research relationships for faculty and students, as well as increase the number of students who complete graduate study, and ultimately, join the faculty ranks.

Finally, the present study had implications for future policy at the institutional, state, and federal levels. Overall, the data revealed through this study provides policymakers at all levels with information they might use to make informed decisions about continued support for GSPPs and the development and implementation of new programs. Results of this study reveal that those who have participated in GSPPs are gaining access to graduate education and transitioning well into the graduate environment. Students report that their GSPP experience was helpful in identifying, applying, and gaining admission into a graduate program. One could speculate that were it not for a GSPP experience, some students may not have pursued a graduate degree.

At the institutional level, results may be used to re-evaluate existing policies that prohibit or require the dismantling of programs and services targeted to specific ethnic minority groups. The findings of this study provide evidence to support the need for such programs to be available and institutionalized, as they are useful in helping to prepare ethnic minority graduate students for their academic and social experiences.

State policymakers may use the findings to improve policies related to increasing minority participation at the graduate level and to assess the amount of resources to be

allocated to programs that promote minority student entry and success at the graduate level. In addition, those at the state level may assess which schools within the state might be best served by sponsoring GSPPs.

Federal policymakers, especially those with direct responsibility for allocating funds, might find this information useful when designing, evaluating, and/or making decisions to fund initiatives that will effectively address issues of access, retention, and completion rates among ethnic minority students and move them through the graduate and faculty pipelines. Results indicate certain factors that most effectively prepare students to transition academically and socially at the graduate level. Programs that incorporate activities to promote these factors and that demonstrate success may be funded at higher levels so that they can be expanded to provide more services and/or serve a greater number of students.

In addition to future practice, the present study also had significance for future research. This study examined the academic and social transition experiences of ethnic minority graduate students by race, type of GSPP experience, and duration of experience. A future study might compare ethnic minority graduate students' experiences to those of their white, and possibly Asian American, counterparts to identify similarities and differences in the experiences across groups.

Another suggestion for future study would be to conduct follow-up interviews with those students who reported no program involvement to learn more about their experiences as undergraduates. This may provide insight regarding their initiative, self-confidence, undergraduate relationships with faculty, and use of resources, as well as feedback related to how they made the decision to attend and how they prepared themselves for graduate school. It may also reveal information about whether non-program participants differ in some way from program participants.

Additional studies might also be conducted to explore graduate student experiences and undergraduate program involvement by institutional type. In other words, future research might examine the experiences of those students who participated in a GSPP at a liberal arts institution versus those whose program was housed at a comprehensive or research institution. Such a study might provide information on best

practices across institutional type and offer strategies for effectively preparing students to transition into the graduate environment, particularly into the social milieu.

Another study might examine the relationship between the students' undergraduate institution and the graduate school they attended. The experiences of those who attended a liberal arts or comprehensive institution may have been different from students who attended a research institution as an undergraduate. This in turn may influence transition experiences at the graduate level.

As a result, the transition experiences may be Students who attended a research institution as an undergraduate Finally, this study collected a great deal of demographic information. Future research might examine the differences in transition experiences by various characteristics including academic discipline, parents' educational level, gender, age, and/or length of time in program. Any one of these demographic factors could reveal differences in transition experiences among ethnic minority graduate students.

Limitations

This study, like others, had several limitations. The first set of limitations to be discussed are related to the sample used for the study. The sample consisted of those who voluntarily responded to the invitation to participate. It is possible that volunteers differed in some way from those who did not volunteer to participate. This may have resulted in the results being skewed to reflect more positive experiences.

A second limitation related to the composition of the sample. An attempt was made to test for sample error with respect to race, however, the necessary data were not available for all racial groups. Study participants identified their race from among four choices: B/AA, H/L, and AI/AN, and Other (which represented 5% of the sample). Institutional data provided only three racial categories and since Other was not a category for which all graduate schools provided data, it was not feasible to calculate sample error by race.

Limitations related to the response rate should also be mentioned. A response rate of 13.3% may appear to be somewhat low, however, the relatively large number of respondents mitigated this to some extent as 621 ethnic minority students responded to the invitation to participate.

A final limitation related to the sample was the absence of a comparative group of non-minority graduate students. By not including students from other groups and obtaining information about their academic and social experiences as graduate students, it is difficult to place the findings in the context of graduate education in general.

It is also important to note that only those who were currently enrolled in graduate study were included in the sample. It is reasonable to suggest that those enrolled during this time had successfully transitioned and that those who had not made the transition may have left their programs during mid-year. Hence, the sample may have been skewed to those who were successful. If so, this may have influenced the results.

Finally, data were collected over a six month time period. Transition is a time-sensitive issue. It is possible that those who participated later in the study had more time to make the transition than those who responded earlier in the data collection period. This, too, may have influenced the findings in some way.

Conclusion

This study examined the academic and social transition experiences of ethnic minority graduate students enrolled at research extensive institutions. The findings of this study contributed significantly to the limited literature that exists on the graduate school experiences of Black/African American, Hispanic/Latino, and American Indian/Alaskan Native students and GSPPs. Overall, ethnic minority graduate students report favorable academic and social experiences. These findings are encouraging as they paint a different picture than that of previous studies that have found a chilly climate for ethnic minority students, and offer hope that programs are attempting to become more inclusive and supportive of students from these groups.

The findings of this study also provided support for GSPPs and their role in preparing ethnic minority students for graduate school and the academic and social experiences they may encounter as graduate students. Results suggest that more emphasis should be placed on acculturating students to the social environment of graduate school. Interestingly, results also suggest a need to explore the undergraduate experiences of those students who had no program involvement, as these students reported more positive experiences than those who had participated in a program of some type.

Increasing awareness of the academic and social experiences of ethnic minority graduate students and the factors that positively influence these experiences is essential if we are to increase representation and educational attainment among ethnic minority students. Armed with this information, higher education professionals, as well as state and federal decision makers, are in a position to design effective programs and services that may serve as a pipeline to graduate education, lead to more satisfying academic and social experiences, improve retention and graduation rates, and increase educational and professional opportunities for ethnic minority students.

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Appendix A

October, 2002

Dear Graduate School Dean/Director:

My name is Miya T. Simpson and I am a doctoral candidate in the Higher Education and Student Affairs Program at Virginia Polytechnic Institute and State University (Virginia Tech). I am writing to request your assistance in gathering data for my dissertation research. My study will explore the academic and social transition experiences of underrepresented ethnic minority graduate students (African American, Hispanic, American Indian) currently enrolled on the main campus of selected doctoral/research extensive universities, and who have completed at least one year of graduate study. I plan to employ a national sample of graduate students from these groups and would like to include students from your campus in this study.

In order to identify my potential sample, I am asking institutional representatives who work closely with graduate students, particularly ethnic minority graduate students, to assist me in contacting and distributing my research materials to students on their respective campuses. I am proposing a variety of data collection methods as outlined below to make your cooperation as easy as possible. Should you agree to participate, I ask that you indicate which of these methods would be most convenient for you and your campus.

Method 1

- Provide the postal and/or e-mail addresses for all African American, Hispanic, and American Indian graduate students currently enrolled on the main campus of your institution who have completed at least one year of graduate study.
- Researcher will mail hard copies of research materials (cover letter, informed consent forms, and surveys) directly to students
- All materials will be returned to researcher

Method 2

- Researcher will mail hard copies of research materials (cover letter, informed consent forms, and surveys) to graduate school deans/directors
- Institutional representatives will distribute materials to all African American, Hispanic, and American Indian graduate students currently enrolled on the main campus of your institution who have completed at least one year of graduate study
- Institutional representatives will collect research materials and return all completed forms to the researcher by Oct. 15, 2002

(Please note that it may also be necessary to send follow-up notices depending on response rate obtained from the initial contact)

Method 3

- Researcher will forward research materials electronically to each cooperating institution
- Institutional representatives are asked to forward the electronic message to all African American, Hispanic, and American Indian graduate students currently enrolled on the main campus of your institution who have completed at least one year of graduate study
- The electronic message will direct potential respondents to a web site where they can complete the survey and accompanying IRB documentation.

(Please note that it may also be necessary to send a follow-up e-mail notice depending on the response rate obtained from the initial contact)

The Institutional Review Board at Virginia Tech has granted approval to conduct this research. All information obtained will be kept confidential and any data collected will be used only for the purposes of this study. Responses will be presented in aggregate form, with no individual or institutional identification. An institutional summary (for your school) can be provided to you upon request; however, no identifying information will be shared across institutions.

I hope you will lend your support to this research study. I believe the results will offer valuable insight into the experiences of underrepresented minority graduate students and will assist higher education professionals in identifying and addressing issues related to matriculation and success at the graduate level among these students. I will contact you within the next two weeks to discuss your willingness to assist me in this research and to answer any questions you may have related to the study and/or your involvement. You may also feel free to contact me at (540) 231-4133 or misimpso@vt.edu.

Thank you for your consideration.

Sincerely,

Miya T. Simpson
Doctoral Candidate, Higher Education and Student Affairs
Virginia Tech

Appendix B

MINORITY GRADUATE STUDENT EXPERIENCES SURVEY (MGSES)

**THIS IS A COPYRIGHTED INSTRUMENT. PLEASE CONTACT THE
RESEARCHER TO OBTAIN A COPY OF THE SURVEY.**

(misimpso@vt.edu)

Appendix C

Hello!

My name is Miya T. Simpson and I am a doctoral candidate at Virginia Polytechnic Institute and State University (Virginia Tech). I am soliciting your help for a research study I am conducting to explore the graduate school experiences of ethnic minority graduate students. I would appreciate your support in completing and submitting the enclosed survey. All information you provide will be kept confidential and used only for the purposes of this research study. Responses will be presented in summary form only and no one will be identified individually. Should you decide to complete the survey you will be eligible to enter a drawing for one of three \$100.00 cash prizes.

To start, you will see an Informed Consent form. Once you have read the form and you agree to the terms outlined, please click the "YES" response at the bottom of the page. You will then be linked to the *Minority Graduate Student Experiences Survey (MGSES)*. If at any time you decide you do not wish to participate, you may exit the site without penalty. The survey should take approximately 15 minutes to complete. Once you have provided your survey responses, click the "submit" button at the bottom of the page. Upon doing so your responses will be submitted and you will be taken to a new page, where you will see a Request for Additional Information button at the bottom. Click on this button and you will then be linked to a form that asks you to enter your name, e-mail address, and postal address. You must complete this form in order to have your name entered into the drawing. Information provided on this form is not attached to your survey responses and will be used only for the purposes of entering you into the drawing and to follow up with you if you are selected as one of the cash prize winners. Your chances of winning will depend on the number of returned surveys and entry forms received.

To view and/or access the Minority Graduate Student Experiences Survey (MGSES), go to:

<http://filebox.vt.edu/users/misimпсо/Informed%20Consent%20Form.htm>

Please send all inquiries or comments to mgses@vt.edu.

I hope you will consider participating in this study. The data obtained will contribute to the limited literature that exists on the graduate school experiences of students of color and assist in ensuring their successful integration into the graduate school environment.

Thank you for your time and I look forward to your feedback.

Sincerely,

Miya T. Simpson, Doctoral Candidate
Educational Leadership and Policy Studies
Virginia Tech
mgses@vt.edu

Appendix D

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY Informed Consent for Participants of Investigative Projects

Title of Project: Academic and Social Transition Experiences of Ethnic Minority Graduate Students

Investigator: Miya T. Simpson

I. Purpose of this Research:

The purpose of this study is to explore the academic and social experiences of minority graduate students.

II. Procedures:

This study utilizes an on-line survey to collect information regarding the academic and social experiences of ethnic minority graduate students. You are asked to carefully review this consent form and indicate your understanding of and agreement with the terms outlined by clicking the “YES” button at the bottom of the form. You will then be linked to the Minority Graduate Student Experiences Survey (MGSES) and asked to respond to items based on your graduate school experiences. Once the survey has been completed, you may choose to complete the attached “Request for Additional Information” form to be entered into a drawing for one of three \$100 cash prizes.

III. Risks:

The risks involved by participating in this study are minimal. Some survey items may provoke some anxiety as you reflect on and evaluate your academic and social experiences as a graduate student. If this occurs and assistance is needed you will be referred to the appropriate professional services.

IV. Benefits of this Project:

Little research exists on the academic and social experiences of ethnic minority graduate students. Your participation in this study will assist the researcher in gathering data that will contribute to the limited literature available on this population. Participants will also have a chance to win one of three \$100 prizes if selected in the drawing.

V. Extent of Anonymity:

The confidentiality of all participants will be maintained at all times during this study. The researcher will be the only person with access to the names of those participating in the study. This information will be used only for the purposes of entering eligible participants into the cash drawing. Results of the study will be reported in aggregate form and no responses will be identified individually.

VI. Compensation:

Participants who fully complete and return the consent form, survey, and request for additional information form will be entered into a drawing for one of three \$100 prizes. Names of all eligible participants will be entered. Chances of winning depend on the number of completed surveys submitted.

VII. Freedom to Withdraw:

As a voluntary participant, you are free to choose not to answer survey items and/or withdraw from this research at any time. To withdraw from the study once completed forms have been returned, please contact the researcher. Please note that only those who fully complete and return the survey, consent form, and request for additional information can be entered into the cash drawing.

VIII. Approval of Research:

This research study has been approved, as required by the Institutional Review Board for Research Involving Human Subjects at Virginia Polytechnic Institute and State University and by the researcher’s graduate faculty advisor in the Higher Education and Student Affairs Program in the department of Educational Leadership and Policy Studies.

IX. Subject's Responsibilities:

I agree that I am voluntarily participating in this study and understand that I have the following responsibilities:

- _____ To review the informed consent form
- _____ To complete the Minority Graduate Student Experiences Survey
- _____ To complete and return the Request for Additional Information form if I would like to be eligible for the cash drawing

X. Subject's Permission:

I have read and understand this Informed Consent and conditions of this research study. I am aware that I may contact the researcher at any time while participating in this study for clarification and information regarding my participation. I acknowledge the above and give my voluntary consent for participation in this study. If I participate, I understand that I may withdraw at anytime.

If you agree to the terms outlined in this Informed Consent form please click **YES**.

Should I have any questions about this research or its conduct I may contact:

- Ms. Miya T. Simpson, Investigator (540) 231-4133, misimpso@vt.edu
- Dr. Joan B. Hirt, Faculty Advisor (540) 231-9700, jbhirt@vt.edu
- Dr. David M. Moore (540) 231-4991, moored@vt.edu
Director, Office of Research Compliance

Thank you for your cooperation!